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REVIEW ARTICLE:

The Women's Health and Well-being in Purvanchal, Uttar Pradesh: An analytical perspective: Women's Health in Purvanchal, Uttar Pradesh

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ABSTRACT

The Purvanchal region of Uttar Pradesh, encompassing districts like Varanasi, Gorakhpur, and Azamgarh, presents a complex scenario for women's health due to socio-economic, cultural, and infrastructural challenges. Despite its rich cultural heritage, the region struggles with stark urban-rural disparities in healthcare access, low female literacy, and entrenched patriarchal norms that restrict women's autonomy in health decisions. Maternal and reproductive health remains a critical concern, with high maternal mortality rates, early marriages, and limited access to contraceptives. Malnutrition and anemia are widespread, exacerbated by poverty and gender-biased food distribution. Non-communicable diseases like diabetes and hypertension are rising, while mental health issues remain underreported due to stigma. Healthcare infrastructure is inadequate, with shortages of trained staff and essential facilities, particularly in rural areas. Cultural barriers, including menstrual taboos and domestic violence, further hinder health-seeking behavior. To address these challenges, a multi-pronged approach is needed, including improved healthcare access, education, economic empowerment, and community-based interventions. Strengthening government schemes, enhancing nutrition programs, and promoting gender-sensitive policies are crucial for sustainable improvements in women's health in Purvanchal.

Keywords: Women's Health, Purvanchal, Maternal Mortality, Socio-Economic Determinants. Reproductive Health, Gender Inequality, Healthcare Infrastructure, Malnutrition, Patriarchy, Public Health Interventions.

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Introduction

The Purvanchal region of Uttar Pradesh stands as a distinctive geographical and cultural entity in eastern India, encompassing several significant districts including Varanasi, Gorakhpur, Azamgarh, and Ballia.[1] This region, steeped in centuries of cultural heritage, presents a complex interplay of traditional values and modern challenges, particularly in the context of women's health.[2] The area's rich historical background, marked by its spiritual significance and educational legacy, contrasts sharply with its contemporary developmental challenges. The socio-economic fabric of Purvanchal reveals stark contrasts and challenges. While urban centres like Varanasi and Gorakhpur have witnessed moderate development with better healthcare infrastructure, the rural areas continue to lag significantly.[3] The region's economy remains predominantly agricultural, with limited

industrialization and formal sector employment opportunities. This economic structure particularly affects women, who often face restricted access to financial resources and, consequently, to healthcare services.

The women's health in Purvanchal is deeply influenced by traditional social structures and cultural norms. The prevalence of patriarchal systems often limits women's autonomy in healthcare decisions.[4] Family structures typically follow traditional patterns where male members hold primary decision-making power, including in matters of women's health. This social dynamic often results in delayed healthcare seeking behaviour and limited access to preventive care services. The healthcare infrastructure in the region presents significant challenges too. The urban centers serve as regional medical hubs with relatively better facilities whereas the rural areas face acute shortages of healthcare services. Primary Health Centers (PHCs) and Community Health Centers (CHCs) often operate with limited resources, inadequate staffing, and irregular supply of essential medicines. The shortage of female healthcare providers further complicates women's access to healthcare, particularly in conservative rural communities.[5]

The educational disparities in the region also significantly impact health awareness and outcomes. While urban areas show improving literacy rates, rural areas, particularly among women, continue to face educational challenges. This educational gap directly affects health literacy, understanding of preventive healthcare, and awareness of various government health schemes and programs. In addition, the economic challenges in Purvanchal too manifest in various forms affecting women's health.[6] Limited employment opportunities, high poverty rates, and significant informal sector employment mean that many families struggle to afford healthcare. Women, in particular, often face the burden of limited financial resources allocated to their health needs, with family resources frequently prioritized for male members.

This complex interplay of geographical, socio-economic, cultural, and infrastructural factors creates a challenging environment for women's health in Purvanchal. Understanding these underlying factors is crucial for developing effective interventions and policies aimed at improving women's health outcomes in the region.

This article provides a comprehensive analysis of women's health issues in Purvanchal, focusing on the determinants, challenges, and potential solutions.

Socio-Economic Determinants of Women's Health in Purvanchal

Women's health in Purvanchal is intricately linked to socio-economic factors such as poverty, education, and employment. According to government data, over 30% of the population in Purvanchal lives below the poverty line, limiting access to nutritious food, sanitation, and quality healthcare. Poverty restricts access to nutritious food, quality healthcare, and education, all of which are crucial for maternal and reproductive health.[7] Women from economically disadvantaged backgrounds are more likely to experience complications during pregnancy and childbirth.

The literacy rates, particularly among women, are significantly lower than the national average, contributing to a lack of awareness about basic health practices and reproductive rights. In the context of health, education plays a very pivotal determinant of health, and in Purvanchal, the female literacy rate remains below the national average. Women with limited education often lack awareness about basic health practices, maternal care, and hygiene, which increases their vulnerability to diseases. Poor education levels also correlate with early marriages, leading to high adolescent pregnancy rates and associated health complications.[8] Efforts to improve educational access for girls, such as government programs and non-governmental initiatives, can have a transformative impact on their health outcomes.

Unemployment and gender disparities further exacerbate health issues. Women in rural Purvanchal often engage in unpaid agricultural labor or low-paying jobs, leaving them financially dependent and less likely to prioritize their health. Moreover, the absence of targeted programs to address the unique challenges faced by women, such as income inequality and limited ownership of property, exacerbates their vulnerability. Economic dependency often limits women's ability to make independent health decisions, leaving them reliant on male family members who may not prioritize their needs. Economic dependency is another significant factor affecting women's health in Purvanchal.[9] The region grapples with poverty, with many families surviving on subsistence agriculture or low-paying daily wage labor. Women often have little or no financial autonomy, limiting their ability to seek medical care. Malnutrition, a direct consequence of poverty, is rampant among women, leading to

anemia, low immunity, and complications during pregnancy. Policies aimed at enhancing women's participation in the workforce and providing skill-based training can help alleviate these issues.

In addition, the traditional gender roles, societal norms and stigmas significantly influence women's health in Purvanchal. Women's health needs often take a backseat to family priorities. Limited autonomy in decision-making, especially concerning reproductive health, leads to high fertility rates and unmet contraception needs. Social stigmas surrounding menstruation and reproductive health also prevent women from seeking timely medical advice. Addressing these challenges requires community-level interventions, including awareness campaigns and engaging local leaders to shift perceptions. In many societies, discussing reproductive health openly is taboo, leading to a lack of awareness and delayed medical intervention. Gender inequality further compounds these challenges, with women often lacking the autonomy to make decisions about their own health.

The environmental conditions in Purvanchal further exacerbate health issues. Poor sanitation and lack of access to clean drinking water contribute to the prevalence of waterborne diseases, which disproportionately affect women, who are often responsible for household chores involving water usage. Furthermore, indoor air pollution caused by traditional cooking methods using biomass fuels increases respiratory problems among women.

Maternal and Reproductive Health

Maternal and reproductive health is a critical aspect of women's health in Purvanchal which covers the entire duration initiating from pregnancy, childbirth, and the postpartum period. In many low-income regions, including rural areas in developing countries, maternal health services are inadequate. Poor infrastructure, insufficient healthcare professionals, and financial barriers prevent women from accessing timely medical care. Additionally, social factors such as early marriages, high fertility rates, and gender-based disparities exacerbate maternal health challenges. Globally, maternal mortality remains a significant concern, with many deaths resulting from preventable causes such as severe bleeding, infections, high blood pressure, and unsafe abortions. Limited access to skilled healthcare during childbirth is a leading factor contributing to these deaths.

The region has one of the highest maternal mortality rates (MMR) in India, attributed to inadequate antenatal care, poor nutritional status, and the prevalence of home deliveries conducted by untrained birth attendants. According to the National Family Health Survey (NFHS-5), only about 60% of women in Purvanchal receive the recommended four antenatal check-ups during pregnancy.[10] Early marriage and teenage pregnancies are common in the region, further compromising maternal health. Nearly 25% of women in rural Purvanchal are married before the age of 18, leading to higher risks of complications during pregnancy and childbirth.[11] Limited access to contraceptives and family planning services also contributes to high fertility rates and unplanned pregnancies. The absence of comprehensive sex education in schools perpetuates misconceptions about reproductive health, leaving young women ill-prepared to make informed decisions.

Compounding these issues is the lack of emergency obstetric care. While district hospitals provide some services, the availability of caesarean sections and blood transfusions remains inconsistent in many rural areas. Many women are forced to travel long distances to access such care, often resulting in delays that can prove fatal. The need for better-trained midwives and community health workers is evident, as they could play a pivotal role in addressing this gaps.[12]

The reproductive health extends beyond pregnancy to encompass the entire reproductive system's well-being throughout a woman's life. This includes access to contraception, prevention and treatment of sexually transmitted infections (STIs), and addressing reproductive system-related diseases like cervical and ovarian cancers. It can be assumed that the reproductive health is utmost essential to make informed choices about their bodies and lives by the empowering women. Unmet needs for contraception are a significant issue in many parts of the world. This leads to unintended pregnancies, which often result in unsafe abortions and associated health complications. Education and access to modern contraceptive methods are vital in addressing this gap. Comprehensive reproductive health services also play a critical role in preventing and managing STIs, which can have long-term consequences if left untreated.

Nutritional Challenges

Malnutrition among women in Purvanchal is a pervasive issue. Studies show that over 40% of women in the region are anaemic, a condition often linked to poor dietary intake, frequent pregnancies, and lack of healthcare.[13] This prevalence rate exceeds the national average and poses particular concerns in rural and semi-urban areas. Recent health surveys reveal that the situation is especially dire among women aged 15-49, with pregnant women facing the highest risk. In many households, women often eat last and least, a practice that deprives them of adequate nutrition. This ingrained cultural norm needs to be addressed through awareness campaigns that emphasize the importance of women's dietary needs, especially during pregnancy and lactation.

Among all nutritional deficiencies, Iron-deficiency anaemia is particularly prevalent, increasing the risk of preterm births and low birth weight babies. It is the most prevalent nutritional disorder in the region. The condition manifests through various symptoms including fatigue, weakness, and decreased work capacity, significantly impacting women's daily lives. Medical data indicates that anaemic mothers are at a substantially higher risk of: Preterm deliveries (1.5-2 times higher risk), Low birth weight babies (2-3 times higher risk), Maternal mortality during childbirth and Postpartum complications. Beyond iron deficiency, women in Purvanchal face multiple vitamin deficiencies that compound their health challenges:

Vitamin A Deficiency: This deficiency affects approximately 30% of women in the region, leading to: Compromised immune function, increased susceptibility to infections, Night blindness, particularly concerning during pregnancy and reduced ability to fight common illnesses and vitamin D deficiency which is prevalent up to 70% of women in Purvanchal resulting in: Poor bone mineralization, increased risk of osteoporosis, Muscle weakness and compromised calcium absorption

The Public Distribution System (PDS) and government nutrition programs like the Integrated Child Development Services (ICDS) have shown limited success in addressing malnutrition due to inefficiencies in implementation and lack of awareness.[14] Seasonal food insecurity further exacerbates the problem, particularly among women from marginalized communities. Cultural dietary restrictions during pregnancy and postpartum periods also contribute to inadequate nutrition, undermining maternal and child health outcomes.

Non-Communicable Diseases and Mental Health

Non-communicable diseases (NCDs) such as diabetes, hypertension, and cervical cancer are emerging health concerns for women in Purvanchal. Recent epidemiological data indicates: A 15% annual increase in diabetes cases among women aged 30-50.[15] The diabetes epidemic among women in Purvanchal presents unique challenges: The risk factors consists of Sedentary lifestyle changes, Poor dietary habits and increased consumption of processed foods, Genetic predisposition, Limited access to regular blood sugar monitoring and Pregnancy-related diabetes with inadequate follow-up. Similarly hypertension causes significant issues in the women's of reproductive group. It affects approximately 25% of adult women with rising obesity rates, particularly in urban and semi-urban areas. The prevention and control is often difficult because of limited awareness of risk factors, irregular blood pressure monitoring, salt-heavy traditional diets, stress-related lifestyle factors and poor medication adherence.

In addition, the increasing cases of thyroid disorders, autoimmune conditions are also observed. The lack of regular health check-ups and awareness about preventive care contributes to the late diagnosis of these conditions. Among the cancer related diseases two cancers are most prevalent i.e. cervical and breast cancer are seen. Cervical cancer screening rates are abysmally low, with most women unaware of the importance of Pap smears and HPV vaccinations. The situation regarding cervical cancer is particularly concerning because of Less than 5% of eligible women undergo regular screening, Limited availability of HPV vaccination programs, Late-stage diagnosis in over 70% of cases, Poor awareness of early warning signs and cultural barriers to gynaecological examinations. Breast cancer, another significant concern, often goes undetected until advanced stages due to limited access to mammography services. The incidence of Breast Cancer is also challenging because of absence of systematic screening programs, limited access to mammography facilities, Cultural stigma around breast examination, Poor awareness of self-examination techniques and High cost of treatment.

Another critical issue often overlooked is mental health. Depression and anxiety are prevalent among women, driven by factors like domestic violence, financial stress, limited legal recourse, social pressure to maintain silence and lack of social support.[16] The limitation in employment opportunities, wage discrimination, burden of household expenses and limited control over financial decisions also aggravates it. Moreover the social perceptions such as mental health issues viewed as personal weakness, fear of social ostracism, marriage prospects affected by mental health history, Family reputation concerns and religious and supernatural beliefs affecting treatment-seeking cause's further inability to get optimum treatment. However, mental health services remain scarce, with a severe shortage of trained professionals and facilities. The stigma surrounding mental health further discourages women from seeking help, leaving many to suffer in silence. Initiatives to integrate mental health services into primary healthcare settings have been slow to take root, despite their potential to reach a broader population.

Efforts to raise awareness about mental health must involve community-based interventions that include counselling and peer support groups. Addressing domestic violence through legal and community support mechanisms can significantly alleviate the mental health burden faced by women in Purvanchal.

The Role of Healthcare Infrastructure

The healthcare infrastructure in Purvanchal is inadequate and poorly equipped to address the region's complex health challenges. The health centers often lack essential medical supplies, trained staff, and diagnostic facilities. The doctor-to-patient ratio in the region is far below the recommended standards, forcing many women to travel long distances for specialized care. Broadly there are two types of health center- Primary Health Centers (PHCs) and Community Health Centers (CHCs).

Primary Health Centers -The fundamental building blocks of rural healthcare face multiple challenges: Average doctor vacancy rate of 35% across PHCs, Critical shortage of female healthcare providers, only 60% have regular electricity supply, Less than 40% maintain proper cold chain facilities, Limited or no laboratory services, Inadequate medicine storage facilities and Poor waste management systems.

Community Health Centers- Secondary care facilities struggle with: Shortage of specialists (over 80% positions vacant), Limited surgical capabilities, Inadequate emergency care facilities, Poor maintenance of medical equipment, Limited diagnostic capabilities, Insufficient bed capacity and Irregular supply of essential medicines.

The region faces severe staffing challenges: Doctor-to-patient ratio of 1:3200 (against WHO recommendation of 1:1000) with only 20% of required specialist positions filled. There is severe shortage of nursing staff (40% vacancy), with limited number of trained laboratory technicians, insufficient paramedical staff and high turnover rates among medical professionals.[17] The Ayushman Bharat scheme and other government initiatives have aimed to bridge these gaps, but their impact remains limited due to poor implementation and lack of awareness among beneficiaries.[18] Strengthening healthcare infrastructure, particularly in rural areas, is crucial to improving women's health outcomes. Mobile health units and telemedicine services could play a significant role in addressing these gaps, especially in hard-to-reach areas.

Cultural and Social Barriers

Cultural and social barriers significantly influence women's health-seeking behaviour in Purvanchal. Traditional beliefs and practices often discourage women from accessing modern healthcare services. For instance, menstruation is still considered taboo in many parts of the region, leading to poor menstrual hygiene and associated health issues. It also causes restricted access to religious and social spaces, limited discussion of menstrual health, poor knowledge transfer between generations, restricted mobility during menstruation and impact on education and work participation.[19] Many women lack access to affordable sanitary products, relying instead on unhygienic alternatives that increase the risk of infections. In addition, the menstrual hygiene management is also affected due to reasons such as high cost of sanitary products, limited availability in rural areas, poor disposal facilities, environmental concerns and storage and privacy issues.

The gender-based violence also affects the health by physical violence, psychological violence, chronic pain conditions and substance abuse. The domestic violence and gender-based discrimination further restrict women's ability to make independent health decisions. A 2021 study revealed that nearly 40% of women in rural Purvanchal experienced some form of domestic

violence, impacting their physical and mental well-being.[20] Empowering women through legal literacy programs and access to support services could help mitigate these issues. Community-based interventions that involve men and boys in challenging harmful gender norms are also crucial. The entrenched patriarchal norms in the region necessitate sustained efforts to challenge gender biases. This includes engaging local leaders and influencers to promote gender equality and encourage healthier attitudes towards women's roles in society.

Recommendations for Improvement

Addressing women's health issues in Purvanchal requires a multi-faceted, comprehensive approach that addresses social, economic, cultural, and medical challenges. Improving healthcare infrastructure, increasing education, and addressing cultural norms are crucial steps. These efforts must be supported by robust policies and community engagement to ensure sustained impact. By prioritizing women's health, Purvanchal can not only enhance the well-being of its women but also foster long-term societal progress.

The socio- economic determinants can be improved by addressing the major issues such as working on education and awareness to promote gender-sensitive education about nutrition, maternal health, family planning, and hygiene by Health literacy programs. Similarly it is also important about the economic empowerment of women for which skill development and employment programmes by providing vocational training, micro-financing and self-help groups reduces poverty and ultimately its impact on health. The gender biasness also affects the women throughout the period of pregnancy especially when they are working so the provision of paid maternity leave and workplace support is strongly advocated for work and health balance.

Strengthening Healthcare Infrastructure- The healthcare at the grass root level can be strengthened by increasing the number of PHCs in rural areas, ensuring they are well-equipped and staffed with gynecologists and trained nurses. The deployment of mobile clinics can provide accessible healthcare in remote villages with special focus on maternal health, reproductive health, and chronic diseases like anemia and malnutrition. The enhancement of maternal and child health services by ensuring regular check-ups, nutrition counselling, and safe delivery practices. It is also necessary to encourage institutional deliveries by increasing the availability of nearby facilities. The training of community health workers and midwives to handle childbirth complications can decrease the maternal and infant mortality rate. And the vaccination programs for pregnant women and children are required to be maximised.[21]

Similarly, the nutritional deficiencies are required to be taken care of by supplementing and distributing iron, folic acid, calcium, and vitamin supplements through Anganwadi Centers and health camps. The nutritional quality in schools to address malnutrition among adolescent girls to ensure the proper growth of female gender and awareness programmes is to be runned to promote balanced diets and locally available nutritious food through village-level workshops.[22] The awareness and education regarding the health requires health education programs by conducting community awareness campaigns on menstrual hygiene, contraception, and sexually transmitted infections (STIs), adolescent health education: about puberty, reproductive health, and hygiene and community mobilization. The family planning programmes should be promoted about accessible contraception, sterilization camps and encouraging male involvement in family planning and reproductive health discussions. The empowerment of women economically and socially is done by Self-Help Groups (SHGs) to improve financial independence, enabling better access to healthcare, skill development vocational training to women to improve their socio-economic status and community leadership to encourage women's participation in village health committees and local governance.[23] The sanitation and hygiene should be ensured for which clean water supply, sanitary facilities and behavioural change campaigns to promote personal hygiene and cleanliness through targeted interventions.

The health facilities should be more interconnected by telemedicine Services to connect rural women with specialists, enabling mobile health apps for health tracking, appointment scheduling, and health education in regional languages and SMS Alerts to set reminders for vaccinations, check-ups, and medication adherence.[24] The cultural and social barriers can be minimized by cultural sensitivity training, community dialogues and legislation and enforcement. Several government schemes like "***Ayushman Bharat and Janani Suraksha Yojana***" for women's health are been implemented and collaboration with NGOs, local businesses, and private hospitals are done to improve healthcare delivery along with CSR Initiatives. The most important factor is

to ensure the monitoring and data collection by regular monitoring of health indicators, including maternal mortality, anaemia prevalence, and vaccination rates along with establishing platforms for community feedback to improve service delivery with impact assessment.

Social Support and Legal Frameworks- The gender biasness related problems which are often faced by women which ultimately affects their health requires specific and strong laws and social acceptance of these laws. These could result in reducing gender-based violence, promote gender equality and strengthen legal protections. The community engagement is also necessary where the men are educated and engaged in various social programmes for women's health initiatives and to strengthen local networks to provide health education and link women to healthcare services.[25]

The Purvanchal region of Uttar Pradesh presents a complex and challenging landscape for women's health, shaped by deep-rooted socio-economic disparities, cultural norms, and inadequate healthcare infrastructure. Despite Government initiatives like Ayushman Bharat & ICDS, persistent gaps in implementation, awareness, and accessibility hinder progress. Key issues such as high maternal mortality, widespread malnutrition, limited reproductive health services, and the burden of non-communicable diseases underscore the urgent need for targeted interventions. By prioritizing gender-sensitive policies, community participation, and sustainable health systems, Purvanchal can transform women's health outcomes, fostering long-term socio-economic progress. The path forward demands collaboration among government, NGOs, and local stakeholders to ensure no woman is left behind. Implementing these measures with sustained effort and community involvement can significantly enhance women's health in Purvanchal, Uttar Pradesh.

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