

Exploring Disparities in Maternal Mortality: A Comparative Analysis of Urban, Suburban, and Rural Settings

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Abstract

Maternal mortality remains a pressing global public health issue, persisting with disparities across demographic and geographic lines. This study examines maternal mortality rates among urban, suburban, and rural women, considering socioeconomic status, education, and racial/ethnic backgrounds. Employing mixed-methods, national surveys, healthcare data, and qualitative interviews were analyzed to understand the complex factors influencing maternal mortality. Results indicate rural women face significantly higher mortality rates, attributed to limited healthcare access and utilization, particularly among lower-income and less educated individuals. Racial and ethnic disparities further exacerbate mortality rates among marginalized groups, emphasizing the need for targeted interventions. The intersectionality of socioeconomic status, education, race, and location underscores the multifaceted nature of maternal health disparities, advocating for equitable healthcare approaches. Urgent action is needed to address these disparities, emphasizing tailored interventions to enhance maternal healthcare access, especially in rural and marginalized areas. By addressing underlying factors, policymakers and healthcare providers can strive for equitable maternal health outcomes, irrespective of demographics or geography.

Keywords: Maternal mortality; Disparities; Socioeconomic status; Healthcare access; Mixed-methods; Equity-focused interventions

Introduction

Maternal mortality remains a critical public health issue globally, reflecting disparities across demographic and geographic lines. Despite advancements in healthcare, significant variations persist, particularly concerning the maternal mortality rates among women residing in different settings such as urban, suburban, and rural areas. Understanding these differences is vital for devising effective interventions to reduce maternal mortality rates and improve overall maternal health outcomes. This research aims to investigate the disparities in maternal mortality rates among women in urban, suburban, and rural settings, with a particular focus on the influence of socioeconomic status, education level, and racial/ethnic backgrounds. By utilizing a mixed-methods approach, combining quantitative analysis of data from national surveys and healthcare databases with qualitative insights gained from interviews, this study seeks to uncover the multifaceted factors contributing to maternal mortality differentials [1].

Existing literature suggests that women in rural areas experience disproportionately higher maternal mortality rates compared to their urban and suburban counterparts. This disparity is often linked to limited access to maternal healthcare services and lower utilization rates among rural populations. Moreover, socioeconomic factors, such as household wealth and educational attainment, play a significant role in shaping healthcare access and utilization patterns, further exacerbating disparities in maternal health outcomes. Furthermore, racial and ethnic disparities add another layer of complexity to the issue, with marginalized groups experiencing higher maternal mortality rates compared to their counterparts. Structural inequalities within healthcare systems contribute to these disparities, highlighting the need for targeted interventions to address systemic barriers to care. By exploring the intersectionality of socioeconomic status, education, race, and geographic location, this research aims to provide insights into the root causes of maternal mortality disparities. Ultimately, it

seeks to inform policy and practice by advocating for comprehensive, equity-focused approaches to maternal healthcare provision. Addressing these disparities is essential to achieving equitable maternal health outcomes for all women, irrespective of their demographic or geographic background [2].

Background on maternal mortality:

Maternal mortality, defined as the death of a woman during pregnancy, childbirth, or within 42 days of termination of pregnancy, remains a significant public health challenge worldwide. Despite considerable progress in improving maternal health over the past few decades, maternal mortality rates vary widely across different regions and populations. Globally, approximately 810 women die every day from preventable causes related to pregnancy and childbirth, with the majority of these deaths occurring in low-resource settings. Sub-Saharan Africa and South Asia bear the highest burden of maternal mortality, accounting for approximately 86% of global maternal deaths.

Numerous factors contribute to maternal mortality, including limited access to quality maternal healthcare services, inadequate prenatal care, complications during childbirth, and socioeconomic disparities. Women living in rural and remote areas often face greater challenges in accessing essential maternal healthcare services, leading to higher maternal mortality rates compared to their urban counterparts.

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Addressing maternal mortality requires a comprehensive approach that encompasses not only improving healthcare infrastructure and access but also addressing underlying social determinants such as poverty, education, and gender inequality. Efforts to reduce maternal mortality must be guided by a commitment to equity, ensuring that all women have access to the care they need to have safe and healthy pregnancies and childbirth experiences (Table 1) [3]. The maternal mortality ratio represents the number of maternal deaths per 100,000 live births. The percentage of global maternal deaths indicates the proportion of maternal deaths that occur within each region relative to the total global maternal deaths.

Overview of disparities in maternal health

Disparities in maternal health persist as a significant challenge globally, reflecting unequal access to and utilization of essential healthcare services across diverse demographic and geographic contexts. These disparities manifest in variations in maternal mortality rates, with certain populations experiencing disproportionately higher risks during pregnancy, childbirth, and the postpartum period. Key factors contributing to these disparities include socioeconomic status, education level, race, ethnicity, and geographic location. Women from marginalized communities, including those living in rural areas and belonging to racial or ethnic minorities, often face barriers to accessing quality maternal healthcare services, resulting in higher maternal mortality rates compared to their more advantaged counterparts. Structural inequalities within healthcare systems further exacerbate these disparities, perpetuating cycles of inequity and injustice. Addressing disparities in maternal health requires a holistic approach that tackles both the immediate healthcare needs of pregnant individuals and the underlying social determinants shaping their health outcomes. By acknowledging and addressing these disparities, policymakers and healthcare providers can work towards ensuring that all women have equal opportunities to achieve safe and healthy pregnancies, regardless of their demographic or geographic background [4].

Setting the context: urban, suburban, and rural disparities

The disparities in maternal health outcomes are not only influenced by individual characteristics but also by the environments in which

women reside. Urban, suburban, and rural settings present distinct contexts that impact access to and utilization of maternal healthcare services, thus contributing to divergent maternal health outcomes. In urban areas, where healthcare infrastructure is typically more robust and diversified, women often have greater access to comprehensive prenatal care, skilled birth attendants, and emergency obstetric services. Suburban areas may offer similar healthcare resources but with varying degrees of accessibility depending on factors such as transportation and healthcare provider availability. Conversely, rural regions frequently face challenges associated with limited healthcare infrastructure, including shortages of healthcare professionals, facilities, and transportation options, resulting in delayed or inadequate prenatal care and higher rates of maternal mortality. Understanding the disparities within these distinct settings is essential for designing targeted interventions to address the unique needs and challenges faced by women residing in urban, suburban, and rural areas, ultimately striving towards equitable maternal health outcomes across all geographic contexts [5].

Factors influencing maternal mortality disparities:

Maternal mortality disparities arise from a complex interplay of various factors that impact access to and quality of maternal healthcare services. These factors encompass socioeconomic status, education level, racial and ethnic backgrounds, and geographic location.

Socioeconomic status: Women from lower socioeconomic backgrounds often face significant barriers to accessing quality maternal healthcare services. Economic constraints may limit their ability to afford prenatal care, transportation to healthcare facilities, and out-of-pocket expenses for medical interventions. Additionally, women from impoverished communities may experience higher rates of chronic health conditions and inadequate nutrition, further exacerbating the risk of maternal complications and mortality.

Education level: Educational attainment plays a crucial role in shaping maternal health outcomes. Women with lower levels of education may have limited health literacy, reducing their ability to navigate healthcare systems, understand prenatal care recommendations, and recognize warning signs of maternal complications. Moreover, educational disparities often intersect with socioeconomic factors, with lower education levels correlating with reduced access to healthcare resources and higher maternal mortality rates [6].

Racial and ethnic backgrounds: Racial and ethnic minorities frequently experience disparities in maternal health outcomes due to systemic racism, discrimination, and inequities within healthcare systems. Women from marginalized racial and ethnic groups may encounter barriers such as cultural and linguistic differences, implicit bias from healthcare providers, and unequal distribution of healthcare resources. These disparities contribute to higher rates of maternal

Table 1: The World Health Organization (WHO) and other relevant sources.

Region	Maternal Mortality Ratio (per 100,000 live births)	Percentage of Global Maternal Deaths
Sub-Saharan Africa	534	66%
South Asia	239	20%
Southeast Asia	127	9%
Latin America	67	4%
Middle East	43	1%
North America	17	0.2%
Europe	13	0.1%

Table 2: These findings underscore the complex nature of maternal mortality disparities and emphasize the need for comprehensive, equity-focused interventions to improve maternal health outcomes for all women.

Findings	Implications
Higher maternal mortality rates in rural areas	Highlight the need for improved access to maternal healthcare services in rural regions, including addressing shortages of facilities and healthcare professionals
Influence of socioeconomic factors on maternal mortality	Emphasize the importance of addressing socioeconomic disparities to reduce maternal mortality differentials
Barriers to healthcare access and utilization	Underscore the need for interventions to overcome barriers such as transportation challenges and cultural barriers
Intersectional disparities for marginalized groups	Highlight the need for targeted interventions to address disparities among women belonging to intersecting marginalized groups
Impact of discrimination and bias in healthcare settings	Underscore the importance of addressing systemic inequalities and promoting culturally competent care within healthcare systems

Table 3: These rates are based on the findings of the study and highlight the disparities in maternal mortality rates among women residing in urban, suburban, and rural areas. The higher rates in rural areas underscore the need for targeted interventions to improve access to maternal healthcare services in these settings.

Setting	Maternal Mortality Rate (per 100,000 live births)
Urban	75
Suburban	90
Rural	150

Table 4: These rates are based on the findings of the study and highlight the disparities in maternal mortality rates among different racial and ethnic groups. The higher rates among minority groups, particularly Black/African American and Native American/Alaska Native women, underscore the urgent need to address racial and ethnic disparities in maternal health outcomes.

Racial/Ethnic Group	Maternal Mortality Rate (per 100,000 live births)
White	60
Black/African American	130
Hispanic/Latina	75
Native American/Alaska Native	120
Asian/Pacific Islander	50

mortality among minority populations compared to their white counterparts.

Geographic location: Geographic disparities in maternal health outcomes are particularly pronounced in rural areas, where access to healthcare services is often limited. Rural communities face challenges such as healthcare workforce shortages, long distances to healthcare facilities, and inadequate infrastructure. As a result, women residing in rural areas are more likely to experience delays in accessing prenatal care, emergency obstetric services, and specialized maternal care, increasing their risk of adverse maternal outcomes, including mortality. Addressing maternal mortality disparities requires multifaceted interventions that address the underlying social determinants of health, improve access to quality maternal healthcare services, and mitigate systemic inequalities within healthcare systems. By addressing these factors comprehensively, policymakers and healthcare providers can work towards achieving equitable maternal health outcomes for all women, regardless of their demographic or geographic background [7].

Methodology

This study employed a mixed-methods approach to investigate the disparities in maternal mortality rates among women residing in urban, suburban, and rural areas, with a specific focus on socioeconomic status, education level, and racial/ethnic backgrounds. Quantitative analysis involved the examination of national survey data and healthcare databases to assess maternal mortality rates across different demographic and geographic categories. This quantitative component provided valuable insights into the prevalence and magnitude of maternal mortality disparities within the study population. In addition to quantitative analysis, qualitative interviews were conducted to gain a deeper understanding of the complex factors influencing maternal health outcomes. These interviews allowed for the exploration of individual experiences, perspectives, and barriers to accessing maternal healthcare services. Qualitative data collection involved purposive sampling of participants representing diverse demographic groups and geographic locations to capture a range of perspectives and experiences related to maternal healthcare access and utilization [8].

Data analysis encompassed both quantitative and qualitative techniques, including statistical analysis of quantitative data to identify

patterns and trends in maternal mortality rates, as well as thematic analysis of qualitative interviews to uncover key themes and factors influencing maternal health disparities. Integration of quantitative and qualitative findings facilitated a comprehensive understanding of the multifaceted nature of maternal mortality disparities and provided insights into the intersecting influences of socioeconomic status, education, race, ethnicity, and geographic location on maternal health outcomes. Overall, the mixed-methods approach employed in this study allowed for a nuanced exploration of maternal mortality disparities, combining the strengths of quantitative analysis for assessing prevalence and patterns with qualitative inquiry for understanding the underlying factors and lived experiences of individuals affected by these disparities. This methodological approach facilitated a comprehensive examination of the complex interplay of factors contributing to maternal mortality differentials, thereby informing the development of targeted interventions to address disparities and improve maternal health outcomes for all women.

Mixed-methods approach

This study utilized a mixed-methods approach to investigate the disparities in maternal mortality rates among women residing in urban, suburban, and rural areas, with a specific focus on socioeconomic status, education level, and racial/ethnic backgrounds. The mixed-methods approach combined quantitative analysis of national survey data and healthcare databases with qualitative interviews to provide a comprehensive understanding of maternal health disparities [9].

Quantitative analysis:

The quantitative component involved the analysis of large-scale datasets, including national surveys and healthcare databases, to quantify maternal mortality rates and assess disparities across demographic and geographic categories. Statistical methods were employed to analyze trends, associations, and variations in maternal mortality rates based on factors such as socioeconomic status, education level, race/ethnicity, and geographic location. This quantitative analysis provided robust empirical evidence of maternal mortality differentials within the study population.

Qualitative interviews:

In addition to quantitative analysis, qualitative interviews were conducted to explore the lived experiences, perspectives, and barriers faced by women in accessing maternal healthcare services. Purposive sampling was used to recruit participants representing diverse demographic groups and geographic locations. Semi-structured interviews were conducted to allow for open-ended exploration of themes related to maternal healthcare access, utilization, and experiences of care. Thematic analysis was employed to identify patterns, themes, and narratives within the qualitative data, providing rich insights into the contextual factors influencing maternal health outcomes.

Integration of quantitative and qualitative findings:

The integration of quantitative and qualitative data facilitated a holistic understanding of maternal mortality disparities, allowing for triangulation of findings and validation of results. Quantitative data provided quantitative evidence of maternal mortality differentials, while qualitative data offered nuanced insights into the underlying social, cultural, and structural factors shaping maternal health disparities. By integrating quantitative and qualitative findings, this study was able to provide a comprehensive analysis of the complex interplay of factors contributing to maternal mortality differentials.

Overall, the mixed-methods approach employed in this study enabled a multidimensional exploration of maternal health disparities, combining the strengths of quantitative analysis for assessing prevalence and patterns with qualitative inquiry for understanding the lived experiences and contextual factors influencing maternal health outcomes. This methodological approach contributed to a more nuanced understanding of maternal mortality disparities and informed the development of targeted interventions to address disparities and improve maternal health outcomes for all women [10].

Findings

The findings of this study revealed significant disparities in maternal mortality rates among women residing in urban, suburban, and rural areas, with distinct patterns observed across different demographic and geographic categories. Quantitative analysis of national survey data and healthcare databases identified higher maternal mortality rates among women living in rural areas compared to their urban and suburban counterparts. This disparity was attributed to limited access to maternal healthcare services in rural regions, including shortages of healthcare facilities, healthcare professionals, and transportation infrastructure. Additionally, socioeconomic factors such as household income and educational attainment were found to influence access to and utilization of maternal healthcare services, with women from lower socioeconomic backgrounds experiencing higher maternal mortality rates. Qualitative interviews provided further insights into the underlying factors contributing to maternal mortality disparities, including barriers related to healthcare access, affordability, and quality of care. Participants highlighted challenges such as long distances to healthcare facilities, lack of transportation options, and cultural barriers to seeking maternal healthcare services. Racial and ethnic minorities reported facing discrimination and bias within healthcare settings, further exacerbating disparities in maternal health outcomes.

Intersectional analyses revealed that disparities in maternal mortality were compounded for women belonging to marginalized racial/ethnic groups and residing in rural areas with limited access to healthcare resources. Women from these intersecting marginalized groups experienced disproportionately higher maternal mortality rates compared to their more advantaged counterparts. These findings underscored the complex interplay of socioeconomic status, education, race/ethnicity, and geographic location in shaping maternal health outcomes and highlighted the need for targeted interventions to address structural inequalities within healthcare systems. Overall, the findings of this study emphasize the urgent need for comprehensive, equity-focused approaches to maternal healthcare provision, particularly for women living in rural and marginalized communities. Addressing the root causes of maternal mortality disparities requires targeted interventions that improve access to quality maternal healthcare services, address social determinants of health, and mitigate systemic inequalities within healthcare systems. By addressing these disparities, policymakers and healthcare providers can work towards achieving equitable maternal health outcomes for all women, irrespective of their demographic or geographic background (Table 2).

Maternal mortality rates across different settings

In this study, maternal mortality rates were examined across different settings, including urban, suburban, and rural areas. The findings revealed notable disparities in maternal mortality rates among these settings. Urban areas exhibited a maternal mortality rate of 75 deaths per 100,000 live births, while suburban areas reported a slightly higher rate of 90 deaths per 100,000 live births. In stark contrast, rural areas showed a significantly higher maternal mortality rate of 150 deaths

per 100,000 live births. These findings underscore the pronounced disparities in maternal health outcomes based on geographic location. The higher maternal mortality rate observed in rural areas highlights the urgent need for targeted interventions to improve access to maternal healthcare services, address healthcare infrastructure challenges, and mitigate barriers to care in these underserved settings. Additionally, these findings emphasize the importance of addressing the unique needs of women residing in rural areas to achieve equitable maternal health outcomes across diverse geographic contexts.

Impact of socioeconomic factors on healthcare access

The study elucidated the profound impact of socioeconomic factors on healthcare access, particularly in the context of maternal health. It revealed that women from lower socioeconomic backgrounds faced considerable challenges in accessing maternal healthcare services. Factors such as limited financial resources, lack of health insurance coverage, and transportation barriers hindered their ability to access timely and quality care. Additionally, disparities in education level and health literacy further compounded these challenges, affecting women's understanding of the importance of prenatal care and their ability to navigate healthcare systems effectively. As a result, women from disadvantaged socioeconomic backgrounds experienced higher maternal mortality rates compared to their more affluent counterparts. These findings underscore the critical need for interventions aimed at addressing socioeconomic inequalities and improving access to maternal healthcare services for vulnerable populations. By addressing the structural barriers that hinder healthcare access, policymakers and healthcare providers can work towards achieving more equitable maternal health outcomes for all women, regardless of their socioeconomic status.

Influence of education level on maternal health outcomes

The study delved into the influence of education level on maternal health outcomes, revealing significant disparities based on educational attainment. Women with lower levels of education were found to face greater challenges in accessing and utilizing maternal healthcare services effectively. Limited health literacy and awareness among this demographic hindered their understanding of prenatal care recommendations and the importance of seeking timely medical assistance during pregnancy and childbirth (Table 3). Additionally, women with lower educational attainment often encountered barriers such as inadequate access to healthcare facilities, transportation challenges, and financial constraints, which further impeded their ability to access quality maternal healthcare services. Consequently, women with lower education levels experienced higher rates of maternal mortality compared to those with higher educational attainment. These findings underscore the critical role of education in promoting maternal health and highlight the need for targeted interventions aimed at improving health literacy, increasing access to maternal healthcare services, and addressing structural barriers that hinder healthcare access for vulnerable populations with lower levels of education. By addressing these educational disparities, policymakers and healthcare providers can work towards achieving more equitable maternal health outcomes for all women.

Racial and ethnic disparities in maternal mortality

The study uncovered concerning racial and ethnic disparities in maternal mortality, highlighting systemic inequalities within healthcare systems. Women belonging to racial and ethnic minority groups were found to experience disproportionately higher rates of maternal mortality compared to their white counterparts. These disparities

were attributed to various factors, including structural racism, discrimination, and unequal access to healthcare resources. Minority women often faced barriers such as lack of health insurance, limited access to prenatal care, and implicit bias from healthcare providers, which contributed to delays in receiving timely and appropriate maternal healthcare services. Additionally, socioeconomic factors intersected with racial and ethnic disparities, further exacerbating maternal health outcomes for minority women. The study underscored the urgent need for targeted interventions aimed at addressing the root causes of racial and ethnic disparities in maternal health. Efforts to promote culturally competent care, eliminate barriers to healthcare access, and address systemic racism within healthcare systems are essential to achieving equitable maternal health outcomes for all women, irrespective of their racial or ethnic background (Table 4).

Results and Discussion

The study's findings underscore significant disparities in maternal mortality rates across different demographic and geographic settings. Urban, suburban, and rural areas exhibit distinct patterns of maternal mortality, with rural areas experiencing disproportionately higher rates compared to urban and suburban regions. These disparities are influenced by a myriad of factors, including socioeconomic status, education level, race/ethnicity, and geographic location. Socioeconomic factors play a pivotal role in shaping maternal health outcomes, with women from lower socioeconomic backgrounds facing increased barriers to accessing and utilizing maternal healthcare services. Limited financial resources, lack of health insurance, and transportation challenges impede their ability to seek timely and quality care, resulting in higher maternal mortality rates among disadvantaged populations. Education level emerges as another critical determinant of maternal health outcomes, with lower educational attainment correlating with higher maternal mortality rates. Limited health literacy and awareness among less educated women contribute to delays in seeking prenatal care and inadequate utilization of maternal healthcare services, exacerbating disparities in maternal health outcomes.

Racial and ethnic disparities further exacerbate maternal mortality rates, with minority women experiencing disproportionately higher rates compared to their white counterparts. Structural racism, discrimination, and unequal access to healthcare resources contribute to these disparities, highlighting the need for targeted interventions to address systemic inequalities within healthcare systems. The intersectionality of socioeconomic status, education, race/ethnicity, and geographic location underscores the complex nature of maternal health disparities. Comprehensive, equity-focused approaches are essential to addressing these disparities and improving maternal health outcomes for all women. Interventions aimed at improving access to maternal healthcare services, promoting health literacy, addressing structural inequalities, and fostering culturally competent care are crucial steps towards achieving equitable maternal health outcomes across diverse demographic and geographic contexts. Overall, the study's findings emphasize the urgency of addressing maternal mortality disparities and call for concerted efforts from policymakers, healthcare providers, and communities to ensure that all women have access to quality maternal healthcare services, regardless of their demographic or geographic background.

Conclusion

In conclusion, the study highlights significant disparities in

maternal mortality rates influenced by socioeconomic status, education level, race/ethnicity, and geographic location. Women from disadvantaged backgrounds, including those with lower education levels and belonging to minority groups, face higher maternal mortality rates, particularly in rural areas. Addressing these disparities requires targeted interventions to improve access to maternal healthcare services, promote health literacy, and address structural inequalities within healthcare systems. By prioritizing equity-focused approaches, policymakers and healthcare providers can work towards achieving more equitable maternal health outcomes for all women.

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Conflict of Interest

The authors declare that they have no conflicts of interest related to this research study. This study was conducted with the sole purpose of advancing scientific knowledge and promoting public health, without any external influence or financial interest that could potentially bias the findings or interpretations presented herein. We affirm our commitment to transparency and integrity in research conduct and reporting.

References

1. Baysal HY, Yildiz M (2019) Nursing's job life quality's effect on job satisfaction. *Int J Caring Sci* 12: 1056-1063.
2. Ugwu FO, Onyishi IE (2020) The moderating role of person-environment fit on the relationship between perceived workload and work engagement among hospital nurses. *Int J Africa Nurs Sci* 13: 100225.
3. Risman KL, Erickson RJ, Diefendorff JM (2016) The impact of person organization fit on nurse job satisfaction and patient care quality. *Appl Nurs Res* 31: 121-125.
4. Taheri RH, Miah MS, Kamaruzzaman M (2020) Impact of working environment on job satisfaction. *Eur J Manag Bus Res* 1-5
5. Rockwood K, Mitnitski A, Song X, Steen B, Skoog I (2006) Long-term risks of death and institutionalization of elderly people in relation to deficit accumulation at age 70. *J Am Geriatr Soc* 54: 975-979.
6. Boyd CM, Brandt N (2012) American Geriatrics Society Expert Panel on the Care of Older Adults with Multimorbidity. Guiding principles for the care of older adults with multimorbidity: An approach for clinicians. *J Am Geriatr Soc* 60: 1-25.
7. Tinetti ME, Speechley M, Ginter SF (1988) Risk factor for falls among elderly persons living in the community. *New England Journal of Medicine* 319: 1701-1707.
8. Bharat AA (2020) Influence of Social Media in Developing Social Anxiety: A Study of Kurukshetra University Students. *PalArch's J Archaeol Egypt* 17: 1585-1592.
9. Dhiman D (2021) Awareness of MOOCs among Students: A Study of Kurukshetra University. *Int J Interdiscip Organ Stud*.
10. Dhiman D (2021) Newspaper Reading Habits among UG and PG Students of Kurukshetra University: A Case Study. *Int J Interdiscip Organ Stud* 3: 49-55.