



# Women's Empowerment: Bringing Women's Rights and Health into Focus- A Comparative Analysis of State Fact Sheets of National Family Health Survey (NFHS)-4 & 5

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## ABSTRACT

**Introduction:** Women's empowerment is a crucial factor for economic and social growth. India being committed to making women contribute equally to the growth of the country by 2030 (SDG-5), this study highlighted the major shortcomings in the domain of Women's health, social and economic growth parameters.

**Methods:** For this study, data related to health and non-health parameters were used from National Family Health Survey factsheets. In reference to "the Global Gender Gap measure by the World Economic Forum", the indicators have been classified into 4 broad themes, for each of which, indicators were selected from NFHS factsheet for analysis, interpretation, and reporting.

**Results:** A 2.9% increase in the child sex ratio from 991 to 1022 females per 1000 males over the last two NFHS rounds, indicates a significant societal shift in the country. Out of 21 selected indicators, 4 parameters namely Screening test for cervical and breast cancer, Marriage of women before 18 years of age and Anaemia amongst women have shown a negative change over the past 5 years.

**Conclusion:** The study found that, India has made significant progress around the health, education, economic and social empowerment parameters. But to get an adequate assessment of developments, we need to expand the basket of indicators to holistically analyze change.

**Keywords:** Women empowerment, SDG-5 goal, Social and economic growth, Health metric

## INTRODUCTION

The concept of women's empowerment as defined by the World Bank talks about expansion of freedom of choice to shape one's life catering to the multidimensional needs of progress<sup>1,2</sup>. Women's empowerment aims to making women capable enough to raise her capacity to manage a more enriched life<sup>3</sup> and making them realize their full powers in all spheres of life<sup>4</sup>. As per Baltiwala, 1994, women's empowerment is a process of facilitating individuals to think, act and control work in an autonomous way that would help them define, challenge and overcome barriers of their life<sup>5</sup>.

Despite advancement in eliminating the health and social disparity, gender equality remains an intangible goal<sup>6</sup>. Although women work two-thirds of the world's working hours, they earn only 10% of the world's income, representing less than 1% of the world's property and inequity experienced by women<sup>7</sup>.

To highlight the vital leadership abilities of women, global women empowerment is one of the important goals to be achieved under previously defined MDGs, and SDGs approved by the United Nations<sup>8</sup>.

The MDG3 aims promoting gender equality and empower women, by addressing individual's sustaina-

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ble economic, social and health needs. The SDGs, target to eliminate gender discrimination and ensure access to resources. The developed countries, are working together with the developing and underdeveloped countries to identify the key challenges and achieve milestones<sup>8</sup>.

As per 2011 census, women make up about half (~46%) of the total population of the country. Government of India has also empowered the States to adopt measures of positive discrimination in their favour<sup>1</sup> and a significant improvement has been made in the last few decades in the country<sup>9</sup>.

Not just the states across the country, but looking at the global picture, India ranks 140 in the gender gap index 2021<sup>10</sup>.

The Gender gap index assesses the distribution of resources and opportunities among the male and female populations<sup>11</sup>. The rankings in 2021 clearly state that women's empowerment in India is in a dismal state. The gender gap rankings for Health and Survival lie at 155, implying poor scenario of female health indicators in the country<sup>10</sup>.

Women's empowerment has been explored using realms of politics, economics, finance, and education, yet, to deal with the challenges comprehensively, health and healthcare are the most promising domains<sup>12</sup>. The Constitution of India not only grants equality to women, but also empowers the State to adopt measures of positive discrimination in favour of women, in view of the same Government of India started National Policy for the Empowerment of Women in 2001<sup>9</sup>.

The Government of India has brought in various schemes and programs to improve the health of women in India i.e. Surakshit Matritva Aashwasan (SUMAN), Janani Shishu Suraksha Karyakaram (JSSK), Pradhan Mantri Surakshit Matritva Abhiyan, Pradhan Mantri Matru Vandana Yojana (PMMVY)<sup>13</sup> Pradhan Mantri Ujjwala Yojana (PMYU), Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Mahila Shakti Kendra ,Beti Bachao Beti Padhao, Sukanya Samridhi Yojana, Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA), etc., are designed for the women's holistic uplifting child and adolescents.<sup>14</sup>

Health is a key parameter to evaluate women's overall standard of life. Focusing on the indicators of female health and suitable actions for promoting the same, would enhance their quality of life and strengthen social, economic, educational, and cultural empowerment<sup>6</sup>. By the comparative analysis of the key health indicators in the state fact sheets of National Family Health Survey (NFHS), India, this article aims to highlight the major shortcomings in the domain of Women's health and other social and economic growth parameters to analyse women empowerment performance of various states of the country. By correlating health indicators with underlying social indicators this article helped in identify-

ing the existing gaps and bringing them into light.

## METHODS

The National Family Health Survey (NFHS) is a large-scale, multi-round survey conducted in a representative sample of households throughout India. Five rounds of the survey have been conducted since the first survey in 1992-93. Each successive round of the NFHS provides a reliable and sequential database and has two specific goals: a) to provide essential data on health and family welfare needed by the Ministry of Health and Family Welfare and other agencies for designing policies and programmes, and b) to provide information on the emerging health and family welfare issues<sup>15</sup>.

For this study, data available in NFHS factsheets were used which provided data related to various health and non-health parameters. It measures six factors- Three related to ownership of physical assets (mobile phones, bank accounts, land, and housing), Access to menstrual hygiene products, Participation in three key household decisions (healthcare for herself, household purchases, and visits to family or relatives), and Employment status over the last year. Additionally, there are several other parameters (which are directly not covered under the women empowerment section of survey) captured by the survey that helps to measure empowerment like the incidence of gender violence, marriage under the age of 18, educational attainment of more than 10 years, and so on<sup>16</sup>.

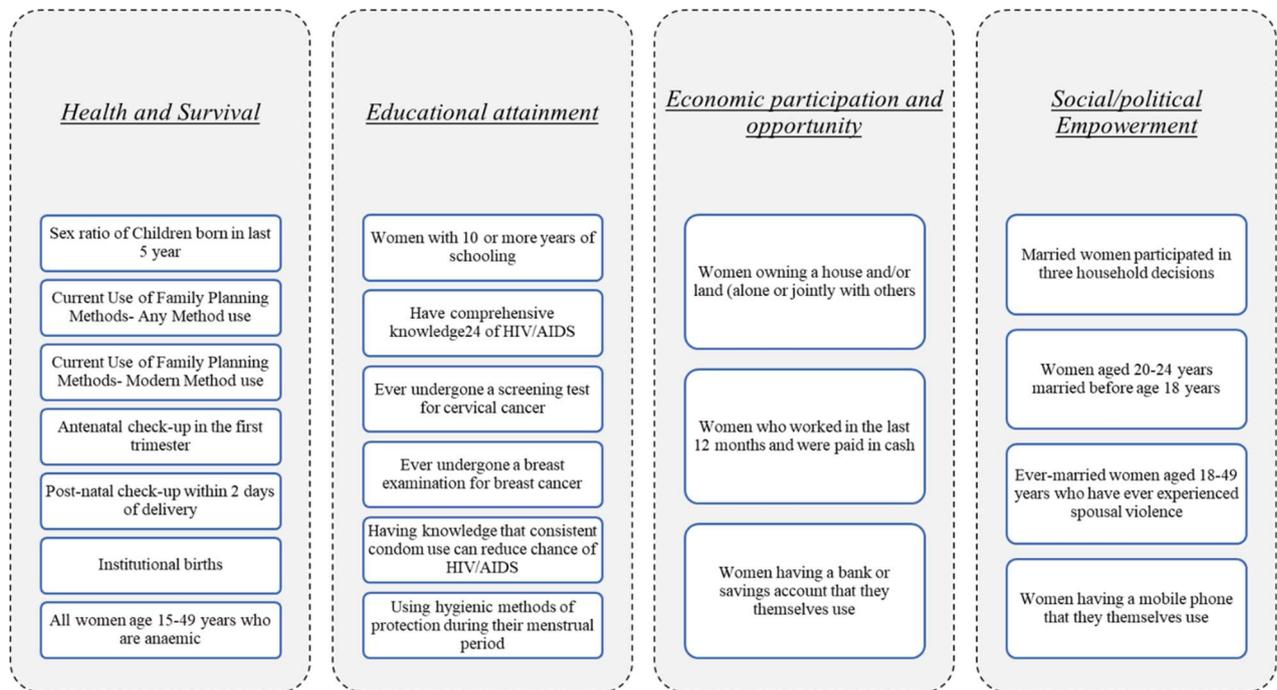
In reference to "the Global Gender Gap measure which was introduced by the World Economic Forum to examine four critical areas of inequality between men and women", authors have also classified the indicators in 4 broad themes for the process of analysis, interpretation and reporting<sup>11</sup>.

These reports which are publicly available were downloaded for NFHS 4 (2015-16) and 5(2019-21)<sup>15</sup>.

**Selection of Indicators:** Under each broad themes only those indicators were purposively selected which were included in the survey in both the rounds (NFHS-4 and 5) and give a broad picture of different phases of women's life, starting from birth, to schooling, to puberty hygiene followed by ANC, PNC, delivery, and some social and other empowerment parameters.

The available data were analyzed based on the broad themes to find out the percentage change over the two recent rounds of NFHS, which will provide a trend change for the time frame from 2015 to 2021. The change in coverage from NFHS round 4 to 5 for India overall, as per geographical regions, and as per each State/UTs were reported.

All analyses were carried out using MS Excel 365. Dadar and Nagar Haveli, Daman, and Diu, Ladakh, were excluded from the analysis due to unavailability of some data in the Factsheet.



**Figure 1: List of indicators included in this study**

**RESULTS**

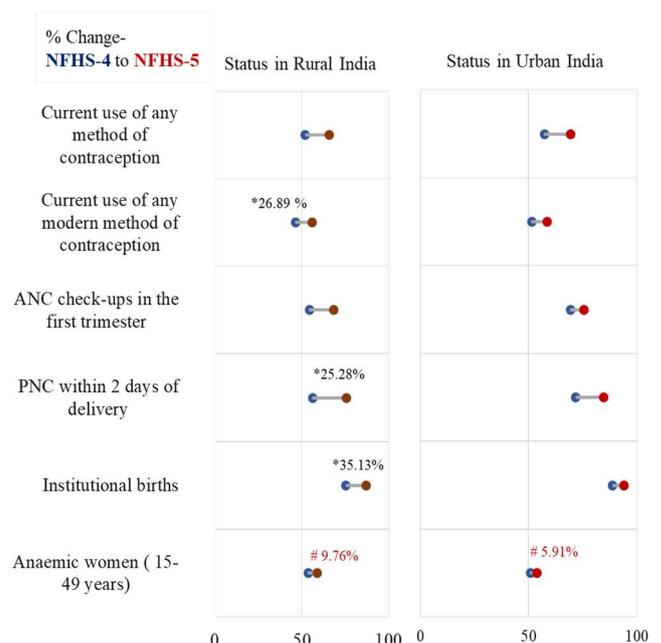
India has more women than men for the first time i.e., with 2.9% increase in the child sex ratio from 991 females per 1000 males during fourth round of NFHS to 1022 females per 1000 males, indicating a significant societal shift in the country. As per the latest NFHS findings Goa had the lowest child sex ratio of 774 while Mizoram registered the highest child sex ratio of 1,007. Further, the results are explained in reference to the four broad critical areas of inequality.

**Health and Survival:** The selected parameters under this broad theme show that there is an overall improvement in the health-related parameters amongst women except for increase seen in the anaemia prevalence in both rural and urban areas. 50% of the selected parameters under this theme namely Modern contraception usage, PNC check-up within 48 hours of delivery, Institutional births in the rural India have shown improvement by more than 25% but significant improvement has not been reported in the urban areas of India. As per the findings, except for institutional delivery, Punjab has reported a negative progress in almost all the selected Health and survival indicators with a cumulative decline of 5%. Whereas all other States/UTs have shown an increment, with Andhra Pradesh having the highest coverage of more than 70% in almost all the selected parameters and Jharkhand, Assam, Uttar Pradesh, Bihar, Manipur, Arunachal Pradesh, Mizoram, Nagaland, Meghalaya have the lowest coverage of less than 65%.

**Education attainment:** Screening for Cervical and Breast cancer under this broad theme have shown a decline by an average of ~90% in both rural as well

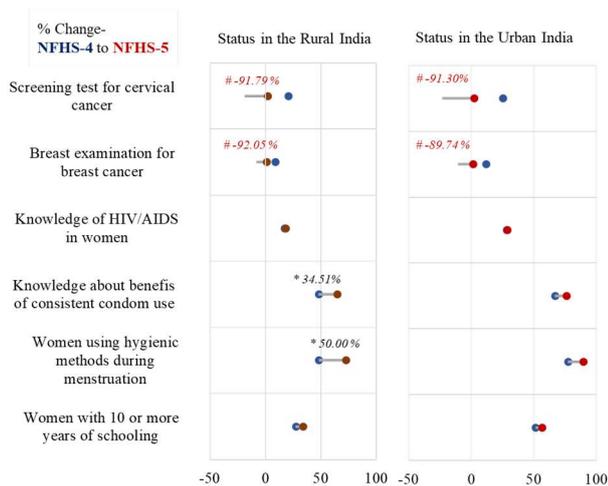
as in urban areas and the same has consistently declined at all the State/UT level. The Rural India shows a significant progress for indicators such as Knowledge about benefits of consistent condom use (34.51%) and Use of hygienic methods during menstruation (50%) wherein the change for the same in Urban areas reflects a change of less than or equal to 15%.

A key area of concern, i.e., Knowledge of HIV/AIDS in women shows a very dismal increase for both Rural (7.69) and Urban areas (1.78).



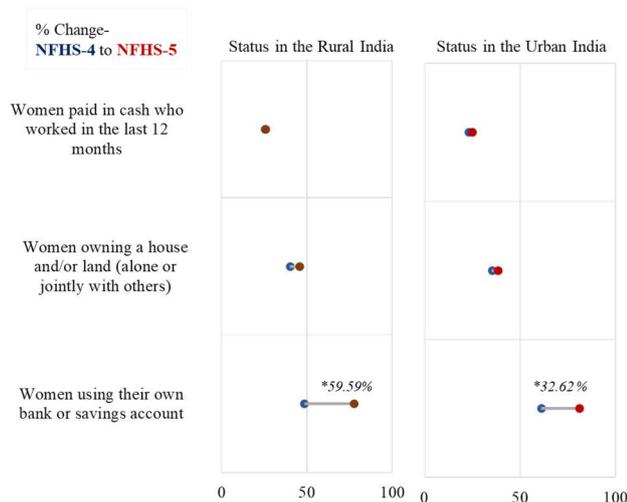
\*Indicates only those indicators with % changes for more than 25%; #Indicators with negative change

**Figure 2: Status of selected Health and Survival indicator in past 5 years (NFHS-4 to NFHS-5)**



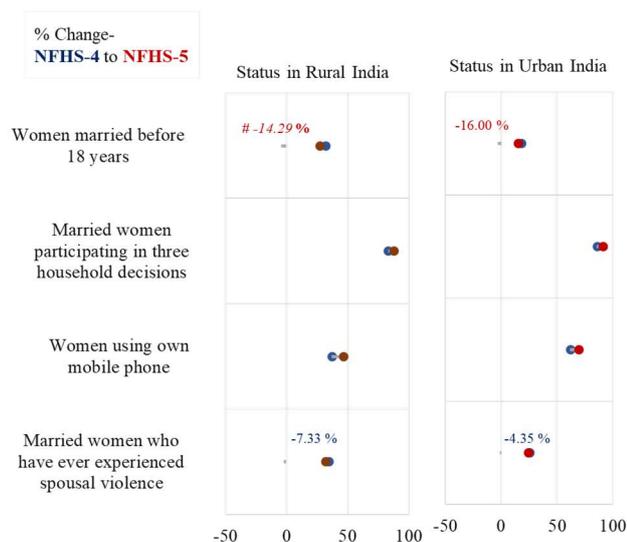
\*Indicates only those indicators with % change for more than 25%  
#Indicates negative change

**Fig 3: Status of selected Education attainment indicator in past 5 year (NFHS-4 to NFHS-5)**



\*Indicates only those indicators with % change for more than 25%

**Fig 4: Status of selected Economic participation & opportunity indicator in past 5 year (NFHS-4 to NFHS-5)**



#Indicates negative change

**Figures 5: Status of selected social and political Empowerment indicator in past 5 year (NFHS-4 to NFHS-5)**

Comparing percentage change from NFHS-4 to NFHS-5 findings at State level, 17 States/UTs out of total 34 included in the Study have shown a decline in Knowledge about benefits of consistent condom use indicator with Chhattisgarh (-51%), Punjab (-58%) and Chandigarh (-69%) reporting more than 50% decline. In the same way 6 States namely Mizoram (0%), Kerala (0%), Haryana (-1%), Jammu & Kashmir (-5%), Chandigarh (-17%) and Punjab (-22%) have shown a decline in the Knowledge of Condom use.

Current survey findings reveal that only 41% women have 10 or more years of Schooling, showing a similar trend, as the percentage change from NFHS-4 to NFHS-5 is less than 25 % for both Rural and Urban. Kerala has registered 77% of female population with 10 or more years of schooling whereas with 23.1% achievement, Tripura ranks lowest in literacy.

**Economic Participation and opportunity:** Under this broad theme, Women using their own bank /savings account has shown a significant progress for both Rural and Urban areas.

The rural India demonstrates a remarkable increase of more than 60% for the same. For the remaining two indicators, Urban India has shown less than 10% increase. The Rural India shows a negligible change of 0.79% for women paid in cash who worked in the last 12 months, making it an area of concern. Comparing the findings at State/Ut level, it is being observed that 8 States/UTs have reported a negative change over the two rounds of NFHS. Jharkhand (-27%) and Chhattisgarh (-33%) have shown a decline by more than 20% whereas more than 16 States/UTs have shown a decline in Women having a house or land with 6 States/UTs namely, Odisha (-31%), Goa (-32%), Maharashtra (-33%), Delhi (-35%), Andaman and Nicobar Island (-47%), and Tripura (-70%) showing a big dip in the indicator (>30%).

**Social and Political empowerment:** The indicators namely Women married before 18 years and Married women who have experienced spousal violence tend to show a negative change by 15 % and ~5% respectively, implying small yet positive progress. A very insignificant change, ~5 % is observed for participation of married women in household decision, for both rural and urban areas. An increase of 25.75% is seen among women using their own mobile phones in Rural areas but the same for Urban areas accounts to 12.33 % only.

**DISCUSSION**

The study focused upon women empowerment specific indicators listed in the NFHS 4&5 factsheets and has broadly classified them into four themes, as discussed above.

Health and survival are key theme of focus as women’s health, primarily reproductive is a key area of concern according to our findings and hence the pro-

vision of service need a more comprehensive perspective<sup>18</sup>. Educational attainment has a multidimensional impact on various other determinants of Women empowerment, as the economic contribution made by women is directly related to the level of education contained. Also, women with higher and more qualitative education seem to be more economically beneficial for the family<sup>19</sup>. Additionally, proper knowledge of health in women clearly impacts the health of their children and family members<sup>20</sup>.

An article by the UN Women under the heading of "Benefits of economic empowerment" states that Women's economic empowerment and availability of new opportunities for them remains the central to assess gender equality and achievement of aspired SDGs<sup>21</sup>. Additionally, The International Monetary fund estimated that India's GDP could increase by 27 percent upon equal participation of women in the workforce<sup>22</sup>. The goals of empowering women are to enhance their decision-making rights at all levels, both inside and outside households, so that they are considered as equal partners in the society<sup>23</sup>, reflecting their social/political empowerment. It is also believed that social and economic empowerment together would help enhancing sexual and reproductive health and rights (SRHR) of women, ensure better fulfilment of water, sanitation and hygiene (WASH) needs, and enable them to take decisions regarding marriage and pregnancy<sup>24</sup>.

Improvement of the health and survival-based indicators delineated above in the results section is of utmost importance for the empowerment of women across all States in India. Since the implementation of the National Health Mission (NHM) in India there has been a noticeable improvement in the utilization of maternal care, namely antenatal care (ANC), skilled birth attendants (SBA) and postnatal care (PNC) in the country, suggesting that the Janani Suraksha Yojana (JSY) and Janani Sishu Suraksha Karyakaram (JSSK) schemes be continued and strengthened for poor mothers to reduce maternal health inequality, particularly in full ANC and PNC<sup>25</sup>.

Modern contraception, especially sterilisation of women, increased in many parts of western India in the past half a decade, according to the NFHS-5. This can be attributed to vehement promotion of sterilisation among women for the family planning programme in India through the launch of Mission Parivar Vikas, a government initiative launched in 2016 to promote modern contraceptives in 146 high fertility districts via financial incentives for women and family planning providers<sup>26</sup>. But majority of women in need of contraception were using female sterilization method, with condom and contraceptive pill being the second and third most frequently used methods followed by IUD. This means, Indian family planning policy should focus on prioritizing women-centric care, making reversible contraceptive methods widely available and promoted<sup>27</sup>.

Institutional deliveries rose across most states in India in the past decade-and-a-half, with Kerala topping the list (99.8 percent), according to the latest NFHS. Institutional delivery service utilisation and avoiding births in homes in India is one of the key and proven intervention to improve maternal health and to reduce maternal mortality through provision of safe delivery environment. After the implementation of National Rural Health Mission, in 2005, India has seen a huge increase in use of institutional delivery care services in India, which was primarily associated with substantial uptake in public sector services among the poor. However sustained policy efforts are necessary, with an emphasis on education, sociocultural and geographical factors to ensure universal coverage of institutional delivery care services in India<sup>28</sup>.

Despite the existence of several policies and programs, anaemia among women continues to be a major concern for public health policy in India<sup>29</sup>. The high rates of anaemia among Indian women, therefore, reflect their social and biological vulnerability both within society and the household<sup>30</sup>.

On the Education attainment front, the sharp decline (~90%) in the rates of screening for cervical and breast cancer maybe a result of screening site closures and the temporary suspension of breast and cervical cancer screening services due to COVID-19. The stay-at-home guidelines likely deterred individuals from seeking health care services, including cancer screening. Although screening mammogram volumes were drastically reduced during the pandemic, patients must resume care as soon as it's safe in order to minimize unnecessary breast cancer complications and deaths<sup>31</sup>. The significant improvement in the usage of hygienic methods of protection during menstruation (50%), shows that national and state-level menstrual health players active in India are contributing to the availability of low-cost disposable sanitary material, Menstrual Health Management (MHM) education to girls through comic books, training of facilitators, and researching on MHM behaviour and practices<sup>32</sup>.

The number of women not only holding their own bank accounts, but also using it themselves has increased dramatically over the past 5 years, indicating their enhanced economic participation and opportunity. The Government of India launched Pradhan Mantri Jan-Dhan Yojana (PMJDY), in 2014, as part of its National Mission for Financial Inclusion, to support every adult in India to have a bank account inclusive of mobile banking accessible via cell phones<sup>33</sup>. The maximum number of beneficiaries of this initiative have been the rural poor, especially women, the populations most affected by low reproductive and maternal health services utilization.

Our inferences on the marriage of women before 18 years of age shows a relatively small change of about 15 percent, for both urban and rural areas. Marriage of women before the age of 18 poses a major chal-

lence to the country as, still about 25 percent of women were married before they turned 18<sup>34</sup>. UNICEF estimates that at least 1.5 million girls below 18 years of age get married. India has largest number of child brides in the world, comprising one third of the global total<sup>35</sup>. Initiatives like Dhanalaskshmi Scheme and Shagun Scheme Aashirwad (Govt of Punjab) aim to reduce the marriage of under 18 girl children. Use of mobile phones is a catalyst for development and is becoming a key tool for health programmes<sup>36</sup>, including the latest National Digital health mission of India. Existing differences in use of mobile phones in men and women exacerbate the shortcomings in promotion and access of healthcare services<sup>37</sup>. Analysing the data available on married women being victims of spousal violence, there is a slight decrease. Studies say that spousal violence has implications on women's access to pregnancy related services and has a toll on their physical and mental health<sup>38</sup>.

## CONCLUSION

Women's empowerment implies giving equal opportunities and authority to women in every field without any discrimination. India is committed to making sure that women contribute as equal partners to the development of the country under SDG-3, by 2030. Hence it can be concluded from our study that, although, we have made some progress on the metrics around health, education, economic and social empowerment parameter, to get a more adequate assessment of the developments around empowerment, we need to expand the basket of indicators and analyse change in the parameters holistically.

## RECOMMENDATIONS

There is a need to assess and explore interventions around cultural factors, along with other indicators, to see long lasting shift. Targeting health variables alone might not be beneficial due to the numerous social and structural aspects that influence health. Hence some key recommendations to encourage women's empowerment around health, based on our study include focussing on their educational attainment, economic participation and opportunity and social/political empowerment.

## REFERENCES

- Menaka G. Women Empowerment in India. 2017;
- Nayak P, Mahanta B. Women Empowerment in Assam. SSRN Electron J [Internet]. 2009 [cited 2021 Dec 20]; Available from: <http://www.ssrn.com/abstract=1325103>
- Janghorban R, Taghipour A, Roudsari RL, Abbasi M. Women's Empowerment in Iran: A Review Based on the Related Legislations. *Glob J Health Sci*. 2014 Jul;6(4):226.
- Women Empowerment in 21st Century [Internet]. [cited 2021 Dec 20]. Available from: [https://www.researchgate.net/publication/317745427\\_Women\\_Empowerment\\_in\\_21st\\_Century](https://www.researchgate.net/publication/317745427_Women_Empowerment_in_21st_Century)
- Dandona A. Empowerment of Women: A Conceptual Framework. *Int J Indian Psychol*. 2015 Jun 30;2:35-45.
- DAVIDSON PM, McGRATH SJ, MELEIS AI, STERN P, DiGIACOMO M, DHARMENDRA T, et al. The Health of Women and Girls Determines the Health and Well-Being of Our Modern World: A White Paper From the International Council on Women's Health Issues. *Health Care Women Int*. 2011 Oct;32(10):870-86.
- The Gender Income Gap and the Role of Education - Donna Bobbitt-Zeher, 2007 [Internet]. [cited 2021 Dec 21]. Available from: <https://journals.sagepub.com/doi/abs/10.1177/003804070708000101>
- Sustainable development goals report 2017.pdf [Internet]. [cited 2021 Dec 20]. Available from: <https://unstats.un.org/sdgs/files/report/2017/thesustainabledevelopmentgoalsreport2017.pdf>
- National Policy for Women Empowerment | Ministry of Women & Child Development [Internet]. [cited 2021 Dec 20]. Available from: <https://wcd.nic.in/womendevlopment/national-policy-women-empowerment>
- WEF's gender gap index: India slips 28 places, ranks 140 among 156 countries. *The Hindu* [Internet]. 2021 Mar 31 [cited 2021 Dec 20]; Available from: <https://www.thehindu.com/news/national/wefs-gender-gap-index-india-slips-28-places-ranks-140-among-156-countries/article34206867.ece>
- Waris A, Viraktamath BC. Gender gaps and Women's Empowerment in India -Issues and Strategies. 2013;3(9):9.
- Mitroi LR, Sahak M, Sherzai AZ, Sherzai D. The Women's Health Care Empowerment Model as a Catalyst for Change in Developing Countries. *Health Care Women Int*. 2016;37(3):273-87.
- Kumar G, Choudhary TS, Srivastava A, Upadhyay RP, Taneja S, Bahl R, et al. Utilisation, equity and determinants of full antenatal care in India: analysis from the National Family Health Survey 4. *BMC Pregnancy Childbirth*. 2019 Sep 5;19(1):327.
- Women Empowerment Schemes.pdf [Internet]. [cited 2021 Dec 15]. Available from: <https://www.bbau.ac.in/Docs/FoundationCourse/TM/MPDC405/Women%20Empowerment%20Schemes.pdf>
- National Family Health Survey [Internet]. [cited 2021 Dec 21]. Available from: <http://rchiips.org/nfhs/>
- What does NFHS-5 data tell us about women empowerment in India? | IDR [Internet]. India Development Review. 2021 [cited 2021 Dec 21]. Available from: <https://idronline.org/what-does-nfhs-5-data-tell-us-about-women-empowerment-in-india/>
- Census of India: Sample Registration [Internet]. [cited 2021 Dec 21]. Available from: [https://censusindia.gov.in/Vital\\_Statistics/SRS/Sample\\_Registration\\_System.aspx](https://censusindia.gov.in/Vital_Statistics/SRS/Sample_Registration_System.aspx)
- World Development Indicators 2012 [Internet]. [cited 2021 Dec 30]. Available from: <https://openknowledge.worldbank.org/handle/10986/6014>
- Determinants and Indicators of Women Empowerment: A Walk Through Psychological Patterns and Behavioural Implications [Internet]. *Science Alert*. [cited 2021 Dec 30]. Available from: <https://scialert.net/fulltext/?doi=rjbm.2017.15.27>
- Where next for family planning? - *The Lancet* [Internet]. [cited 2021 Dec 30]. Available from: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(09\)61960-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)61960-7/fulltext)
- Facts and Figures: Economic Empowerment | UN Women [Internet]. [cited 2021 Dec 30]. Available from:

- <https://www.unwomen.org/en/what-we-do/economic-empowerment/facts-and-figures>
22. Gender Equality: Women's Economic Empowerment [Internet]. [cited 2021 Dec 30]. Available from: <https://in.one.un.org/unibf/gender-equality/>
  23. Thanikaivel M, Priya K. ECONOMIC EMPOWERMENT OF WOMEN IN INDIA. *Int J Tech Res Sci*. 2018;
  24. Social and Economic Empowerment of women and girls — Simavi | Powerful women, healthy societies | Africa en Asia [Internet]. [cited 2021 Dec 30]. Available from: <https://simavi.nl/en/social-and-economic-empowerment-of-women-and-girls>
  25. Ali B, Dhillon P, Mohanty SK. Inequalities in the utilization of maternal health care in the pre- and post-National Health Mission periods in India. *J Biosoc Sci*. 2020 Mar;52(2):198–212.
  26. MPV\_guidelines.pdf [Internet]. [cited 2021 Dec 30]. Available from: [http://nhm.gov.in/images/pdf/programmes/family-planning/guidelines/MPV/MPV\\_guidelines.pdf](http://nhm.gov.in/images/pdf/programmes/family-planning/guidelines/MPV/MPV_guidelines.pdf)
  27. Ewerling F, McDougal L, Raj A, Ferreira LZ, Blumenberg C, Parmar D, et al. Modern contraceptive use among women in need of family planning in India: an analysis of the inequalities related to the mix of methods used. *Reprod Health*. 2021 Aug 21;18(1):173.
  28. Institutional delivery in India, 2004-14: unravelling the equity-enhancing contributions of the public sector - PubMed [Internet]. [cited 2021 Dec 30]. Available from: <https://pubmed.ncbi.nlm.nih.gov/29659831/>
  29. Prevalence of Anemia and Its Determinants Among Pregnant, Lactating, and Nonpregnant Nonlactating Women in India - Mohammad Zahid Siddiqui, Srinivas Goli, Tamal Reja, Riddhi Doshi, Swastika Chakravorty, Chhavi Tiwari, Nomita P. Kumar, Deepshikha Singh, 2017 [Internet]. [cited 2021 Dec 30]. Available from: <https://journals.sagepub.com/doi/full/10.1177/2158244017725555>
  30. The burden of anemia among women in India | *European Journal of Clinical Nutrition* [Internet]. [cited 2021 Dec 30]. Available from: <https://www.nature.com/articles/1601504>
  31. Smetherman DH. Breast Cancer Screening and the COVID-19 Pandemic. *J Breast Imaging*. 2020 Dec 24;wbaa106.
  32. FSG-Menstrual-Health-Landscape\_India.pdf [Internet]. [cited 2021 Dec 30]. Available from: [https://menstrualhygieneday.org/wp-content/uploads/2016/04/FSG-Menstrual-Health-Landscape\\_India.pdf](https://menstrualhygieneday.org/wp-content/uploads/2016/04/FSG-Menstrual-Health-Landscape_India.pdf)
  33. Singh A, Kumar K, McDougal L, Silverman JG, Atmavilas Y, Gupta R, et al. Does owning a bank account improve reproductive and maternal health services utilization and behavior in India? Evidence from the National Family Health Survey 2015–16. *SSM - Popul Health*. 2019 Apr 6;7:100396.
  34. Pasricha A. India Could Raise Marriage Age for Women from 18 to 21 [Internet]. VOA. [cited 2021 Dec 30]. Available from: <https://www.voanews.com/a/india-could-raise-marriage-age-for-women-from-18-to-21-/6364862.html>
  35. Ending child marriage and adolescent empowerment | UNICEF India [Internet]. [cited 2021 Dec 30]. Available from: <https://www.unicef.org/india/what-we-do/end-child-marriage>
  36. Does having a mobile phone matter? Linking phone access among women to health in India: An exploratory analysis of the National Family Health Survey [Internet]. [cited 2021 Dec 30]. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7371204/>
  37. George AS, Morgan R, Larson E, LeFevre A. Gender dynamics in digital health: overcoming blind spots and biases to seize opportunities and responsibilities for transformative health systems. *J Public Health Oxf Engl*. 2018 Dec;40(Suppl 2):ii6–11.
  38. Investigating the relationship between women's experience of intimate partner violence and utilization of maternal healthcare services in India | *Scientific Reports* [Internet]. [cited 2021 Dec 30]. Available from: <https://www.nature.com/articles/s41598-021-89688-1>.