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The Manifold and Intersecting Aspects of Discrimination and Their Effect on Maternal Health Outcomes

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1 ABSTRACT

The objective of this thesis is to systematize and synthesize existing evidence on the relationship between intersecting aspects of discrimination and health outcomes for minority women in maternity issues. Towards this objective, existing systematic reviews on the issue were used as data. Reviews from 2012 to 2024, were selected using keywords like "systematic review," "(Racial) Discrimination," "Maternity," "Risk Factors,", "Maternal Research," "Participation," "Equity," and "Intersectionality." The review findings were thematically categorized and similarities and potential differences between them were documented. According to the findings, although direct links between discrimination and specific health outcomes, such as preterm birth, are not always evident, indirect effects through increased stress are noted. Neighborhood conditions, often racially segregated, further exacerbate health disparities, impacting both mothers and infants. Ethnic minority women tend to avoid healthcare due to past negative experiences, resulting in delayed or insufficient care. Socioeconomic status, education, and insurance coverage also play crucial roles in healthcare access and quality. The conclusions highlight the ways in which overlapping social identities and systemic inequalities affect maternal health. The study emphasizes the need for inclusive research methodologies and multilevel interventions to address health inequities. Recommendations include cultural sensitivity training for healthcare providers, flexible research methodologies, and systemic changes to improve maternal health for ethnic minorities, providers, flexible research methodologies, and systemic changes to improve maternal health for ethnic minorities.

2 INTRODUCTION

Racial discrimination (with its multiple facets) is growingly being recognized as a critical social determinant of health. More and more scientific papers shed light on the deep roots of discrimination in societal structures that influence a range of life aspects, including health (Chambers et al., 2022; Chelstowka, 2011; Fang, 2000). A specific health area where the effects of discrimination become particularly evident is in the sphere of maternity, namely affecting maternal and neonatal outcomes (Alhusen et al., 2016; Brown, 2019; Mehra et al., 2017; Sonderlund et al. 2021). Accordingly, research has revealed that in the US the risk of facing

maternal mortality for Black women is three to four times higher compared to white women, while two to three times higher for serious maternal morbidity (Hailu et al., 2022). More precisely, existing literature indicates an impact on psychological stress, hypertension, and poor outcomes not only in maternal but also in infant health, such as preterm birth and low birth weight (Van Daalen et al., 2022). Evidence is provided by studies investigating the health status of women having been facing discrimination either over a longer life span or in the context of maternity (Pereira et al., 2022). In other words, discriminative experiences influence the concerned person's behavior long term in a way that increases disadvantages and disparities. The deepening health disparities of minority women have been documented by research that uses the concept of intersectionality and shows that membership in more than one disadvantaged group entails a higher risk of health-related problems (Harari & Lee, 2021). According to this strand of research, having (had) discrimination experiences (due to intersecting subordinate identities, such as gender, class, race, ethnicity, sexuality) may result in avoidance of seeking medical help in a timely manner, due to fear of disrespectful treatment, stigma, discrimination and more. This eventually hinders the possibility to apply provisional measures which could avoid derogative health outcomes (Wang et al., 2020). Studies in this research field proliferate -especially in past years- through the use of a variety of methodologies.

Accordingly, in recent years the implementation of an intersectional framework within the quantitative research on health disparities is increasingly being applied in the last decade, even though the core idea of intersectionality had emerged well before. With Kimberlé Crenshaw, a legal scholar and civil rights advocate, the issue of intersectionality became popular in the late eighties and emerged in academia, addressing Black women being affected by a unique form of discrimination based on their gender and race (Harari & Lee, 2021). In her work she highlighted how traditional approaches to social justice and anti-discrimination laws often fail to consider the multifaceted nature of people's identities by addressing race and gender as separate categories. This binary thinking overlooks the unique experiences of individuals who face multiple forms of discrimination simultaneously (Crenshaw, 1991). Even though this concept has received increasing attention through Crenshaw, the idea had been addressed decades ahead, formerly known as Black feminism, opposing White feminist ideas which ignored the experience of Black women, as well as anti-racist ideas which disregarded the

adverse positions of (Black) females, eventually rather being a fight for Black men only rather than the Black community, including women, as a whole[1] (ibid; Lorde, 1984).

An intersectional perspective considers that different social determinants, such as race and gender, operate together (intersect) rather than working independently from each other, resulting in creating unique experiences of discrimination for individuals being part of more than one marginalized group e.g. being a Black woman (Harari & Lee, 2021).
The scope of an intersectional framework is to capture the complexity of social identities and how different elements interact and operate in creating unique experiences and outcomes for those social identities. Within this concept several approaches are common: first the inter-categorical, second the intra-categorical, and lastly the anti-categorical approach. The first approach focuses on methodologically contrasting different unequal circumstances between groups with particular identity markers and social statuses. When doing so, it considers different factors to interact with each other rather than operating isolated e.g. race/ethnicity and gender having a joint effect instead of the aspect of race/ethnicity having an influence on health decoupled from the gender aspect. This method is the most frequently employed within the research in health disparities. In contrast, the intra-categorical approach focuses on contrasting differences within a group with particular markers and social positions. A particular group is thus not considered to be homogeneous but to still differ in some aspects. Lastly, proponents of the anti-categorical approach argue that the categorization of social identities into groups neglects the diversity prevalent within social groups and that this procedure fosters favorable/unfavorable positions for certain groups. Since it fully denies categorizing, it is eventually considered to be unsuitable for researchers analyzing health disparities with an intersectional perspective, since they examine how different aspects, divided into categories, interact with each other to understand how their interplay generates inequalities (Harari & Lee, 2021).

[1] The base was for example set in 1970 by Toni Cade Bambara with her publication The Black Woman and later, in the eighties and nineties, by names like Angela Audre Lorde, June Jordan, or Angela Davis, contributing with publications, essays and poems, tackling the interplay of race, gender, and class (Collin, 2000). Unequal conditions for different population groups became subject to potential change with theories like those of June Jordan, who portrayed social inequalities as products of social constructions, produced by individual's actions (ibid.). It was through the publication "A Black Feminist Statement" conducted in 1982 by the Combahee River Collective with African American Women of Boston being its member that the perspective of framework focusing only on gender or only on race does not take the various and interacting power relations into account African American women are exposed to and ignores the unique forms of oppression was established (ibid.).

Even though this concept aims to capture complexities, highlight hidden disparities and provide comprehensive insights, it is limited by aspects that contradict its objective. For example, the focus is still only on certain groups and particularly examines aspects such as race/ethnicity, sex/gender, and socioeconomic status, disregarding age, disabilities, immigrant status, sexual orientation and more. It furthermore commonly applies a binary system (e.g. "White/"non-White") which leads to the neglect of variations within groups and to constraints within the research of health disparities. Limited focus also applies to health disparities research, extensively concentrating on specific outcomes such as (self-rated health, BMI, functional limitations,chronic conditions etc.) (ibid.). Thus, while research is criticized to overlook crucial factors contributing to (health) disparities, this applies to the implementation of an intersectional approach in quantitative research as well, calling for more nuanced measures of intersectionality and health outcomes in order to provide a more developed understanding of health disparities. This observation is taken up in a later section, in the Recommendations of this thesis.

This thesis aims to systematize and synthesize existing evidence on the relationship between different, intersecting aspects of discrimination and health outcomes, specifically in maternity issues. In other words, it aims to document the expansion of the aforementioned research field and the different objectives, methodologies of the studies conducted and to cast light on the multifaceted findings. Furthermore, the review aims to delve deeper into the roots of disparities and explore various forms of discrimination, whether based on race, socioeconomic status or other factors and illuminate how they interact with each other and contribute to health inequities for expecting women of marginalized groups. For this purpose, not only direct health outcomes are investigated, but furthermore maternity research conditions are taken into account which eventually contribute to health implications for non-White women. By examining the multifactional influence on maternity health, the review seeks to provide a comprehensive understanding of how systemic inequities are perpetuated in healthcare. Lastly, the review underscores the need for multilevel intervention measures to dismantle discriminatory societal structures. This means advocating for changes at different levels such as in the individual or community sphere, but also within institutions and policies. It formulates recommendations for future research and intervention measures. This involves identifying gaps in the current body of evidence and suggesting areas where further study is needed. It also includes proposing

practical strategies for implementing the findings of the review to improve health outcomes for marginalized populations and promote the consideration of intersectionality in this regard.

In the first chapter of the thesis the theoretical framework which refers to the manifold faces of discrimination will be introduced, and the key concepts and research question and research objectives will be specified. The following section, the Methodology will specify criteria on which studies were in- or excluded and outlines the approach on how included literature was analyzed. This section is then followed by the findings of included studies, divided into following different categories: 1. Impacts on and impacts of received care; 2. Effects on birth outcomes (low birthweight and very low birth weight; preterm birth; birth weight for gestational age and small for gestational age); 3. General health outcomes (blood pressure; stress; health effects exceeding period of pregnancy); 4. intersectional dimensions of discrimination (economic resources; insurance coverage; environment; education); 5, participation in maternity research (communication; trust; study design (recruitment and facilities)), and 6. Respectful maternity care (communication; reasons for discrimination: racism, insurance coverage, beliefs).

The core of the review comprises different dimensions of the topic, such as the impact of systemic racism on healthcare access and the socio-economic factors influencing maternal health. Results will then be interpreted and synthesized in the Discussion part and suggestions for recommendations and for future studies will be stated. Finally, the Conclusions section summarizes the key insights and underscores the importance of multilevel interventions to raise awareness of the complex nature of discrimination and address the identified disparities.

3 THEORETICAL FRAMEWORK

Despite the presence of international legal frameworks and guidelines on the prohibition of (racial) discrimination in all areas of life, inequalities are still a prevalent issue in the field of health (including maternal health). Before delving into the forms and effects of discrimination, we will first introduce frameworks that recognize health as a human right and explain their provisions. Followed by it, the legal basis of sexual and reproductive rights and its development will be presented. Organizations promoting those with specific measures and guideless will be mentioned in this regard. Lastly, background information on social determinants that put

women in disadvantaged societal positions and pose a threat to their health will be delivered to point out their unfavorable status. Finally, the last sub-section mainly focuses on conditions of women in African countries. This is to comprehensively review the overall conditions in the Global South, stemming from the global discriminatory history which Black women are exposed to and still carry the weight of until this day.

3.1 Health as a human right

Health is recognized as a Human Right and it is accordingly embedded in international and regional frameworks, some of which presented in the following section. The Universal Declaration of Human Rights of 1948 declares in article 25 that “everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including [...] medical care and necessary social services, and the right to security in the event of [...] sickness, disability, [...] or other lack of livelihood in circumstances beyond his control” (United Nations [UN], 1948), while the International Covenant on Economic, Social, and Cultural Rights (ICESCR) of 1966 analogically refers to it in its article 12, mentioning that “the state parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health” (UN, 1966). Furthermore, the African Charter on Human and Peoples’ Rights (ACHPR) of 1981 and the European Social Charter (ESC), which was revised in 1996, take up the provisions stated in the international legal frameworks with its even so 12th article “every individual shall have the right to enjoy the best attainable state of physical and mental health” (African Commission on Human and Peoples’ Rights [ACHPR], 1981) and in article 11 “with a view to ensuring the effective exercise of the right to protection of health, the Parties undertake [...] to take appropriate measures [...]” (Council of Europe [CoE], 1996).

Ensuring this right requires taking various components into account, such as availability, accessibility, acceptability, and quality. Availability implies that a sufficient number of functioning public health care services and goods must be provided, manifested in the General Comment (GC) No. 14 “The Right to the Highest Attainable Standard of Health" from the UN Committee in Economic, Social and Cultural Rights (CESCR) (UN Committee on Economic, Social and Cultural Rights [CESCR], 2000). The next component, accessibility, refers to those services and goods being accessible in order to comply with fulfilling the enjoyment of the

right to health. The aspect of accessibility is not limited to physical accessibility and is shaped by four constituents, namely non-discrimination, physical accessibility, economic accessibility (in terms of affordability), and lastly, information accessibility (ibid.). The third component, acceptability, requires health services, goods, and facilities to be culturally appropriate and to respect medical ethics (ibid). To accomplish the right to health for everyone successfully, healthcare facilities, goods, and services must be of a certain (good) quality and be appropriate scientifically as well as medically (ibid.). The fundamental principles of medical ethics encompass autonomy, beneficence, non-maleficence, and justice. These principles uphold the overarching goal of ensuring the right to health. Autonomy entails that patients receive comprehensive information about potential risks, benefits, and alternative treatment options beyond initially recommended interventions. This ensures patients are empowered to make informed decisions. Beneficence requires healthcare providers to prioritize the patient's best interests, taking into account their welfare and well-being. To do so it necessitates respecting women's preferences, which may be influenced by cultural or religious factors. Non-maleficence, or the principle of "do no harm," mandates avoiding actions that cause harm and minimizing risks to patients. Understanding the social context of women, as detailed in the "Findings" section, is crucial in formulating recommendations outlined in the "Recommendations" section. Lastly, justice in medical ethics demands fairness and equality in healthcare delivery. This principle advocates for equitable treatment of all patients, including women from ethnic minority backgrounds, ensuring they receive appropriate care options comparable to those offered to the majority population of women (Valentino, 2016).

With being part of international parties member states undertake to take certain, passive as well as active, measures in order to comply with the provisions outlined above. This includes to respect, protect and fulfill the right in question, here the right to health, embedded in article 2 of the ICESCR (UN, 1966) In order to respect the right to health a state must refrain from interfering directly or indirectly with the enjoyment of the right to health while it must at the same time prevent third parties from interfering in such a way when providing for the protection of the right. As a proactive obligation, appropriate legislative, administrative, budgetary, judicial, promotional and further measures must be adopted by member states to fulfill their commitment of ensuring the right to health (ibid.).

Next to states committing to this aim other bodies, e.g. international health initiatives such as the World Health Organization (WHO) or the United States Sustainable Development Goals

(SDGs) with its Goal 3“Good Health and Well Being”, work to promote health as a human right, healthy lives and well-being for all (UN, 2015).
However, even though legal frameworks and international organizations thrive for the right to health for everyone, current conditions do not provide for its fulfillment, since it is in actual times impeded by various challenges and barriers, including the issue of discrimination. Completing the right to health is an important issue in itself, however, its importance goes even further, since all human rights are interconnected with each other, thus barriers to one human right will as well affect the enjoyment of other rights, such as the (right to) education and food having impact on an individual’s (right to) health, as acknowledged in the Vienna Declaration and Programme of Action which was adopted at the World Conference on Human Rights in Vienna in 1993 (World Conference on Human Rights, 1993). In addition to the recognition of interrelatedness, it emphasizes the universal nature of human rights, meaning those rights are to be enjoyed by everyone without exclusion. The interplay of factors is among the topics addressed in the course of this review.

The right to health also includes more specific health rights, such as sexual and reproductive rights that include maternity health issues, as presented in the section below.

3.2 Maternal Health as a human right

To introduce the development of maternal health as a human right the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) of 1979, which was adopted by the United Nations General Assembly must be mentioned. This convention is often referred to as the “International Bill of Rights for Women”, for example by the UN Women, the entity dedicated to gender equality and women's empowerment (UN Women, 2023). This is also taken up by Human Rights Watch, an organization promoting human rights, including reproductive and sexual rights (Human Rights Watch, n.d.). One article, essential for the topic of this review, is article 12 of the CEDAW, addressing women’s health: “States Parties shall take all appropriate measures to eliminate discrimination against women in the field of health care in order to ensure, on a basis of equality of men and women, access to health care services, including those related to family planning.” and “Notwithstanding the provisions of paragraph I of this article, States Parties shall ensure to women appropriate services in connection with pregnancy, confinement and the post-natal period, granting free services where necessary, as

well as adequate nutrition during pregnancy and lactation" (UN, 1979). This being said, it includes one fundamental element: the legal basis for reproductive rights. Concretely, this means that the elimination of discrimination is explicitly mentioned for the sphere of healthcare, also including that access to (quality) healthcare must be ensured. In a next step this also concerns health care services dedicated to family planning, hence, reproductive rights. This in turn, involves those provisions to be applied in pregnancy, childbirth, and postpartum care. Legally, the significance of this convention with its articles recognizes sexual and reproductive rights as part of the fundamental human rights. This recognition goes beyond the right to access to health care services and implies to have the possibility to be adequately informed about those rights in the first place, as mentioned above (ibid). Women are to be educated about their rights of being able to take decisions over their own bodies and reproductive functions without facing discrimination, violence or actions against their own will. One major contributor to promote these provisions was the International Conference on Population and Development (ICPD) held in Cairo in 1994. The ICPD was organized with the intention to address global population issues and to establish a new approach to population and development policies. It eventually led to focusing on individual rights, health, and well-being and tackled gender-based violence, discrimination and harmful practices (Shalev, 2000). Above that, it resulted in the adoption of a new framework, called the Cairo Program of Action, aiming to foster reproductive health, gender equality, and sustainable development, with a focus on individual well-being and human rights (UN, 1995). This goal was again taken up by the UN Sustainable Development Goals (SDG), now visible in SDG Goal 3 "Good Health and Well-Being" or SDG 5 "Gender Equality" (UN, 2015). Specific targets of SDG 3 are to reduce the global maternal mortality ratio to less than 70 per 100,000 live births by 2030 (SDG 3.1), to provide for universal access to sexual and reproductive healthcare services (SDG 3.7), and quality access to healthcare services as well as financial risk protection (SDG 3.8). Next to this, a variety of organizations are advocating for this purpose nowadays. To name some of the biggest ones: the WHO, the White Ribbon Alliance, the Association of Women's Health, Obstetric and Neonatal Nurses, or the Agency for Research and Quality. The White Ribbon Alliance has conducted a charter with Respectful Maternity Care assets, which is accessible through their official website and are equally supported by beforementioned organizations. It puts down Respectful Maternity Care (RMC) Assets connected to human tights and notes their respective articles of legal and regional legal authorities, such as the European Convention of Human Rights, the African Charter of Human and Peoples' Rights, the Convention on the Rights of the Child and many more (White Ribbon Alliance, n.d.). This charter represents The

Universal Rights of Women and Newborns. Respectful Maternity Care describes a specific approach to maternal health. The main drivers are dignity, privacy, confidentiality, freedom from harm, informed choice and continuous support during labor and childbirth to ensure a safe motherhood. The aim of Respectful Maternity Care goes beyond preventing incidents like mortality or morbidity, it includes taking into account the fundamental human rights of all women for a positive childbirth experience and providing for an empowerment experience of childbirth (ibid.). Even though Respectful Maternity Care is promoted to be applied in maternity care, this field is not free of discriminatory structures and actions. In the US around 30% Black, Hispanic and multiracial participants of a survey examining among others mistreatment and discrimination reported having experienced abuse, while 29% of participants reported discrimination (Jones et al., 2017).

Beyond the aspect of racial discrimination, existing research reports about several elements contributing to disparities in health equity, such as the social factors (education, income, and more) mentioned above. This highlights the need to apply an intersectional approach and represents one of the aims of this review, further elaborated below.

3.3 Multifaceted aspects of discrimination and Intersectionality

Intersectionality recognizes that contextual forces, such as sexism and racism, do not exist independently but instead interact with each other, creating a unique exposure to inequalities (Green et al,, 2017). Collins (2012) furthermore highlights how an intersectional approach emphasizes the role of power relations that exist between the majority and minority population, between different social classes, gender, and more, which in other concepts, such as pragmatism are present only implicitly, but not illustrated as a main driver. This signifies that individuals belonging to a single marginalized group and individuals belonging to a multiple marginalized group are exposed to different forms of discrimination, e.g. a Black woman encountering different obstacles than a White woman or a Black man, as her social identity of race and gender intersect and interact with each other (Green et al., 2017). This is also known as the *double jeopardy hypothesis*, with abundant research evidence confirming that being a member of more than one disadvantaged group places a person at higher risk of behavioral, mental and physical health problems (Das-Munshi et al., 2016) compared to those belonging to one such group. This seems to hold true for a variety of ethnic groups, as well as for

intersections of gender and race (Seaton, Caldwell, Sellers, & Jackson, 2010; Thoma & Huebner, 2013). Social inequality, politics, and power are further core elements essential in an intersectional framework when examining an individual's life conditions (Collins, 2012).
For example, Black women experience gender specific challenges, such as sexual abuse, differently than women of the majority group. Crenshaw (1991) mentions in this regard how stereotypes of Black women being sexually more active and the perception about Blacks distorting the truth in their narratives leads to Black women being stated by the judges as illegitimate victims. Even in the case of the perpetrator being sentenced, it is significantly lower as in cases where a White woman was a victim of such an act. Above that, women that are not of the majority group in women's shelters are often confronted with rigid, to some extent racist, structures of such places, not taking the needs of Black/non-White people into consideration, sometimes not even granted entry, left in conditions threatening their security due to their lack of English language skills. The result is Black and generally non-White women reconsidering their stay and leaving the shelter in order to avoid being exposed to these structures. This is dangerous in the sense that in some cases it puts Black women back in the environment of the perpetrator. Black women are thus exposed to forces of gender- and race specific disadvantages concurrently (Crenshaw, 1991). Misconceptions about Black people are also an issue in healthcare settings by influencing how they are received and treated by healthcare practitioners (Chambers et al., 2022) as will be visible in the "Findings" section of this paper.

Intersectional methodologies in research now aim to capture the manifold aspects of discrimination, by taking more aspects into account that go beyond simply dividing individuals in two different groups and acknowledge the influence of several factors simultaneously interfering in individuals' life (Chambers et al., 2022). It is important to to note that the idea is not that the intersecting individuals are to be determined as being risky themselves, but the factors and social structures behind those social identities (Green et al., 2017). While an intersectional concept is stated to be needed in order to capture factors creating inequalities and differences between and within groups, supporters of the anti-categorical intersectional approach, however, criticize dividing individuals into different categories ignores the fluidity of social identities and provides for a too rigid approach (ibid.). While the uniqueness and fluidity of individuals cannot be disregarded it is not applicable when researching on inequalities, which is why Green et al. (2017) suggest that the social context of identities and the power relations they are exposed to should be acknowledged when researching and interpreting results in order to understand inequalities prevalent in domains such as health.

This is why acknowledging the particular conditions of intersecting components are of high importance when dealing with the subject of discrimination in the realm of maternity. The specific effects of accumulating factors on reproductive health are articulated in this section.

3.4 Race/ethnicity/Gender/social status

When broaching the issue of discrimination in maternity care, elements beyond race in the sphere of discrimination become salient, crucial to be addressed in this review. Gendered racism refers to the "unique oppression due to the intersection of race/ethnicity and gender" (Rosenthal & Lobel, 2020).

Identified higher levels of racism and gendered racism related to stereotypes for Black, Latina, and multiracial/ethnic women than for White females are one of the indicators affirming the increased exposure to discriminatory conditions. Additionally, increased rates of infant mortality, HIV and STIs in general as well as further adverse physical or mental constraints among Black Americans are only a few out of many outcomes of gendered racism (ibid).
Stereotypes are a major factor in gender-specific racism, as they foster a particular image of Black women, which generally ascribes negative attributes to them and deepens disparities in healthcare (ibid.; Glover, 2021). Black women are particularly affected to be perceived in a certain way based on their physical characteristics (Chambers et al., 2022). Attributed characteristics include the assumption that Black women have an animal-like sexuality with many sexual partners, are uneducated and bear children at a young age. Additionally, they allegedly give birth to many children for the sake of benefiting from public assistance and are more pain resistant than White women (ibid.). This is influencing the manner in which health issues of Black women are approached and treated by professionals in health care services, resulting in disrespectful actions and lower quality care. Instead of being treated with competency and compassion, Black women receive judgment, face victim-blaming and receive punitive care (Chambers et al., 2022; Glover, 2021;). Being exposed to those circumstances, leads on one hand to Black women's health seeking behavior being impacted by avoiding doctor visits and delayed necessary doctor visits (Rosenthal & Lobel, 2020).
Distrust goes beyond avoiding doctor visits and expands to rejection towards contraceptive options. This phenomenon is deeply rooted in the past of discriminative medical experiments on minority group women, including Blacks and Latinas, when forced sterilization was

performed (Davis, 1981; Washington, 2006 both as cited in Rosenthal & Lobel, 2020). As of now, Black and Latina women are still relatively more advised to use contraceptive methods and avoid becoming pregnant (Dehlendorf et al., 2010; Downing, 2007 both as cited in Rosenthal & Lobel, 2020). Among Black women, this creates the perception that reproduction of certain communities is wanted to be restricted (Rosenthal & Lobel, 2020) and makes them distrust the intentions of professionals in the health sector resulting in decreasing the willingness to use birth control methods. The general distrust towards medical advice results in avoiding taking advice in the first place or in not following medical recommendations, impacting Black women's health facing increased risks of stress and maternal mortality. Above that, Black women might feel limited in their own decision-making power and trying to make a stand, by not following suggestions of a doctor (Factor, Kawachi, and Williams 2011 in Rosenthal & Lobel, 2020). Limited power of women is associated with a variety of other factors, each operating in connection with each other. On the other hand they are penalized to a higher extent for missing prenatal appointments and are object to further penalized health care, depriving them from options that are offered to White women, such as allowing visitors, as they are perceived as being disturbing (Chambers et al., 2022). Generally, Black women are more often considered to be unreliable (ibid.). This issue is double-faced, on one hand due to mistrust in healthcare among Black women, on the other hand affecting treatment, should they eventually access health care services. These problems are further increased by clinical professionals not having developed competencies to counter discriminatory treatment methods, even in the case of being aware of structural and institutional racism and its impacts on women of minority groups (ibid.).

Lower education levels and economic status are some of these factors, deepening health disparities (Nwogwugwu, 2021). Economic factors can determine women's health, playing an important role in decision making and access to health care in different ethnic and national contexts. Being a Black woman implies dealing with a range of negative conditions, which is why it is essential to fight gender inequality that is the main driver for women's disadvantaged positions, especially in minority communities. A higher education and economic score of a woman gives her more independent decision-making power in the realm of her own life, including her reproductive right and health, but also in processes of women related policies in the making (ibid.). The imbalance between men and women goes hand in hand with many factors and is essentially rooted in traditions and norms which has consequences for a woman's freedom by creating dependency from the partner or other male figures. This includes that

women are exposed to risky situations e.g. because they have to undergo female genital mutilation (FGM) (Nwogwugwu, 2021) or face domestic violence by their partner, which they cannot escape due to their financial dependence (ibid.). Financial dependence stems from gender inequalities and show their effects in gender roles as women are mostly required to stay home to take care of household and family cores. This does not only shape their everyday lives but also interferes with their opportunities for (further) education, to set foot in the professional field, or to access health care services, leaving them powerless in making free decisions and depriving them from control over their own lives (Hagman, 2013; Shen & Williamson, 1999; Walker, 1996, as cited in Nwogwugwu, 2021). The expectations towards a woman go further, in a way that women are appointed to fulfill a reproducing role or that women depend on males' approval in order to take health and therefore childbirth decisions, since he is "assigned" by traditional norms to be the one in charge in taking decisions concerning family issues (ibid.). Additionally, healthcare services in Africa oftentimes necessitate direct payments from patients, which restricts access for those with low income, with women unproportionally being affected by it due to their economic dependency (ibid.). Abortion is one of the areas affected in the maternal health field, on one hand because legal ways, if they exist, are in large parts unaffordable for women. On the other hand, abortions are often conducted by untrained individuals, largely because women are coerced into seeking alternative methods when legal or financial support is lacking, which is needed to ensure safer procedures (ibid.).

This issue is not confined to countries in the Global South only and also to be found in some Global North countries. An example with the most restrictive abortion laws is Malta, the only EU country in which abortion is entirely prohibited, even in the case of rape or the mother's life being at risk. Furthermore, certain regions have seen regulations on abortion increasingly getting more restrictive in recent years, such as Poland and the United States, which represent significant setbacks in women's decision-making power regarding reproductive health. In the United States for example, the Roe v. Wade decision of 1973, which established the constitutional right to abortion, the U.S. Supreme Court overturned this decision in 2022, with the result that 14 states have enacted laws that render abortion illegal and interfere in the accessibility of reproductive healthcare in respective regions since then (Siegel, 2022). Additionally, in Poland, where since 1993 laws already permitted abortion only in cases of rape, the life of the mother being at risk or severe fetal abnormalities, ruling become even more strict, since the Polish Constitutional Tribunal decision in 2020 of fetal abnormality abortions to be illegal. Effectively, this means that almost all abortions are banned since its ruling having

come into effect in 2021, as most abortions were performed under this provision. This leaves abortion in Poland only to be legal when pregnancy is the product of a criminal act, such as rape, or the mother's life being at risk (Bucholc, 2022).

The overturn of the Roe v. Wade case of 1973 in 2022, making abortion in numerous states of the USA illegal, has far reaching implications going beyond the restriction of women's sexual and reproductive rights. Even before this decision, women living in rural areas of the USA were facing burdens to effectively access services providing abortions by encountering travel distances of over 100 miles. The Supreme Court's decision changing abortion laws now threatens to add to the distance by 249 miles (Kitchener et al., 2022 in Siegel, 2022). This does not only result in increasing travel distances, but also increased costs for reaching abortion providers, on one hand by the prolonged distance, on the other hand by needing to book accommodations due to long distances. The amounts incurred for this do not represent the total cost of using abortion services; they are simply additional expenses on top of the procedure itself and potential lost wages from taking days off work (Myers et al., 2019 in Siegel, 2022). With ¾ of women using abortion services being of low-income, women with financial restrictions make up the majority (Kortsmit et al., 2018 in Siegel, 2022). Additionally, many of those are young and part of the Black minority community (Jones & Finer, 2011 in Siegel, 2022). The issue of financial burdens is not only women having to be able to afford the procedure generally, but to be able to afford it in time. Women needing to collect the money covering all costs might overdue the time limit of possible abortion before being able to provide the required sum. This implies that the number of unintended births will be elevated and, as research has revealed, foster the spiral of poverty. Here the reminder, that low-income women already represent the majority of aborting women. Not only do these circumstances lead to increased poverty, but to gender disparities concerning salary and education, putting these women in even more disadvantaged positions (Siegel, 2022).

Besides disparities in education and salary, women are also more vulnerable to health issues and adverse birth outcomes. Next to economic factors impacting women of all population groups, Black women in the US face even greater disadvantages in maternity care, partly due to economic factors and the lack of effective access to maternal healthcare, which is often a result of living in areas without nearby maternity services The role of the environmental factor is further discussed in the Findings of this research paper. Disparities do not only affect women themselves who are of low income and/or are part of an ethnic minority group. Disadvantages

are rather transmitted to the future generations, among others due to the increased poverty in which the children of those women grow up, limiting their opportunities in life (Siegel, 2022).

Even more economic implications come with the ban of abortion as Chelstowka (2011) is tackling in her article, not only focusing on burdens for women in Poland who (want to) use abortion services, but also introducing how abortion practitioners benefit from restricted abortion laws, that have become even more severe since the publication of the paper. This might intensify the aspects highlighted here. As previously mentioned, effective access to abortion involves not just the prevailing laws but also the societal narrative surrounding women who choose to utilize abortion services. In Poland, next to the legal situation limiting women's possibility to abort in public healthcare services, women are further burdened by the prevailing social opinion, deeming these practices immoral, even within the inner social circle (Chelstowka, 2011). Chelstowka states in this regard, that even women legally eligible to abort, might not make use of it due to the stigma they would have to face. On the other hand, she highlights that abortions do not disappear with strict regulations, but merely shift to a different framework. First, this means these practices happen in the private sector which second, implies they have to be arranged and paid in private. Since there is no official way to make use of it, prices are not regulated and abortion providers can make their own prices, knowing that women are left with no other options and use this as an opportunity to exploit their patients. This is why they have no interest in changing the status of abortion regulations and one can imagine that their business is flourishing even more after the legal situation has been tightened in 2021 (ibid.). Besides impacting the women economically, those circumstances can cause adverse health outcomes for women, since providers might not act out of altruistic reasons but in their own interest and applying unsafe practices.

Economic and health constraints are further fueled by the privatization of the healthcare system in Poland, making their citizens need to pay on their own and creating greater access to individuals in economically privileged positions, paying healthcare services under the table (ibid.). This implies disparities in access to healthcare services with contraception and pregnancy care not being exempt from it. Economic burdens are thus prevalent in the Global South as well as in Global North countries.

Gender gaps are further deepened by males dominating in spaces where policies concerning women's health issues are being discussed and made. This in turn, affects the kind of policies

in place. However, as long as gender roles are still prevalent, even legal liberal frameworks cannot outbalance cultural practices and inequalities persist. Cultural barriers must be removed, and empowerment of women promoted, among other things through education and the equipping of more power, since research reveals that countries with a higher rate of employed women encounter less exposure to intimate partner violence, which leaves her with chances to leave abusive relationships due to being financially independent (Nwogwugwu, 2021). Furthermore, it grants women power over making informed reproductive health decisions, resulting in lower HIV/AIDS and higher maternal survival rates as well as a better health status overall (ibid.).

However, other components add to this subject as seen in the example of occupational and environmental hazards linked to health issues people in the Global South are dealing with at workplaces in agriculture or the industry. There, an increased level of chemicals, dust and more is prevalent and being under the influence of particular environmental conditions is associated with potential health impacts. For example, miscarriages and congenital anomalies can derive from fungicides and pesticide exposure (Okojie, 1994). Next to this, if women work, they do so under more unfavorable working conditions. e.g. long working hours, heavy workload or working by the water (a breeding ground for waterborne diseases) which poses an additive hazard factor to health, both physically and mentally (ibid.). If women had more opportunities to enjoy education and training, it would not only enable them to find professionally active, but they could also additionally avoid being in adverse working conditions that impact their maternal health (Nwogwugwu, 2021).

To summarize the background information of the theoretical framework, international legal frameworks and guidelines aim to prohibit discrimination in all life areas, including maternal health. Health as a fundamental human right is embedded in several international and regional frameworks, among others the UDHR. These documents assert that everyone is entitled to a standard of living that ensures physical and mental health. Ensuring this right involves considering availability, accessibility, acceptability, and quality of healthcare services. States are obliged to respect, protect, and fulfill this right by taking various measures, including legislative and administrative actions.

Maternal health as a human right, in particular, is supported by the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), which mandates equal access to healthcare for women, including services related to pregnancy and childbirth (UN,

1979). Key conferences and programs, such as the International Conference on Population and Development (ICPD) and the Cairo Program of Action, have further emphasized reproductive health and gender equality (Shalev, 2000). Various organizations, including the WHO, or the White Ribbon Alliance, advocate for respectful maternity care with an approach aiming to ensure dignity, privacy, informed choice, and continuous support during labor and childbirth, with the scope to provide for a positive and empowering childbirth experience (White Ribbion Alliance, n.d.).

However, despite efforts by international bodies like the World Health Organization (WHO) and initiatives such as the United Nations and Sustainable Development Goals (SDGs), intersecting discrimination structures and practices hinder the full realization of the right to health in general and maternal health in particular. In other words, a number of intersecting factors, apart from gender, such as race, ethnic background, lower educational level, low economic status, environmental exposures, and even more that are not addressed here due to space and time limitations of the current thesis, make certain women extremely vulnerable to maternal health risks (Chelstowka, 2011; Fang & Alderman, 200; Nwogwugwu, 2021.)Discriminatory structures and behaviors still appear in maternity care. For instance, studies show significant percentages of racial minorities in the US report experiencing mistreatment and discrimination in healthcare settings (Bacak et al. 2005; Chambers et al., 2022).
The multifaceted nature of discrimination and its outcomes and the interconnected nature of human rights -which means that barriers to health rights also impact other rights- necessitate the advancement of an intersectional approach (Harari & Lee, 2021; Green et al., 2017). In order to address broader systemic inequities affecting health outcomes requires a multilayered strategy that includes improving education, economic opportunities, and healthcare accessibility for all women, particularly those from minority communities. The goal is to empower women to make informed decisions about their health and well-being, thereby improving overall health outcomes and reducing disparities (UN, 2015).

In the light of the above, this systematic review addresses several key research objectives regarding racial discrimination and maternal health outcomes. Firstly, it investigates on the question what the association between racial discrimination and health outcomes during maternity is, aiming to discern how discriminatory practices impact the health of mothers. Deriving from this research question further objectives arise. This review will thus explore additional factors contributing to disparities in maternal health beyond racial discrimination,

aiming to provide a comprehensive understanding of the multifaceted determinants at play. Secondly, it assesses the necessary approaches to address the underlying causes of discrimination that contribute to maternal health disparities, emphasizing strategies for promoting health equity. Lastly, the review identifies gaps in current research on racial discrimination in maternal health and evaluates the effectiveness of existing intervention measures aimed at fostering equity in healthcare outcomes. By addressing these research objectives, this systematic review aims to contribute to a holistic understanding of racial disparities in maternal health and to inform evidence-based interventions aimed at reducing these inequities.

4 METHODOLOGY

4.1 Search Strategy

The initial aim was to investigate the underrepresentation of ethnic minorities in maternity within clinical trials through gathering systematic reviews including clinical trials as a source of their findings. However, using electronic databases like EMBASE; NCBI; PubMed; PLoS ONE; The Lancet; ACP Journals; Gates Open Research; ScienceDirect; CINAHL revealed that little data deriving from clinical trials related to maternity is present. This may be due to trials during maternity being a sensitive issue, which future mothers prefer to avoid, driven by the concern it could harm the unborn child or not wanting to decide on the child without its consent (Shankar et al., 2024). Thus, the review was extended to research focused on maternity health-related problems. In order to assure that a large volume of existing research will be considered, we decide to include existing systematic reviews instead of individual studies. Hence the present review is based on recent systematic reviews exploring disparities in maternity health-related issues. Data was gathered from the following electronic databases: EMBASE; NCBI; PubMed;PLoS ONE; The Lancet; ACP Journals; Gates Open Research; ScienceDirect; CINAHL.

To gather data within the framework of this review, we searched through literature to find systematic reviews related to experienced or perceived exposure to discrimination during maternity, risk factors and intersectionality in the context of maternity health, population representation or participation in maternity research, and lastly, potential interventions to improve maternal health. Reviews were selected mainly from 2020 to 2024, in order to include recent findings, with two reviews deviating from it, having been published in 2012 and 2017. Reviews compromising keywords “systematic review” [publication type], “(Racial)

Discrimination", "Maternity", "Risk Factors", "Maternal Research", "Participation", "Equity", "Intersectionality", were included for this review. Search keywords were combined when searching through the databases.

In the first step, pertinent reviews from the databases were collected, then text words in the title, abstract, keyword section, and introduction of a review were identified and extracted. In the second step, a second search was conducted, including new discovered keywords in PubMed. Third, new reviews were taken into consideration by searching through the reviews' references. Titles and abstracts of reviews potentially to be added were analyzed for the search terms. Fourth, collected papers were screened on free access to full text articles. Publications without free full access were excluded. Fifth, after the exclusion procedure, maintained reviews that aligned thematically were grouped into following subcategories 1. Impacts of and impacts on received care; 2. Discrimination and general health outcomes; 3. Birth outcomes 4. Participation in maternity research; 5. Respectful maternity care. Although as it has been already mentioned our primary focus was on systematic reviews, in some cases we also considered individual papers (included in the reviews that constituted our data corpus), in order to clarify particular assumptions or to acquire a deeper understanding of findings. These individual papers have been included in our reference list, since they constituted primary sources of information (Papers that were not individually considered have been solely mentioned as (indirect) in-text-references e.g. "Kortel, 2015 in Rodney, 2021" and are not included in the reference list).

The PICO model was employed for verifying whether to include a review or not, applied with the components stated in the table below (Tab. 1).

First research was undertaken on PUBMED.

Population (**P**)	• The populations studied include • pregnant racialized women • experiencing discrimination and • associated health outcomes.
Intervention (**I**)	• The interventions are less about • traditional medical treatments and • more about identifying and addressing experiences of racial discrimination and • its impact on health outcomes.
Comparison (**C**)	• Comparisons are made on different

	• health conditions between ethnic • minority women and women of the • majority group.
Outcomes (**O**)	• Adverse pregnancy outcomes such as • preterm birth, low birth weight (LBW), • very low birth weight (VLBW), and • poorer mental health outcomes. • Broader health impacts like increased • allostatic load, chronic mental strain, • and systemic discrimination effects. • Roots of discrimination stemming from • past racist structures, impacting other • social determinants

Tab. 1: PICO Model

4.2 Inclusion Criteria and Exclusion Criteria

The following table outlines the criteria on which inclusion or exclusion was based.

Inclusion Criteria	Exclusion Criteria
1) all English language research published in peer review publications were included	1) Other than English language papers
2) Studies that examine discrimination during maternity	2) Studies examining maternal care without focus on racial disparities
3) Studies considering other risk factors such as social determinants were included	3) Publications without free full text access
4) Studies examining participation factors of maternity research were included	4) Papers with related title to this review but without matching text content were excluded from the review
5) The reviews included in this review were mostly published in recent years, between 2020 and 2024, with only two of them deviating being from 2012 and 2017	5) Studies published before 2012 were excluded to ensure updated scientific research information

Tab. 2: In- and exclusion criteria

The inclusion and exclusion criteria clearly defined and outlined the specific results of this systematic review. Publications that did not comply with the eligibility criteria were sorted out; duplicate articles were removed. Above that, reviews with unmatching titles, abstracts or keywords were eliminated. Most papers were excluded due to not providing relevant content for the purpose of this review or not matching our temporal criteria (publication time).

4.3 Study Selection

At first, after search filters such as the year of publication, the research field and type of publication have been applied, 815 results were displayed. It included no restriction on the location. When searching for publications related to disparities in maternal health the number of results reduced to 132. From this number of results the exclusion of 116 were carried out for various reasons, resulting in 9 articles.

We conducted a comprehensive initial search in PubMed, EMBASE and NCBI. First, general filters were applied, namely the publication type (systematic review), and date (from 2012 on). In the next step the research was grouped into 4 broad categories that were concretized after having gathered relevant publications. These categories were created to provide a multilevel perspective on the issue of disparities in maternity: From representing the status quo, to its background and to efforts and recommendations to change it and enhance maternity health equity. These categories were initially named as such: 1. Impacts on and impacts of received care; 2. General health outcomes; 3. Birth outcomes; 4. Intersecting factors of discrimination; 5 Participation in maternity research; 6. Respectful maternity care. This division served to gather information from disparities in maternity created in interpersonal settings, to disparities within institutions and research, to underlying factors, socio-economic attributes and discriminatory roots resulting in these disparities. Furthermore, this research intended to examine intervention measures already in place or by the least published in scientific papers serving as suggestions for future procedures. The effectiveness of measures to improve conditions in maternity health issues was investigated, in order to be able to identify gaps and crucial steps to take in further action. Later on, another category “Participation in Maternity Research” was formulated. Furthermore, in order to get an insight of implemented guidelines “Respectful Maternity Care” was introduced to collect background information on

intersectionality in general but also in relation of implementation into guidelines promoting diversity and equity. The studies incorporated in our data set included randomized controlled trials and nonrandomized studies, quantitative, qualitative analyses and mixed-methods approaches, anonymized medical records questionnaires, and observational studies. They have been published between 2012 and 2023, but they include research material from 1993 onwards. Included studies were all conducted in the Global North.

4.4 Procedure of Data Extraction and Analysis

The first stage of the procedure involved continuous reading of the studies included in the data set and the identification of common topics and the construction of different files on the basis of these topics. The second stage involved extracting segments of text and putting them into different thematic files. Data was extracted manually, using Microsoft Word and organized into tables. The third stage involved looking for thematic patterns, regularities and differences (coinciding findings and contradictory findings) and the construction of subthematic categories within the broader themes/topics (Joffe & Yardley, 2004), as seen in Table 3.

Main Categories	Subcategories
1) Impacts on and impacts of received care	• -
2) Effects on birth outcomes	• Low birth weight and very low birth weight • Preterm birth • Birth weight for gestational age and small for gestational age
3) General health outcomes	• Blood pressure • Stress • Health effects exceeding period of pregnancy
4) Intersectional dimensions of discrimination	• Economic resources • Insurance coverage • Environment • Education
5) Participation in maternity research	• Communication • Trust • Study design (recruitment and facilities)
6) Respectful maternity care	• Communication • Reasons for discrimination: racism, insurance coverage, beliefs • Suggestions from minority women

Tab.3: Main categories and subcategories

5 FINDINGS

Analytic procedure indicated four primary themes: Impacts on and impacts of received care, effects on birth outcomes (low birthweight and very low birth weight; preterm birth; birth weight for gestational age and small for gestational age), general health outcomes (blood pressure; stress; health effects exceeding period of pregnancy), intersectional dimensions of discrimination (economic resources; insurance coverage; environment; education), participation in maternity research (communication; trust; study design (recruitment and facilities)), and lastly respectful maternity care (communication; reasons for discrimination: racism, insurance coverage, beliefs; suggestions from minority women).

This section is organized to first explore the types of discrimination identified in the literature, followed by an examination of their specific health outcomes. Next, the role of other intersection factors is discussed, highlighting how multiple factors influence health conditions. Finally, we review intervention measures aimed at mitigating these disparities and provide recommendations for future research and policy actions. By structuring the findings in this way, we aim to provide a comprehensive overview that not only identifies the current state of knowledge but also points to areas where further investigation is needed to inform effective policy and practice.

5.1 Impacts on and impacts of received care

Examining reviews for the research findings have shown that racial discrimination does not only have its direct influences on the mother's and her unborn or born child's health; rather, the mother's health-seeking behavior can be influenced by experiences with racism in the past, which will then eventually cause impacts on her and her child's health (Van Daalen et al., 2022). This means that ethnic minority women who have had negative experiences in a healthcare setting due to racism, are more likely to avoid engagement with health care services either in order to avoid putting themselves in a racist situation again, or due to distrust into the system because of their past negative experience. Avoiding health care services also includes not seeking health visits in a timely manner in order to receive prenatal care (Pereira et al., 2022). These visits, however, are decisive in order to detect early signs for potential harm and

be able to act preventively, thus impeding certain diseases and complications to arise in the first place (ibid.). Other than that, it has been observed that compared to white women, ethnic minority women encounter more barriers to access maternity care effectively in various locations around the world. Accordingly, a review found that in England maternity care services are consulted at a later stage by women having an ethnic minority background, exposing them to higher risk of perinatal and intrapartum difficulties. In China, on the other hand, a lower number of ethnic minority patients compared to native Chinese women within the services for antenatal care has been identified (Toh & Shorey, 2023). Barriers like this do not only exist during the time of pregnancy, but also persist beyond this time, affecting maternity recovery in a postpartum period. The following findings will represent more concrete information about statements of this paragraph.

5.2 Effects on Birth Outcomes

Besides racial discrimination impacting solely the health of the mother herself, a prevalent finding was the positive relationship between racial discrimination and adverse birth outcomes. Those are namely low birth weight and very low birth weight, preterm births or stillbirths.

5.2.1 *Low Birth Weight (LBW) and Very Low Birth Weight (VLBW)*

It is found that particularly African American women are giving birth to children with low and very low birth weight (van Daalen et al., 2022), precisely facing VLBW with a 2.6 to 3.3 times higher risk than white women. This was found to be connected to racism during childhood causing diastolic blood pressure and eventually affecting the baby's birth weight. Next to this, indirect racism during childhood, adult racism and general racism were also identified as contributing to deviations in infant weight (Hilmert et al., 2014). Confirming this observation, a study analyzing low birthweight deliveries among Black and White women delivers results showing an 4.2 times increased chance of low birth weight for newborns of Black women, with the observation that factors like consumption of tobacco and alcohol, symptoms of depression or net pregnancy weight gain did not interfere in the connection of racism and LBW outcomes (Mustillo et al., 2004). Additionally, a study conducted on women in South Australia showed that perceived racism was linked to a higher rate of low-birth-weight deliveries among aboriginal women (Brown et al., 2019). Experiences of lifetime discrimination in the field of receiving service in a store or restaurant, health care, school, getting a job or at work were found to adversely impact the child’s weight at birth, increasing the probability of very low birth weight. It was sufficient to have had experiences in only one of the mentioned spheres to

result in this outcome, while the probability to end up with a VLBW newborn increased from 90% to 110% when being affected by it in two life domains. The likelihood amounted to even 220% with an increased number of three or more fields in which discrimination had been experienced (Collins et al., 2004). Another study found similar results with an increased VLBW probability of 90% when women faced racial discrimination in at least one life domain and 170% with three or more concerned life domains (Lespinasse et al., 2004).

Of the studies included, only the research paper by Slaughter-Acey et al. (2019) could not show clear evidence for a link between racism and low-birth weight for women over the age of 25. It is to be noted, that a positive relationship between both was still observed, but it did merely not present enough evidence to be stated of significant nature (Slaughter-Acey et al., 2019).

5.2.2 *Preterm Birth*

Apart from low or very low birth weight, the event of preterm birth (PTB) is a very common adverse pregnancy outcome related to racial discrimination (van Daalen et al., 2022). A study found that among African American women, direct as well as indirect exposure to racial discrimination leads to a significant rise of 48% and 45% in the case of preterm labor. Indirect racial discrimination describes the witnessing of another person that is considered to have similar attributes to oneself (Daniels et al., 2020). Another study investigated birth outcomes in relation to the experience of racial discrimination within 12 months before delivery. Its result was similar: The likelihood of preterm birth was increased compared to women not reporting having been affected by racial discrimination, here by 29%. Even though the extent of prenatal care was observed to have an influence on the relation between racial discrimination and preterm delivery, it was stated to be non-significant (Bower et al., 2018). Confirming the connection between recently experienced racial discrimination (in the time frame of 12 months prior to delivery), a further study showed that PTB cases were about 150% more likely to occur when facing high level exposure to racism compared to reports of women with medium- or low-level exposure (Rankin et al., 2011). Another study that examined the effect of microagressions on Back women stated an association as well with PTB (Slaughter-Acey et al., 2016). This was noted for women with mild or medium depressive symptoms affected by moderate daily life racial experience, while severe depressive women did not show an increased risk of PTB.

In contrast to the above findings, results of a study that included 832 Black women in Baltimore

and examined long-term and daily encounters of racism could not identify an one to one relationship between racism and preterm birth. However, it has shown that, if women experience stress or depression, these conditions amplify the negative effects of racial discrimination on the likelihood of preterm births. Therefore, the impact of racial discrimination was mediated by mental health factors such as stress and depression score and the preterm birth was elevated by 32% and 55% for women who reported to have been facing racial discrimination above average in their lifetime and dealing with high or low stress levels or prenatal depression (Misra & Trabert, 2010).

Other than that,, two large sample studies reported no significant link between the occurrence of PTB and the quantitative and prevalent exposure of pregnant women to discrimination in everyday life or over their lifespan (Grobman et al., 2018; Mendéz et al., 2014). Both studies did still observe an increased occurrence of PTB in Black women compared to White women but could not explain it by the phenomenon of encountering racism. However, the identified lack of significant influence could derive from the fact that these studies reported subgroups of a small size and disparities in the demographic compositions of their sample sizes compared to other studies that showed clear evidence on a meaningful influence of discrimination on birth outcomes (Sonderlund et al, 2021).

5.2.3 *Birth Weight for Gestational Age (BGA) and Small for Gestational Age (SGA)*

A newborn is considered to be small for its gestational age when it is below 37 weeks old. Next to preterm birth and (very) low birthweight, small for gestational weight (SGA) and birth weight for gestational age (BGA), also included in the potential impacts of discrimination, are considered to be an adverse health status for the child (Pereira et al., 2022). A significantly higher risk of 90% to deliver a baby small for its gestational age has been identified for Aboriginal women in comparison to white women in the same study which had already identified low and very low birth weight as an outcome of exposure to racism (Bower et al., 2018). Affirming this finding, a study that included Black, Hispanic and Asian women and women from other racial or ethnic minority groups, investigated child weights in the first three years of their life and found that children with mothers having faced discrimination were more often low in weight for their gestational age than those children with mothers not reporting on discrimination (Dixon et al., 2012). Additionally, it was found that African American women over the age of 25 who were exposed to racism were more likely to give birth to babies small for their gestational age compared to women without such exposure. In contrast, there was no

significant link identified between racism and small for their gestational age babies among younger Black women (Slaughter-Acey et al., 2019). Reaffirming the influence of discrimination and SGA of the child, a review of racial discrimination and adverse birth outcomes found interpersonal racism to potentially cause a smaller infant size at birth (Alhusen et al., 2016).

Contrary to the above, no significant relation could be stated between discrimination of mothers and SGA by another study conducted in Ohio, US including 86 Black women and examining interpersonal discrimination and SGA (Gillespie & Anderson, 2018). However, the overall findings stating a link between discrimination and BGA/SGA outweigh findings that have not confirmed a significant link.

5.3 **General Health Outcomes**

Key findings of the systematic reviews examined have commonly found that racial discrimination has negative effects on the health of women with a minority background. This does not only imply physiological changes such as oxidative stress or inflammation, but also causes impacts on mental health, including chronic mental strain and depression (Sonderlund et al., 2021). It is important to note that oxidative stress and inflammation are health issues that do not necessarily remain temporary but can become a long-term health issue. Oxidative stress, for instance, contributes to the progressive loss of tissue and organ function associated with ageing and is involved in several chronic health issues such as cardiovascular diseases, chronic obstructive pulmonary disease, chronic kidney disease, neurodegenerative diseases, and cancer. This implies that oxidative stress has lasting effects on the body over time (Liguori et al., 2018). Among others, high blood pressure and increased cortisol levels are another potential outcome of having to deal with racial discrimination (Pereira et al., 2022). Furthermore, it was observed that constant exposure to discrimination can lead to an allostatic load (Sonderlund et al., 2021), which in turn represents a risk factor for severe health diseases, such as heart diseases, diabetes, or neurological disorders (Guidi et al., 2021). The risk of dealing with preeclampsia is an additional health issue mothers with minority background are above-average exposed to (Pereira et al., 2022). All these negative health outcomes can eventually cause the women's health to be impacted in such a drastic way that they face shorter life expectancies than women not exposed to racial discrimination (Van Daalen et al., 2022). Corresponding to this result, research has revealed that in the US the risk of facing maternal mortality for black

women is three to four times higher compared to white women, while two to three times higher for serious maternal morbidity (Hailu et al., 2022). More detailed findings to be found in the following.

5.3.1 Blood pressure

Outcomes not in relation to the baby's weight or size are other health constraints that can be caused by racial discrimination, as for example increased blood pressure before and during pregnancy. Accordingly, African American women with experience of racism during childhood are observed to have a higher score of diastolic blood pressure pregnancy (Pereira et al., 2022). High pregnancy blood pressure can in turn result into further adverse health conditions, including PTB and LBW (potential outcomes having been mentioned in the above), the requirement to apply a caesarean delivery or neonatal intensive care, preeclampsia, or even perinatal death (Bramham et al., 2014). Findings of a cohort study on Black pregnant women conducted in Los Angeles, CA found that changes in diastolic blood pressure prior to delivery were connected to direct and vicarious exposure to racism, causing in a further step negative changes the child's birth weight (Hilmert et al., 2014). This was specifically the case for women exposed to racism in more than one life domain (e.g. at school, restaurants, stores, medical settings etc.) during childhood and did not appear for women without racist exposure. From the whole data set only one systematic review, including hypertensive disorder in its investigation did not identify any relation to self-reported racial discrimination (van Daalen et al., 2022).

5.3.2 Stress

Stressful events and stress/stress biomarkers were another detected element in relation to discrimination (Pereira et al., 2022), which was found to be linked to LBW, PTB and infant mortality (Hobel & Barrett, 2008). It included maternal stress during as well as before pregnancy. A study found that stress biomarkers such as the adrenocorticotropic hormone and C-reactive protein were substantially increased in Black women compared to White women, regardless of the income or health insurance status of these women (Borders et al., 2015). The former biomarker's function is to stimulate the production as well as the release of cortisol, while an increased level of the latter is an indicator for elevated stress. Next to increased stress levels, racialized communities were observed to be equipped with decreased buffers of stress. The relation between (psychological) stress and experiences of perceived discrimination has been examined by a research paper extracting data from 134 samples with the result of

identifying the association between both elements to be positive (Pascoe & Richman, 2009). An augmented score of PTB by 40% for Black women with experiences of racism was stated in a study in Central North Carolina on expecting women, even reaching an augmented score of 80% in a follow-up study when racist experiences were found to be of high-level nature (Dole et al., 2003). An important finding that was made is that stress is significantly related to allostatic load, which in turn is in strong association with an elevated likelihood not only for pregnancy-related outcomes such as preeclampsia (Hux & Roberts, 2015) but for a variety of physical impacts and long-term health constraints, such as chronic diseases. Those include cancer, diabetes, cardiovascular disease and more (Beckie, 2012; Black & Garbutt, 2002; McEwen et al., 1993). The relation of stress and allostatic load had also been confirmed by the research paper finding discrimination and stress to be connected (Pascoe & Richman, 2009).
Above that, higher scores of yet another stress marker, and additionally allostatic load marker, is prevalent and associated with maternal discrimination, namely the Epstein-Barr virus (EBV), more precisely the EBV virus capsid antigen immunoglobulin (VCA IgG). Higher levels of VCA IgG are considered to be contributing to adverse birth outcomes. This was found in a study conducted on Black and White women in Ohio, US which examined the experience of maternal discrimination and measured lifetime pervasiveness. In every stage of pregnancy and also in the postpartum period the score for IgG antibody titers were of significantly higher score for Black than for White women (Christian et al., 2012). However, it must be noted that this study contained only a small number of cells and might not be representative. Since other studies found other stress markers to be elevated, this study was still included. Cortisol, for example, is another stress marker that was found in a study made on a group of diverse ethnicities in Auckland, New Zealand to be elevated for pregnant women but also for infants, showing a higher cortisol level response at postpartum vaccination. Higher evening cortisol rates in women were found to be in positive relation with ethnic discrimination in comparison to women with low or no ethnic discrimination experience (Thayer & Kuzawa, 2015).

Overall, a systematic review on the relation between interpersonal discrimination maternal experiences and adverse birth outcomes published in 2021, observed that the findings align well with the assumption that interpersonal discrimination results in impactful stress levels among ethnic minority women, eventually posing menaces to a healthy life. For discrimination to cause a measurable impact on stress-related health outcomes, the mere observation of it was sufficient. However, the person witnessed to be discriminated against is required to be considered close to an individual’s background, thus perceived as being similar. The effect of

observing discrimination against an individual not representing attributes of the perceived ingroup, is unclear. (Sonderlund et al., 2021).

5.3.3 Health Effects exceeding Period of Pregnancy

As has been identified in precedent sections, adverse health outcomes do not only affect the birth outcomes isolated or remain within the period of pregnancy but have an effect lasting exceeding this time. One of the indicators were findings revealing that oxidative stress has lasting effects on the body over time (Liguori et al., 2018). Additionally, chronic diseases were found to be possibly triggered by the adverse conditions women with ethnic minority background are facing (van Daalen et al., 2022). Next to this, impacts exceeding the pregnancy period do not only affect the mother herself, but also her child. For example, a study found that children with mothers affected by allostatic load are increasingly affected by dental caries (Guidi et al., 2021).

5.4 Intersectional dimensions of discrimination

Investigating and gathering scientific research publications on maternal health outcomes deriving from experiences with discrimination, it became prevalent that racism is a factor among several other components influencing each other and together resulting in those adverse health outcomes. Therefore, it is to be noted that it is the interplay of the following categories together affecting a woman's health status, albeit being represented as distinct elements. Identified factors are represented in the below section. Many conditions of the factors derive from racist societal structures and now resulting in representing risk factors. While several factors contribute to health outcomes, health disparities are also fostered in the prior steps when accessing or receiving effective health care or accordingly not accessing/receiving it in an effective way. Factors considered to represent barriers to the effective use of health services are listed in the categories below. It is important to acknowledge that further aspects could be examined but are not addressed in depth here or generally not introduced, due the background of this review's drafting, setting limits the extent of research.

5.4.1 Economic Resources

Barriers for using health care services during maternity effectively, which in turn impacts health conditions, have been observed to be further influenced by disposable income, representing one of the core elements (Toh & Shorey, 2023; Hailu et al., 2022). This does not

only refer to accessing health care services, but to facing different treatment depending on the financial status of a woman, once (physical) access was successful (Toh & Shorey, 2023) and impacting health-maintaining behaviors. Those are said to help avoid complications during pregnancy which can eventually impact maternity related health outcomes, e.g. because they are a driver for regular and qualitative check-ups (Pereira et al., 2022).

At last for this section and not confirming previously mentioned findings, there were also results indicating that there were no variations in the proportional causes of death during or within a year after pregnancy among women from various combined ethnic groups, and there were no statistically significant differences in the quality of care they received (Cosstick et al., 2022).

5.4.2 Insurance Coverage

Insurance coverage was found to represent one of the influencing factors of maternal health outcomes. When referring to insurance coverage, it is not solely about whether health insurance was existent or not, but includes the kind of insurance, namely public vs. private insurance coverage.

Among women with no or public health insurance coverage the probability of facing maternal death or severe maternal morbidity was higher than the likelihood among privately insured women. An increased impact on health outcomes was above all observed for women without insurance coverage in terms of a higher score of death related to cardiovascular, severe sepsis, or respiratory issues and death occurring during hospitalization (Wang et al., 2020). Whether women with public health insurance or no insurance at all were of diverse ethnicities or not, compared to privately insured women they were exposed to a higher ratio of extended ectopic-pregnancy hospitalization (Papillon-Smith, 2014; Stulberg, 2015), a higher risk of hospitalization readmission in general (Bacak et al., 2005; Lee et al., 2015) and additionally in the emergency department in a 90-days period after delivery (Batra et al., 2017). A systematic review on social determinants in relation to pregnancy-related mortality and morbidity in the US drew the overall conclusion that the lack of insurance showed to be a substantial factor for mentioned pregnancy-related outcomes (Wang et al., 2020).

5.4.3 Environment

Findings about the environmental conditions a woman is exposed to were repeatedly showing evidence to have an impact on her health. The component of the environment is examined through a social as well as through a physical lens, meaning it takes into account neighborhood conditions, for example access to health improving locations, as well as factors of air quality or pollution (Hailu et al., 2022). Neighborhoods Black women are disproportionately often residing in may not offer any healthy options within reach when referring to green areas such as parks, or locations where to have access to healthy food, namely healthy grocery stores. Since those are contributors to healthy habits and lifestyle, thus a good health status, the lack of healthy options affects preconception, pregnancy, and childbirth negatively (Diez Roux, 2007; O'Campo et al., 2008, Vinikoor-Imler et al., 2011). If instead an unhealthy environment, e.g. containing toxic and polluted elements such as air pollution, happens to be in physical reach it would influence maternal outcomes (Mehra et al., 2017; Mendéz et al., 2014, 2016; Pickett et al., 2005). Historically marginalized and underfunded neighborhoods, where Black people are primarily found to reside, are found to be close to railroads and the industrial area which exposed them more to unhealthy settings than White women. Thus, Black women are unproportionally exposed to adverse environmental settings contributing to maternal health disparities (Hailu et al., 2022). The association of maternal outcomes and social as well as physical environmental setting is reaffirmed by research observing preeclampsia and gestational diabetes influenced by exposures to the environment (Malmqvist et al., 2013; Pedersen et al., 2014). Concretely, it is found that the social and physical environment is positively associated with racial and socioeconomic disparities in maternal health (Gee & Payne-Sturges, 2004; Woodruff et al., 2003).

5.4.4 Education

Several studies have confirmed a woman's lower education level to be a contributor to adverse maternal outcomes. Accordingly, mortality rates related to pregnancy were higher for women with a lower education status (Fang & Alderman, 2000; Hoyert et al., 2000) compared to women with higher education. Above that, it was observed that even among women already being disadvantaged by lower education impacts, additional disparities in mortality existed between black and white women (Fang & Alderman, 2000). A variety of studies extracted in the systematic review of Wang confirmed the association of education level and severe maternal morbidity with the additional note that higher education had a preventative effect on

vaginal births only, thus, not in cesarean births (Wang et al., 2020). While a further study reaffirms the link between lower education level and a higher mortality score (Nelson et al., 2018), another study could not come to this conclusion (Moaddab et al., 2016).

5.5 Participation in Maternity Research

Discrimination effects are not only visible through health outcomes, but are also reflected in participation in maternity research, which often consist of a homogeneous group of participants. Factors enhancing or diminishing diverse participation in studies are examined in the following section. Participation is referring to the period of recruitment and extends to its follow-up, the retention of a participant.

5.5.1 Communication

Communication was found to be a key factor in research participation (Lovell et al., 2023). Participation in studies could in the first step be restricted by the simple fact that potential participants did not feel being addressed due to recruitment material being available in English language only, resulting in a disinterest in participating (Neelotpol et al., 2016; van Delft et al., 2013). Recruitment material included the study content such as invitation letters but also the research conductors (Brown et al., 2015; Lindsay et al., 2021; Neelotpol et al.,2016). Accordingly, it was observed that if recruitment letters were conducted in Spanish for Latina women in the US and contained acknowledgements about health disparities for this particular population group, the score to participate rose accordingly (Brown, 2015). Language as a barrier is further supported by findings stating that bilingual researchers increased participation (ibid.; Barnett et al., 2012).

However, communication is not restricted to language use alone but also includes extra verbal communication. An individual communication style when approaching someone to be potentially recruited was found to be effective in fostering participation. Specifically, this means applying culturally sensitive communication to show respect, which was particularly found for women of South Asian descent in a study (Neelotpol et al., 2016). Additionally, another study found that friendliness was an essential element prior to getting through the study for Brazilians, with friendliness being considered a crucial component of their culture (Lindsay et al., 2021). Overall, inclusive recruitment was encouraged when training regarding cultural competency for research staff was provided (Bodicoat et l. 2021). Not only was taking a

woman's culture into account a factor, but also acknowledging religious beliefs to increase participation (Neelotpol et al., 2016).

Next to this, the frequency of communication between the recruitment team and the individual to be recruited represented an additional factor to be considered. This required showing presence on a regular basis in the clinical setting and providing for ongoing communication. This increased trust in the research team, another crucial factor for successful recruitment addressed below, and a feeling of being valuable (Barnett et al., 2012).

Furthermore, the application of diverse communication techniques and trying several times to reach out to potential participants led to successful recruitment and retention. Contact for reminders about follow-up appointments was identified as an additional key factor (ibid.; Lindsay et al., 2021). Frequent communication was generally important to increase trust and eventually foster successful recruitment.

5.5.2 Trust

Another, very essential component for individuals to consider participation and retention in a study was trust. This implies distrust to pose a barrier for participating in research (Bodicoat et al., 2021; Clark et al., 2019; Corbie-Smith et al., 2002) and scores of distrusts were particularly higher among African Americans (Corbie-Smith et al., 2002; Rajakumar et al., 2009). In the studies included this mainly refers to lack of trust in data processing, meaning distrust regarding the confidentiality of their data and who it will be shared with. Concerns were that sensitive data could be transmitted to law enforcement agencies but also employers or close people such as relatives (Garg et al., 2017; Lindsay et al., 2021, Martin et al., 2013, Savich et al., 2020). This worry could be successfully countered through transparency about the purpose and the manner of data collection and use and the note that data remains confidential (Martin et al., 2013).

Did women trust the research staff, participation in research was increased (Savich et al., 2020) and it was enhanced when community outreach was applied to create trustful relationships between researchers and individuals potentially participating (Barnett, et al., 2012; Lindsay et al., 2021). Trust was further increased when research information was transmitted by trusted facilitators, such as faith communities or community leaders. Above that, community partners were also promoting participation when in place from the start on of the research study. It further safeguarded linguistically and culturally accurate data collection and protocols (Lindsay et al., 2021).

As stated in the section above, communication and frequent contact were observed to be a crucial component in building trust (ibid). Participants showed a higher trust score towards the medical researcher team when they were familiar with it and when they experienced it to be a positive exchange (Barnett et al., 2012). Positive experience was not only a driver to increase trust in current participants but also for future potential participants when hearing about it (Lindsay et al., 2021). The experience was considered positive when respect was provided and participants felt listened to (Farooqi et al., 2022) and good communication was given greater importance than the study information itself (Houghton et al., 2020; Kenyon et al., 2006; Myles et al., 2018; Tooher et al., 2008).

Dismissing participation due to distrust was a factor that did not merely affect ethnic minority women and was observed in some white women being pregnant as well (Baker et al., 2005; Van der Zande et al., 2018). Additionally, trust was also identified as a barrier to receiving respectful maternity care for women of ethnic minorities. When a third party was present, several women reported not being at ease when sharing personal data about their needs stemming from their culture, beliefs or gender e.g. because women did not trust information would remain confidential among those present, such as the interpreter (Toh & Shorey, 2023).

5.5.3 Study Design (recruitment and facilities)

How a study was designed was a decisive factor in whether women would participate in research or not. One crucial point which was already mentioned above, was the consideration of an ethnic minority woman's respective cultural background and norms (Lovell et al, 2023). The framework in which research was done posed an additional constituent for women considering participation, such as time and space provided. Little time and space were a barrier to successful recruitment. Was the procedure further disturbed by frequent interruptions or noise, participation was also reduced (Barnett et al., 2012).

Next, indirect reach out methods through social media posts or posters at social centers resulted in a lower participation rate than personal contact as direct recruitment measure, while information located in waiting areas was found to result in the highest probability for women to participate (Gillespie, 2021; Lindsay et al., 2021; Neelotpol et al, 2016)

Flexibility in terms of communication options favored and enhanced participation. This refers

to the initial approach as well as methods for retaining of women's participation by providing a variety of data collection models such as filling out questionnaires, attending telephone, online, or real-life meetings (Martin et al., 2013).

Time-consuming studies were rather declined and were reported to be a burden due to women's time constraints of having to balance work and family (Garg et al., 2017; Lindsay et al., 2021; Martin et al., 2013). This is why the opportunity to do routine and research appointments at the same time (Barnett et al., 2012; Garg et al., 2017) and flexible options were favored also in terms of the study location, e.g. by facilitating proceedings in a familiar setting outside of the hospital, such as at the church, at home, or social centers (Lindsay et al., 2021).
Above that, the way in which data was collected impacted participation. Non-invasive, namely medical records, as opposed to invasive methods, such blood tests or swabs as well as infant/internal examination, were preferred (Garg et al., 2017; Nechuta et al., 2009; Savich et al., 2020; van Delft et al., 2013).

Lastly, the point of time in which women were approached was considered relevant for an effective recruitment. If women were left with time to reflect whether to participate or not they were more likely to agree (Gillespie & Anderson, 2018; Martin et al., 2013).
However, even though results of some studies mentioned here reported on culturally congruent research members to be beneficial for recruiting women of minority groups successfully, other findings have revealed that this is not favored by all women and might not be considered to suit every potential participant or kind of study (Farooqi et al., 2022). Interestingly, contrary to expectations that racism would pose a barrier to participation in maternal research, results revealed the opposite with the finding that women were encouraged to participate when experiencing racism. Above all, the review by Lovell ended up finding more factors enabling rather than impeding participation (Lovell et al., 2023).

5.6 Respectful Maternity Care (RMC)

This section is investigating RMC's implementation, aiming to provide for equal and fair treatment in the field of maternity care. It examines how their implementation is evaluated by ethnic minority women. Factors overlap with intersecting discriminatory factors and elements identified as barriers for participation in maternal research, where these elements are elaborated to a greater extent.

5.6.1 Communication

As it was already prevalent for successful recruitment of potentially suitable individuals for maternal research, ineffective communication was identified as a barrier to the enjoyment of RMC (Toh & Shorey, 2023). In this review, communication included signages in maternity services and the language applied when in exchange with ethnic minority women. Women reported not receiving considerate treatment and professionals lacking in making efforts to transparent communication when patients were not proficient in English, transmitting to them the feeling of being perceived as a complicated patient (John et al., 2021; Davies, 2001 as cited in Toh & Shorey, 2023). Having to resort to interpreting services was considered an obstacle due to resulting in miscommunication at times. Above that, ethnic minority women felt they were communicated information that was of poor quality about maternity issues during the period of pregnancy or even childbirth (Toh & Shorey, 2023). Verbal abusive language was another example of impolite communication towards ethnic minority women (Henderson et al., 2017; Mohammadi et al., 2017 as cited in Toh & Shorey, 2023).

5.6.2 Reasons for discrimination: racism, insurance coverage, beliefs

Ethnic minority women were found to be disrespected and to be undergoing procedures not taking their wishes into account in the maternity health field due to stereotypical perceptions coming from the staff in maternity health services or estimations of their health conditions that were deriving from wrong assumptions (Davies, 2001; Shibili et al., 2021 as cited in Toh & Shorey, 2023). Women did feel not being listened to, silenced, or ignored by professionals in situations of expressing requests, e.g. when asking to be treated by a female instead of male practitioner due to cultural reasons (Chinouya et al., 2019 as cited in Toh & Shorey, 2023). Scenarios like this were interpreted as “racism” by affected people and believed to be stemming from cultural insensitivity (Jomeen et al., 2013; Mohammadi et al., 2017; Shibili et al, 2021; all as cited in Toh & Shorey, 2023). At the same time, some of ethnic minority women reported having observed women of the ethnic majority receiving advantageous care compared to them (Davies, 2001 in Chon Toh, 2023).

Above that, quality care was identified to be dependent on the kind of insurance women were covered by. Women with public insurance reported to be confronted with perception shaped by stereotypes and bias (Glover, 2021).

Moreover, women did not only feel to be stigmatized based on their race but based on their religion and beliefs. This feeling arose due to their health decisions being ignored which would eventually end up not meeting their expectations of healthcare quality, e.g. when requesting to keep her placenta for religious reasons a woman was deprived from obtaining it and her placenta was subducted (Jomeen et al., 2013 as cited in Toh & Shorey, 2023).

5.6.3 Suggestions from ethnic minority women

There were some reports from ethnic minorities about positive experiences mentioning good support and care, creating the feeling of encouragement; however, they remained scarce. Still, efforts in care about them and their babies were noted, and when staff and patients successfully built good cooperation, it affected increased reliability and quality of care. Ethnic minority women expressed the wish for a culturally sensitive approach in care, which included being taken seriously, being more attentive when interacting with them, and receiving equal treatment (Toh & Shorey, 2023). What elements a culturally sensitive approach includes is elaborated in the "Recommendations" section of the subsequent "Discussion" part.

6 DISCUSSION

Disparities in general health care are increasingly being detected. Maternity is not exempt from it, and this paper's research question focuses on the connection between racial discrimination and adverse maternal health outcomes. Several aims are formulated deriving from this research question, and this section represents the aforementioned relationship between discrimination and maternal health outcomes. In this context, other contributing factors have become salient and relevant, being associated and mutually influencing the issue of racial discrimination, further elaboration below. Contributing and enhancing factors for the participation of maternity research were additionally examined. Moreover, the current implementation and experience by minority women with respectful maternity care (RMC) and its ethics to foster reproductive health is explored. The findings of these categories will be interpreted, and corresponding implications concluded. In the next step, this section will identify gaps in current research as well as in intervention measures. Identified gaps and findings are used to formulate recommendations for further research and practical implementations. The aim of this review is to comprehensively examine the association between racial discrimination and health outcomes in maternity. It seeks to identify other contributing factors to maternal health disparities beyond

race-based discrimination, evaluate the necessary approaches to counter the roots of discrimination, and uncover existing gaps in current research and intervention measures aimed at fostering health equity.

The thesis reveals compelling insights into maternity health outcomes influenced by racial discrimination and socioeconomic determinants. Numerous studies consistently link racial discrimination to adverse birth outcomes, such as low birth weight (LBW) and very low birth weight (VLBW). Researchers have documented higher rates of LBW and VLBW among minority women reporting experiences of racial discrimination during pregnancy (Brown et al., 2019; Collins et al., 2004; Hilmert et al., 2014; Lespinasse et al., 2004; Mustillo et al., 2004; van Daalen et al., 2022). However, findings vary, with studies like Slaughter-Acey (2019) indicating nuances in the impact of discrimination on birth weight across different demographic groups (Slaughter-Acey et al., 2019). Preterm birth (PTB) also shows a significant association with racism, particularly among women reporting discriminatory experiences in the year before delivery (van Daalen et al., 2022). While severe depressive symptoms among racially discriminated Black women do not consistently correlate with PTB risk, long-term exposure to discriminatory stressors is linked to heightened stress levels, impacting pregnancy outcomes (Misra & Trabert, 2010). Grobman et al. (2018) and Mendéz et al. (2014) highlight higher PTB rates among Black women, cautioning against oversimplifying these outcomes solely to racial discrimination (Grobman et al., 2018; Mendéz et al., 2014). The review underscores racial discrimination's impact on birth weight for gestational age (BGA) and the incidence of small for gestational age (SGA) births. Studies involving diverse ethnic groups consistently show associations between discrimination and an increased likelihood of delivering infants classified as SGA (Dixon et al., 2012). However, conflicting findings indicate the need for further investigation into the specific effects on SGA births (Gillespie & Anderson, 2018; Slaughter-Acey et al., 2019). Elevated blood pressure is prevalent among racially discriminated Black women across various life settings, despite some studies not conclusively establishing a direct causal link (van Daalen et al., 2022). Biomarkers like cortisol and C-reactive protein consistently exhibit increased levels in response to racial discrimination, impacting pregnancy outcomes such as low birth weight and preterm birth (Borders et al., 2015; Christian et al., 2012; Pascoe & Richman, 2009). These stress markers also affect infant health, suggesting that the effects of maternal stress are transmitted (Thayer & Kuzawa, 2015). Pascoe & Richman (2018) notes diminished stress-buffering capacities among racially discriminated Black women, contributing to cumulative health risks over their lifetimes.

Beyond racial discrimination, socioeconomic determinants' influence on maternal health outcomes were examined. Financial status also negatively impacts maternal health, though findings on disparities among ethnic minorities vary (Cosstick et al., 2022; Hailu et al., 2022). Insurance coverage emerges as a critical factor, with publicly insured or uninsured women facing higher risks of maternal mortality and severe morbidity compared to their privately insured counterparts (Wang et al., 2021). Environmental factors such as air quality and neighborhood conditions further exacerbate disparities in maternal health outcomes (Diez Roux, 2007; Mehra et al., 2017; Mendéz et al., 2014, 201; O'Campo et al., 2008; Pickett et al., 2005 Vinikoor-Imler et al., 2011). Educational attainment also plays a pivotal role, with lower education levels linked to increased mortality risks among women, particularly impacting minority populations (Fang & Alderman, 2000; Hoyert et al., 2000; Moaddab et al., 2016).

Effective communication strategies and trust in research institutions are critical for minority women's participation in maternity research (Lovell et al., 2023). Multilingual recruitment materials and culturally sensitive approaches prove effective in engaging diverse populations in research endeavors (Barnett et al., 2012; Brown et al., 2015; Lindsay et al., 2021; Neelotpol et al., 2016). Trust in research activities is facilitated when conducted in familiar community settings or led by trusted community figures. Overall, trust levels within maternity research do not significantly differ between Black and White women (Lindsay et al., 2021). Cultural competency among research staff is valued, though preferences regarding staff cultural congruence vary among participants (Farooqi et al., 2022). The section on the implementation of respectful maternity care perceived by ethnic minority women highlights several key factors influencing care: communication, trust, cultural sensitivity, and insurance coverage. Ineffective communication was identified as a barrier to RMC, with issues such as language barriers and poor-quality information leading to feelings of being perceived as complicated patients (Toh & Shorey, 2023). Trust issues arose when sharing personal information in the presence of third parties, such as interpreters, due to confidentiality concerns (ibid.).

Ethnic minority women often experienced disrespect and procedures that ignored their preferences due to stereotypical perceptions from healthcare staff. These experiences were frequently interpreted as racism and cultural insensitivity. Additionally, ethnic minority women observed that ethnic majority women received more favorable care. Stigmatization based on

religion and beliefs was also noted. Women's health decisions rooted in religious practices were sometimes disregarded, leading to dissatisfaction with healthcare quality (ibid.). Quality of care was found to depend on the type of insurance coverage, with women with public insurance often facing stereotypes and bias, negatively impacting their care (Glover, 2021). Some ethnic minority women reported positive experiences when healthcare staff demonstrated support and care, emphasizing the importance of culturally sensitive approaches, being taken seriously, receiving attentive care, and ensuring equal treatment (ibid).

In conclusion, influence of discrimination based on race and other social determinants on health outcomes was not unanimously detected, however, the majority of findings included in this paper indicate an association between those factors. Communication, trust, and study design were areas providing findings about their influence on the willingness of women of ethnic minorities to participate in maternity research. Same factors were identified for impacting the application of respectful maternity care. Even if research findings have not identified a direct relation between (aspects of) discrimination and health outcomes they still allowed room to support an indirect or mediated by other factors relation. For example, even though studies did not identify a significant relation between racism and preterm birth, it was still observed that increased stress (related to discrimination experiences) could generate adverse birth outcomes, including preterm birth (Misra & Trabert, 2010). This signifies that even if discrimination based on race could not be stated to add to adverse outcomes directly, it contributed to a woman's stress level score and would therefore indirectly negatively influence birth outcomes (Slaughter-Acey et al., 2016).

Small gestational age and birth gestational age was generally found to be linked to exposure of interpersonal racism and was only countered by one of the studies (Gillespie & Anderson, 2018), thus evidence confirming such association overriding contradictory results. Regarding the stress levels, the overall observation shows that findings align well with the assumption that interpersonal discrimination results in impactful stress levels among ethnic minority women, eventually posing menaces to a healthy life. For discrimination to cause a measurable impact on stress-related health outcomes, the mere observation of it was sufficient. However, the person witnessed to be discriminated against is required to be considered close to an individual's background, thus perceived as being similar. The effect of observing discrimination against an individual not representing attributes of the perceived ingroup, is unclear. (Sonderlund et al., 2021). This shows the strong effect on individuals of exposure to

racial discrimination, even when "only" experienced indirectly, indicating even more the need to reduce racist encounters for women of ethnic minorities.

One essential environmental aspect with major influence that women need to be aware of is the neighborhood they are residing in. More important to mention is that oftentimes neighborhoods are racially and ethnically segregated and are said to be one of the main areas where Black people are settled (Kramer & Hogue, 2009; Williams & Collins, 2001). This shows that discriminatory structures of the past are still very present and far from being resolved. Black women are (at least) double affected, encountering racial discrimination and being unproportionally affected by residing in deplorable neighborhoods, which are both factors contributing to health disparities. This observation highlights the need to address and tackle all the different areas where the roots of racism still exist.

Racial discrimination has been noted to not only have direct influences on the mother's and her unborn or born child's health, rather, the mother's health-seeking behavior can be influenced by experiences with racism in the past, which will then eventually cause impacts on the health of the mother and the child (Van Daalen et al., 2022). This shows its effect on minority women tending to avoid doctor visits due to negative experiences in the past that range from verbal attacks to disrespect and bias and ignorance of expressed requests from health care practitioners towards patients (Pereira et al., 2022). Avoiding doctor visits does not only imply generally disregarding them but taking them into account in a later phase only. Timely visits, however, are decisive in order to detect early signs for potential harm and be able to act preventively or intervene in due course, thus impeding certain diseases and complications to arise in the first place (ibid.). Other than that, it has been observed that compared to white women, ethnic minority women encounter more barriers to accessing maternity care effectively in various locations around the world. Accordingly, a review found that in England maternity care services are consulted at a later stage by women with an ethnic minority background, exposing them to higher risk of perinatal and intrapartum difficulties. In China, on the other hand, a lower number of ethnic minority patients compared to native Chinese women within the services for antenatal care has been identified (Toh & Shorey, 2023). Barriers like this do not only exist during the time of pregnancy, but also persist beyond this time, affecting maternity recovery in the postpartum period. These observations clearly indicate that barriers to effective healthcare utilization extend beyond logistical challenges. Effective healthcare access is not solely achieved through physical availability; it also requires addressing non-physical factors

that may impede access. Therefore, it is essential to recognize that the nature of these barriers encompasses more than just physical obstacles.

Disrespectful maternity care stems among others from unfavorable attitudes towards minority women, including perceptions about Black women, which we just identified as fueling avoidance in doctor visits. Those perceptions and disbeliefs are deeply rooted in stereotypes that stem from racial societal structures and include incorrect estimation of their health conditions and appropriate treatment, e.g. because of the belief Black women withstand a higher pain level than White women .(Chambers et al., 2022). This is why applying culturally sensitive communication is of high value, since it results in positive perception of health care received and generally increases trust. This in turn influences the reliability of women with minority backgrounds in terms of showing up for doctor visits - increased trust is linked to increased attendance of medical appointments (ibid.) - and has a further effect on increasing trust within their communities (Lovell et al., 2023).

Factors that were drivers for health outcomes were usually observed to be of importance for participation in maternal research in the first place, namely elements like respectful communication, including respect towards cultural background, religious beliefs or active listening and individual requests, trust towards health care practitioners and research team (Barnett et al., 2012; Bodicoat et al, 2021; Lindsay et al, 2021; Lovell et al, 2023). Aspects that were relevant to result in successful recruitment of women from minority groups were equally identified to be of importance for satisfactory received maternity care (Toh & Shorey, 2023). Above that, the environmental aspect influences health conditions in direct as well as indirect ways. On one hand due to segregated neighborhoods with bad air quality and no access to healthy options that cause health problems and where Black women are unproportionally often residing, as explained above (Diez Roux: 2007, Hailu et al., 2022; O'Campo et al., 2008; Vinikoor-Imler et al., 2011). On the other hand the environment in terms of where and how a study is taking place (unfamiliar setting, noisy, interruptive, uncomfortable vs. feeling safe and heard) (Barnett et al., 2012) or how receiving health care is perceived (disrespectful vs. considerate of personal background and requests), influences participation in research as well as attending regular check-ups, which were identified as crucial factor, especially in the realm of preventive care, impeding potential complications from arising (Lovell et al., 2023; Toh & Shorey, 2023).

Discriminatory incidents are affecting all stages concerning maternal health care, starting with the period prior to accessing health care services by seeking (or not seeking) medical professional help in the first place, to the willingness of maternal health research participation and eventually the reception of maternal health care (Toh & Shorey, 2023; Gatny & Axinn, 2011; Lovell et al., 2023; Pereira et al., 2022). Not only are those areas affected as such, but conditions in one part of the procedure will affect the other stages of maternal health care by interacting with each other and ultimately creating a vicious circle: disrespect in health care towards minority women leading to avoidance, which might be interpreted as unreliability, fuel negative perceptions and stereotypes of minority group women and influence how they are received (Chambers et al., 2022). This in turn might contribute to avoidant health-seeking behavior and the wheel of the vicious cycle continues to turn with factors reinforcing each other mutually.

Concretely, this means that underrepresentation of women with ethnic minority background in maternal health research can, due to small sample sizes lead to not being representative and potentially impede prospects of obtaining meaningful and valuable insights into factors crucial to have for the scope of advancing maternal health outcomes for minority women. This in turn, results in a lack of knowledge and untrained medical staff, instructing inappropriate intervention measures, deriving from prevalent false beliefs about this population group such as thinking that Black women are more pain resistant than White women (Chambers et al., 2022). Even if in a particular health care service such beliefs do not dominate health care practitioners' beliefs and even in cases where they are aware that some of their current approaches might not be suitable for minority women, they lack knowledge and training about alternative maternal health care practices, as has been reported by medical professionals themselves (ibid.). Thus, underrepresentation can cause lack of valuable data, leading to lack knowledge to include in training material, leading to untrained staff and inappropriate health care practices that eventually reduce care quality and uphold discriminatory behaviors, further increasing distrust and avoidance of health care visits from the part of ethnic minority women and eventually foster maternal health disparities (ibid.; Lindsay et al., 2021; Pereira et al., 2022; Toh & Shorey, 2023).

As the findings of this review have shown, respectful communication and behavior essentially contribute to the perceived quality of maternal health care for ethnic minority women. However, it has become salient, that not the same factors are equally relevant to each individual

woman and is influenced by her respective cultural and religious background, such as emphasizing friendliness or valuing the inclusion of community members (Lindsay et al., 2021; Neelotpol et al., 2016). Additionally, while some women were found to feel safer with staff members or interpreters of the same/similar cultural background, others would feel restricted to share sensitive data with members of the same community due to fear of judgment and distribution of their personal information within their community (Lovell et al., 2023; Toh & Shorey, 2023). Taking this into account it can be concluded that a "one-fits-all" approach is not suitable and women should not be merely categorized as "White" and "non-White", but being considered with their individual background and likings, which do not merely involve cultural or religious aspects but rather other factors women are exposed to, such as economic resources, mobility and environmental factors that might be taken into account when reflecting on appropriate intervention measures (Filbey et al., 2023).

Against expectations, women that encountered racism were more likely to participate in maternal research. However, this does not appear to be contradictory when taking into consideration women reporting that with their participation, they wanted to counter current conditions in healthcare settings they had experienced themselves due to confrontation with discrimination. Participants thought about benefits for their own family and members of their community when trying to fight the status quo (Lovell et al., 2023). The finding about Black women stating more frequently than White women to be worried about complications during pregnancy and in this regard taking the opportunity of receiving extended maternal care such as extra scans (ibid.) when participating in studies can be stated as indicative of them being more affected by adverse outcomes, from which those concerns could stem. Finally, Lovell's study concluded that facilitators outnumbered barriers, which could possibly be explained by the study investigating recruitment strategies that were successful, (ibid.). However, the objective is to confront all possible obstacles, regardless of the relative number of barriers compared to facilitators.

Moreover, it is important to note that maternal health outcomes can constitute pregnancy-related complications as well as adversities not related to pregnancy (Slaughter-Acey et al., 2019; Sonderlund et al. 2021; van Daalen et al., 2022). Thus, unfavorable health conditions can last beyond the time of pregnancy, eventually not only posing an issue of maternal health but of general health, since outbreaks of chronic diseases were detected as potential outcomes (Liguori et al., 2018; Sonderlund et al., 2021; van Daalen et al., 2021). It reveals that all areas

of life are interconnected, influencing and reinforcing each other. One other aspect in that regard, is that not only the mother but the infant as well is impacted by the mother's experience of discrimination, salient through premature birth or low birth weight of the child, which is a risk for its health (Guidi et al., 2021). Moreover, children have shown to have higher stress responses to vaccines when their mother experiences discrimination (Thayer & Kuzawa, 2015). This highlights again how far impacts of discriminatory experiences spread and can be included to be part of the effects of indirect exposure to racism mentioned before, once again emphasizing its power and the need to further explore and battle it (Hilmert et al., 2014). Additionally, these findings reveal the longitudinal effect of racism, on one hand by outcomes pertinent beyond the period of pregnancy, also because barriers to effective healthcare access remained and were equally prevalent in the postpartum period (Sonderlund et al., 2021; Toh & Shorey, 2023). On the other hand, by its transgenerational heritage, affecting future generations, which puts children in disadvantaged positions from the very beginning (Siegel, 2022; van Daalen et al., 2022).

Research on maternal health has indicated that a variety of factors next to racial discrimination contribute to adverse outcomes. The conditions an individual or population group is living in are a major contributor to the state of a potentially healthy life. This signifies that factors that might appear minor, add to whether an individual's life can develop in a healthy manner or not. To name some examples that meet us daily, the access to healthy food options or a clean and green environment, for example a grocery store or to parks have an influence on a person's life conditions. The reason why proximity to green areas is significant is because studies have shown that neighborhoods close to industrial areas show a higher rate of damaging pollution and noise, which stem from said areas, since toxins are produced at a higher rate in this space. Toxins and pollution in turn influence the life of living species in a negative way, among others by affecting respiratory health (Hailu et al., 2022). The environment does not only play a role in terms of having access to a green area nearby. Moreover, the neighborhood in which a woman resides will have an impact on birth outcomes as studies have shown. As a result, findings suggest that women living in a neighborhood affected by poverty are, compared to women of more privileged areas, facing a higher risk of giving birth to their child at an early stage, the case of preterm birth (Agénor, 2020). Additionally, accessibility to health care services is a relevant element having been observed in several reviews. Here, it has been repeatedly addressed that access does not solely remain on the fact if health care services and options of transport, e.g. trains or buses are in place. Whether they can be effectively used by

an individual might be an obvious relevant point but seems not always to be present when thinking of true accessibility. To understand whether options are truly effective various factors have to be examined, namely “acceptability, affordability, availability, geographical accessibility, and the accommodation of care services" (Toh & Shorey, 2023). Looking at the component of “affordability”, the financial status of an individual, thus the socioeconomic setting, has to be taken into account. Even if from a logistic point of view all necessary elements are in place to access specific services, a person not being able to afford paying for it will not be able to benefit from it and remains deprived of such options (Hailu et al., 2022). Above that, the socio-economic status might not only determine an individual’s mobility, but also the insurance status of a person. It has been found that women with a lack of insurance or being covered by non-private insurance are represented by a smaller number in the use of obstetrical services than women covered by private insurance (Wang et al., 2020). The importance of financial status when it comes to maternity has also been observed by a study finding that preterm births are two times more likely to happen among low-income families. An increased risk for parents not being in employment can also be stated in the matter of children that are small for their gestational age (Agénor, 2020). Additionally, to the socio-economic status, the level of education plays a decisive role in choosing or not choosing to use health care options. Accordingly, it has been observed that women with a lower education level show lower probability rate in making use of obstetrical services (Wang et al., 2020). This finding aligns with a review observing that ethnic minority women finding themselves in their perinatal period are often not aware of what their possibilities are in terms of rights and decisions they can take (Toh & Shorey, 2023). In turn, this affirms that barriers to quality education eventually pose a barrier to quality health care. However, interesting to note is that even people living in better socio-economic conditions will potentially still be affected by adverse health outcomes when facing racial discrimination. Thus, it can be stated that racial discrimination is a decisive driver which cannot be equilibrated solely by a stable socio-economic status (Hailu et al., 2022).

Examining these factors, it becomes prevalent that racism is not an issue solely appearing in interpersonal discrimination, but begins at a way earlier stage, affecting people over a long period of time and putting them in adverse positions. In the end, it becomes visible that the reasons why minority groups often find themselves in disadvantageous circumstances eventually stem from structural racism issues, rooted in the history of colonialism and repression by white supremacy groups (ibid.). This past has left its marks in all areas in life,

which makes racism a multifactorial issue, appearing in a variety of forms. Combating this effectively requires an awareness of the reasons why intersectionality is a crucial element to shed light on, as was the purpose of this section. This perspective will be taken up again when discussing effective intervention measures.

This review corroborates and extends the findings of previous research on the impact of racial discrimination on maternal and neonatal health outcomes. In common with Hailu et al. (2022) and Van Daalen et al. (2022) we indicated how the multifaceted nature of discrimination affects maternal health. The synthesis of existing literature highlights the profound influence of systemic racism and socioeconomic disparities on maternal morbidity and mortality. Similar to Pereira et al. (2022), we found that the long-term impact of discrimination extends beyond immediate health outcomes, influencing psychological stress and hypertension, which in turn exacerbate adverse birth outcomes (Pereira et al., 2022). This echoes Wang's observation that discrimination leads to delayed medical care due to fear of stigma and mistrust in healthcare providers, further contributing to poor health outcomes (Wang et al., 2020).

Moreover, our review delves deeper into the intersectionality of discrimination, considering not only racial but also socioeconomic factors. The complexity of these intersecting determinants underscores the need for intersectional approaches in both research and policy. This approach is supported by Cosstick et al. (2022) and Agénor (2020), who emphasize the importance of intersectional analysis in understanding health disparities. (Agénor, 2020; Cosstick et al., 2022). By integrating intersectionality, our review highlights how multiple forms of discrimination compound to worsen health outcomes for marginalized groups. For instance, lower educational levels and socioeconomic status, often intertwined with racial disparities, were consistently identified as significant factors influencing maternal health. Furthermore, within these disadvantaged groups, racial disparities persisted, exacerbating the risk for minority women, visible through segregated neighborhoods.

The review also highlighted the role of environmental and social contexts in shaping maternal health outcomes. Factors such as neighborhood conditions, exposure to pollutants, and access to healthcare services were found to influence health outcomes. These elements are often intertwined with racial and socioeconomic disparities, further complicating the landscape of maternal health inequities (Cosstick et al., 2022; Gee & Payne, 2004; Wang et al. 2020).

The urgent need for comprehensive and intersectional strategies to combat these inequities is clear. Therefore, our findings call for more research that integrates intersectional perspectives to better understand and address the root causes of health disparities. Policy recommendations need to include enhancing educational opportunities, improving environmental conditions, and promoting cultural sensitivity in healthcare. By addressing the interconnected social determinants and advocating for multilevel interventions, we can move towards more equitable maternal health outcomes for all women.

6.1.1 Limitations and Recommendations for Future Research

Despite the valuable insights provided by this review, several limitations must be acknowledged. The findings presented are based on a relatively small number of case studies, which may not be representative of the broader population. Moreover, the population group varied throughout studies. To put it differently we included studies that tackled issues of "non-White" individuals, without though limiting the population group to a specific minority. Due to the constraints mentioned, it is important to recognize that no grand claims or definitive conclusions can be drawn from this review alone. The limited scope and sample size necessitate caution in interpreting the results and applying them to wider contexts.

To address these limitations and provide a more robust evidence base, future research should focus on conducting more profound meta-analyses. Such analyses would allow for a more comprehensive synthesis of the available literature, increasing the representativeness and generalizability of the findings. These future studies should aim to include a larger and more diverse set of data to capture the full range of experiences and factors influencing maternal health outcomes among different ethnic groups, as well as examine isolated aspects more profoundly.

Furthermore, future research needs to focus on the exploration of mechanisms that link social determinants to health. Although current reviews address the impact of social determinants of health, such as socioeconomic status, on maternal mortality and morbidity, the mechanisms connecting these factors are not thoroughly explored due to insufficient data. Above that, few studies have investigated the underlying processes that explain these associations. Furthermore, there is a need to examine a broader array of determinants, thoroughly investigate underlying mechanisms, and employ diverse study designs to capture the full spectrum of social factors affecting maternal health. Research often oversimplifies diversity by grouping women into broad categories such as "Other than White," which impedes the exploration of their unique

experiences. More subcategories are needed to enable more targeted research and correspondingly obtain more precise findings, which can ultimately be included in the creation of guidelines taking manifold implications of discrimination into account.

Future research should also be extended to include different populations and different methods. Longitudinal studies, for example, are crucial to allow for the understanding of temporal and indirect aspects of social exclusion. Recruiting individuals affected by indirect racist experiences is crucial, since studies have shown that health impacts do not remain at the person directly confronted to such conditions only. This should help to understand and highlight racism's radius and harmful impacts more deeply. Lastly, future research locations should be extended. During the collection procedure, it has become salient that studies are mostly from the Global North, especially the US. Broadening the research to more varied locations is important, as health care systems and societal structures may differ, requiring different approaches for effective implementation of intervention measures. Therefore, studies planned for future execution should promote diversity and inclusion and implement inclusive recruitment strategies, such as delivering study material in diverse languages, providing interpreters during research and having a culturally competent team.

7 CONCLUSION AND RECOMMENDATIONS FOR POLICY AND INTERVENTION

This study attempted a comprehensive and holistic overview of the intersection between racial discrimination and maternal health outcomes. It elucidated several pivotal dimensions, including systemic racism, social determinant risk factors, and various stages of maternal health, such as recruitment, study design, and healthcare encounters. Moreover, it accentuated that health constraints in maternal health transcend the pregnancy period, positioning them within the broader context of general health issues (Liguori et al., 2018; Pascoe & Richman, 2009; Pereira et al., 2022; Sonderlund et al., 2021; van Daalen et al., 2022).. This review also underscored the urgent need for further research into intersectional matters, emphasizing the importance of understanding the synergistic effects of overlapping social identities and systemic inequalities on maternal health. By advocating for more elaborated and inclusive research methodologies, this review contributes to the ongoing efforts to promote health equity and improve maternal health outcomes for all women. The review also highlighted the role of environmental and social contexts in shaping maternal health outcomes. Factors such as neighborhood conditions, exposure to pollutants, and access to healthcare services were found

to influence health outcomes (Hailu et al., 2022). These elements are often intertwined with racial and socioeconomic disparities, further complicating the landscape of maternal health inequities (Toh & Shorey, 2023; Wang et al, 2021).

The complexity of these intersecting determinants underscores the need for intersectional approaches in both research and policy. The review advocates for a multilevel modeling approach to capture the variations in health inequalities by different social determinants. Intersectionality should be central to developing interventions that address the diverse needs of marginalized populations (Agénor, 2020; Green et al., 2017). By integrating intersectional perspectives into both research and clinical practice, healthcare providers can better grasp and mitigate the detrimental effects of racial discrimination on maternal health. This is one of the reasons why it is crucial to investigate more and raise awareness about the discriminative societal structures in place and their manifold implications, one of them concerning health equity. One way is to update guidelines and draft recommendation papers while medical staff and society members should undergo training and be provided with educational events including intercultural communication and cultural sensitivity

To provide for a culturally competent staff and battle bias towards minority women effectively, efforts must be made to remove racial and social biases within medical training curricula. One approach is to educate instructors and individuals who work in health care services. e.g. with mandatory cultural sensitivity training in the course of education for future health care practitioners (Filbey et al., 2023). For already professional active practitioners, obligatory training should be implemented likewise. This should eventually enhance health care quality and experiences for ethnic minorities. Diversity among health care teams and among coaches who are training the health care professionals could further contribute to foster cultural background knowledge (ibid.). Cultural competency training for research staff is essential for understanding cultural differences and developing effective recruitment strategies (Bodicoat et al., 2021). However, training needs to go beyond cultural sensitivity, as other social factors have been identified to be grounds of discrimination as well, further adding to health disparities (Toh & Shorey, 2023). This implies that addressing patients' social needs should be included which requires screening for social determinants of health and providing necessary resources.

Healthcare providers must recognize the weight of structural determinants and accordingly adapt flexible and modifiable study designs, such as offering different locations for where study

is executed or providing for different data collection strategies (questionnaires, online vs. phone vs. real life visits etc.) in cases of mobility or time constraints of recruited women (Lindsay et al., 2021; Lovell et al., 2023). Economic limitations should be countered by offering the opportunity of reimbursement e.g. of bus tickets. Before mentioned funds should include these factors in estimating an appropriate sum available for such purposes (Filbey et al., 2023). Implementing flexible research methodologies that account for personal preferences, thus applying an individual approach to each person are of high importance. General categorization must be disestablished and dividing women into “white” and “non-White” is not enough to effectively battle discriminatory structures (Black/white). Guidelines must highlight heterogeneity within the same communities cannot be disregarded (Harari & Lee, 2021). Additionally, individually adaptive methods could include enabling women to decide whether they agree with interpreters from the same community or not, as findings have shown this factor to have a significant impact on women's sense of security regarding the sharing of sensitive data (Toh & Shorey, 2023).

Realizing those strategies could contribute to building trust between medical professionals, research members, and women of ethnic minorities, since good physician-patient relationships and enhancing social support were found to foster health equities (Lovell et al., 2023). Lastly, a space should be created where suggestions for improvement and evaluation of received care can be expressed, coming back to findings stating that being listened to improves the overall experience of received care. In short, public health scholars, educators, and practitioners should promote research and advocacy to address racial health disparities.

Furthermore, education training should not only be dedicated to health care providers, but for health care receivers likewise. Minority group women, but every other individual as well, could benefit from educational work e.g. by learning about rights they have through comprehensive explanation of everyone’s decision-power. This is also essential to promote CEDAW’s provision of providing access to adequate information. Raising awareness is thus equally important for healthcare providers as it is for receivers. Above that, the medical field is not the only area where such training should be implemented. As mentioned in this review, racial discrimination is encountered in different domains (at school, restaurants, housing, and more) and each one of them should be subject to awareness-raising missions (van Daalen et al., 2022). A holistic approach is crucial to battle discriminately societal structures effectively and sustainably.

To fight health care inequities and to combat modern forms of racism, global efforts are also needed. International collaboration by working with community organizations dedicated to foster (maternal) health and fight ethnic and social disparities are a contribution that could be fruitful, on one hand to exchange information about concrete health disparities and better understand the complexity of underlying factors resulting in health outcomes, on the other hand to counter inequality stemming from roots of racism, by promoting organizations of minority populations and give them a voice (Filbey et al., 2023).

Summarizing recommendations, a multilevel modeling approach is advisable. It can provide for the capture of variations in health inequalities within social identity contexts. Involving community members and researchers in all research phases ensures that studies address relevant social determinants of health. Adopting an intersectionality approach ensures diversity and inclusion in research teams and healthcare, fostering equitable power dynamics among team members and between providers and study participants or patients. Awareness can battle educational discrepancies and empower women through knowledge about their decision power, educational constraints can be countered - even if only partly - with appropriate funds, while cultural sensitivity reduces disrespect in healthcare. Integrating these approaches can address the complex interplay of racial discrimination and health disparities, eventually promoting health equity and improving maternal health outcomes for ethnically diverse populations.

Summed up the recommendations outlined in this report align closely with the provisions of Sustainable Development Goal (SDG) 3, which aims to ensure healthy lives and promote well-being for everyone (UN, 2015).One of the specific targets of SDG 3 that was introduce in the theoretical framework of this thesis is to reduce the global maternal mortality ratio. An example from the recommendations that supports this provision is the emphasis on improving maternal health research by including large groups of people from diverse ethnic backgrounds and employing ethnographic methods. This approach allows for a better understanding of how racial discrimination affects health outcomes for ethnic minority mothers and their children, ultimately informing targeted interventions to reduce maternal mortality. SDG 3.7, on the other hand, focuses on ensuring universal access to sexual and reproductive health-care services by 2030, including family planning, information, and education. Formulated recommendations highlight the importance of providing cultural sensitivity training for healthcare providers and promoting diversity within healthcare teams. This training ensures that healthcare professionals

can offer respectful and informed care to women from diverse cultural backgrounds, enhancing access to necessary sexual and reproductive health services (ibid.).Achieving universal health coverage, another critical target under SDG 3.8, involves providing access to quality essential health-care services and financial risk protection. These recommendations emphasize the need to ensure that healthcare services are accessible and adaptable to the needs of ethnic minority women. This includes implementing inclusive recruitment strategies, offering services in diverse languages, and providing interpreters. Such measures ensure that all women, regardless of their background, have equitable access to essential health services (ibid.).

Recognizing health as a human right, as outlined in international human rights law, underscores the importance of addressing structural constituents that perpetuate racism. Stated recommendations call for tackling these systemic issues by addressing social determinants of health, such as economic stability, education, and neighborhood conditions. By promoting an equitable health system, this ensures that everyone has the right to a standard of living adequate for health and well-being. Sexual and reproductive rights, as recognized by the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), highlight the necessity of access to health care services, including family planning (UN, 1979). This review recommends educating both healthcare providers and patients about their rights and decision-making powers. This education empowers women to make informed health choices and ensures they receive the care and respect they deserve.

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9 APPENDIX I

The systematic reviews considered

1. Chon Toh, Remus Kin & Shorey, Shefaly. (2023). Experiences and needs of women from ethnic minorities in maternity healthcare: A qualitative systematic review and

meta-aggregation. *Women and Birth*, 36(1), 30-38. In any case you need to omit the last table on CONCRETE EXAMPLES DISCRIMINATION

2. Cosstick, E., Nirmal, R., Cross-Sudworth, F., Knight, M., & Kenyon, S. (2022). The role of social risk factors and engagement with maternity services in ethnic disparities in maternal mortality: A retrospective case note review. *EClinicalMedicine.*
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