ICPD+30: INDIA'S COUNTRY MONITORING REPORT

Review of National Policies and Programmes And A Synthesis of Literature on Sexual and Reproductive Health in India (1995-2022)

Sapna Mishra

Dr P Balasubramanian

CommonHealth

arrow
asian-pacific resource & research centre for women

PUBLISHED BY:
SAHAJ on behalf of CommonHealth
SAHAJ, 1 Shri Hari Apartments,
13 Anandnagar Society,
Behind Express Hotel, Alkapuri, Vadodara,
Gujarat, India 390007
Tel: 91-265-2342539
Website: www.sahaj.org.in
Email: sahaj_sm2006@yahoo.co.in

Contact:
Swati Shinde
[Programme Manager cum Co-ordinator, CommonHealth]
Email: cmnhsa@gmail.com
CommonHealth website: http://www.commonhealth.in

Asian Pacific Resource and Research Centre for Women – ARROW
Nos. 1 & 2, Jalan Scott, Brickfields,
Kuala Lumpur, Malaysia
Tel: 603 2273 9913/14 and Fax: 603 2273 9916
Website: arrow@arrow.org.my
Facebook: The Asian-Pacific Resource and Research Centre for Women (ARROW)
Twitter: @ARROW_ Women YouTube: youtube.com/user/ARROWwomen

PRODUCTION TEAM:

Research Lead: Dr P Balasubramanian

Co- Researcher: Rashmi Padhye

Authors: Sapna Mishra, Dr P Balasubramanian

National Reviewer: Dr Alka Barua

External Reviewers: Riju Dhakal, Anjali Shenoi,
Nur Hazwani Husin and ARROW team

Copy Editor: Anuradha Bhasin

Layout Design: Sanskruti Designers, Pune

ICPD+30: INDIA'S COUNTRY MONITORING REPORT

Review of National Policies and Programmes And A Synthesis of Literature on Sexual and Reproductive Health in India (1995-2022)

Sapna Mishra
Dr P Balasubramanian

BACKGROUND OF THE PUBLICATION

The year 2024 holds a significant milestone – the 30th anniversary of the International Conference on Population and Development (ICPD). This landmark event is a commemoration and an opportunity to review progress in and gaps of the ICPD+30. The UN General Assembly Sessions in September 2024 (UNGA, 2022) will be a platform for this review. The 57th Commission on Population and Development (CPD) session in 2024, as called by the UNFPA, will be dedicated to a discussion of ICPD+30 and has already initiated the process of generating evidence on it.

Within this global context, the Asian Pacific Resource and Research Centre for Women (ARROW), a regional women's rights organisation in Malaysia, has embarked on a collaborative journey. Together with its national partners, it has diligently generated evidence on progress and gaps in the sexual and reproductive health and rights (SRHR) situation in 17 countries. This report on India's country monitoring is a testament to the collective study conducted by ARROW's partners in these countries. The research was aimed at monitoring progress and the gaps in the Indian government commitment to the ICPD PoA, with a specific focus on the SRHR of young people and adults.

This research, the outcome of diligent effort by CommonHealth in India, a multi-state coalition of organisations and individuals, holds immense significance. It was prepared for advocacy at the 2023 Asia Pacific Population Conference (APPC) at the regional level, during the 2024 global review process at the Commission on Population and Development (CPD), and through national-level advocacy with different stakeholders. "ICPD+30: India's Country Monitoring Report" is not just a document but a beacon of hope, guiding us towards a future where SRHRs are universally respected and protected. The objectives of the research were:

- To document progress, gaps, and challenges in implementing the ICPD Programme of Action at the national level;

- To generate evidence on key SRHR issues identified, particularly on young people's sexuality and maternal healthcare, including abortion, to inform national-level advocacy on universal access to SRHR; and
- To generate evidence on key SRHR issues relating to marginalised women and girls.

The following three publications were produced under the ICPD+30: India's Country Monitoring Research:

1. "Review of National Policies and Programmes, and Synthesis of Literature on Sexual and Reproductive Health in India (1995-2022)";
2. "Sexual and Reproductive Health, Rights and Justice of Structurally Excluded Women and Girls in India"; and
3. "Are Sustainable Development Goals Furthering the Agenda of Gender Equality? Review of the Progress in India."

TABLE OF CONTENTS

Chapter **Page**

ACKNOWLEDGEMENTS

We are deeply grateful to the Asian Pacific Resource and Research Centre for Women—ARROW, Malaysia for their financial and technical support in producing the national research report. Our heartfelt thanks also go to member of the CommonHealth Steering Committee for their insightful feedback on the research's concept note and methodology.

We sincerely appreciate the useful comments and insights provided by Dr TK Sundari Ravindran while developing the report. Her critical inputs and valuable suggestions have significantly enhanced the quality of our work. We also extend our special thanks to Dr Alka Barua for her dedicated support in reviewing the report and providing constructive feedback on revising earlier drafts; and also go to Ms Riju Dhakal, Ms Anjali Shenoi, Ms Nur Hazwani Husin and other ARROW team members for their diligent review of the report and valuable inputs prior to finalisation.

We thank Ms Swati Shinde, Programme Manager of CommonHealth and the SAHAJ team for providing administrative support for the study.

CommonHealth Team

LIST OF ACRONYMS AND ABBREVIATIONS

AD	–	Antenatal Depression
AIDS	–	Acquire Immune Deficiency Syndrome
AKI	–	Acute Kidney Injury
AMB	–	Anaemia Mukt Bharat
ANC	–	Antenatal Care Services
ANIs	–	Annual New Infections
ANM	–	Auxiliary Nurse Midwife
APPC	–	Asia and Pacific Population Conference
ARROW	–	Asian and Pacific Resource and Research Centre for Women
ARSH	–	Adolescent Reproductive and Sexual Health
ART	–	Assisted Reproductive Technology
ASHA's	–	Accredited Social Health Activists
AYUSH	–	Ayurveda, Yoga, and Naturopathy, Unani, Siddha and Homoeopathy
BC	–	Backward Caste
BMI	–	Body Mass Index
BPL	–	Below Poverty Line
CHD	–	Congenital Heart Disease
CHWs	–	Community Health Workers
CPD	–	Commission on Population and Development
CPHC	–	Comprehensive Primary Healthcare
CRC	–	Convention on the Rights of the Child
CSSM	–	Child Survival and Safe Motherhood
D&C	–	Dilatation and Curettage
DIPSI	–	Diabetes in Pregnancy Study Group India
EAG	–	Empowered Action Group
ECPs	–	Emergency Contraceptive Pills
EM 2023	–	Equal Measures 2023
EmoC	–	Emergency Obstetric Care
ESCAP	–	Economic and Social Commission for Asia and the Pacific
EVA	–	Electric Vacuum Aspiration
FRUs	–	First Referral Units
GBV	–	Gender-Based Violence
GDM	–	Gestational Diabetes Mellitus
GDP	–	Gross Domestic Product
GOI	–	Government of India
HIV	–	Human Immunodeficiency Virus
HMIS	–	Health Management Information System
HRGs	–	High– Risk Groups
HSC	–	Health Sub-Centre
HSS	–	Health System Strengthening
HWCs	–	Health and Wellness Centres

IADPSG	–	International Association of Diabetes and Pregnancy Study Groups
ICC	–	Internal Compliance Committee
ICPD	–	International Conference on Population and Development (ICPD)
ICPD+30	–	International Conference on Population and Development after 30 years
ICU	–	Intensive Care Unit
IFA	–	Iron and Folic Acid
IIPS	–	International Institute of Population Sciences
IMR	–	Infant Mortality Rate
IPV	–	Intimate Partner Violence
IUCD	–	Intra-Uterine Copper Device
IUDs	–	Intra Uterine Devices
JSY	–	Janani Suraksha Yojana
LBW	–	Low Birth Weight
LCC	–	Local Compliance Committee
MCH	–	Maternal and Child Health
MDGs	–	Millennium Development Goals
MMR	–	Maternal Mortality Ratio
MoHFW	–	Ministry of Health and Family Welfare
MPCE	–	Monthly Per capita Consumer Expenditure
MTP	–	Medical Termination of Pregnancy Act
MVA	–	Manual Vacuum Aspiration
NACO	–	National Aids Control Organisation
NACP	–	National Aids Control Policy
NAEP	–	National Adolescent Education Programme
NCDs	–	Non– Communicable Diseases
NCERT	–	National Council for Educational Research and Training
NFHS	–	National Family Health Survey
NGO	–	Non–governmental Organisation
NHM	–	National Health Mission
NHP	–	National Health Policy
NHPS	–	National Health Protection Scheme
NITI Aayog	–	National Institution for Transforming India
NRHM	–	National Rural Health Mission
NYP	–	National Youth Policy
OSC	–	One-stop Centre
OT	–	Operation Theatre
OTC	–	Over-the-Counter
PCOS	–	Polycystic Ovarian Syndrome
PCPNDT	–	Pre– Conception and Pre–Natal Diagnostic Techniques
PD	–	Postnatal Depression
PHC	–	Primary Health Centre
PLHIV	–	People Living with HIV
PM– JAY	–	Pradhan Mantri Jan Arogya Yojana
PMS	–	Premenstrual Syndrome
PNC	–	Post-natal Care
PoA	–	Programme of Action

POCSO	–	Protection of Children from Sexual Offenses
PPTC	–	Prevention of Parent–to–Child Transmission
PTSD	–	Post– Traumatic Stress Disorder
PVTs	–	Particularly Vulnerable Tribes
PWDA	–	Protection of Women from Domestic Violence Act
RCH	–	Reproductive and Child Health
RCN	–	Renal Cortical Necrosis
RKSK	–	Rashtriya Kishore Swasthya Karyakram
RMC	–	Respectful Maternity Care
RMNCAH+N	–	Reproductive, Maternal, New Born, Child, Adolescents Health PLUS Nutrition
RMNCH+A	–	Reproductive, Maternal, Neo– natal, Child Health and Adolescents
RSBY	–	Rashtriya Swasthya Bima Yojana
RTI	–	Reproductive Tract Infection
RUWSEC	–	Rural Women's Social Education Centre
SBA	–	Skilled Birth Attendance
SC	–	Scheduled Caste
SCTIMST	–	Sree Chitra Tirunal Institute for Medical Sciences and Technology
SDGs	–	Sustainable Development Goals
SHP	–	School Health Programme
SRH	–	Sexual and Reproductive Health
SRHR	–	Sexual and Reproductive Health and Rights
SRR	–	Sexual and Reproductive Rights
SRS	–	Sample Registration System
ST	–	Scheduled Tribes
STIs	–	Sexually Transmitted Infections
TB	–	Tuberculosis
TFR	–	Total Fertility Rate
U5MR	–	Under five Mortality Rate
UHC	–	Universal Health Coverage
UNESCO	–	United Nations Educational, Scientific and Cultural Organization
UNFPA	–	United Nations Fund for Population Activities
UNGA	–	UN General Assembly
UNICEF	–	United Nations International Children's Emergency Fund
WHO	–	World Health Organisation
WIFS	–	Weekly Iron and Folic Acid Supplementation

LIST OF TABLES

Review of National Policies and Programmes And A Synthesis of Literature on Sexual and Reproductive Health in India (1995-2022)

1. INTRODUCTION

1.1 Background

Over the past three decades, India has signed several international treaties and conventions on health and human rights. Notable among these are the International Conference on Population and Development (ICPD) in 1994, the Millennium Development Goals (MDGs) in 2000, and the Sustainable Development Goals (SDGs) in 2015. The year 2024 is the 30th year of the ICPD Programme of Action (PoA) and also the halfway point for achieving the 2030 agenda for the SDGs. By signing these agreements, the government has committed to providing universal access to health care and comprehensive sexual and reproductive health (SRH) services. The commitment includes increasing investments in SRH services, reducing inequalities, and safeguarding the sexual and reproductive rights (SRR) of all sections of the population.

The ICPD in 1994 produced a path-breaking and comprehensive PoA, which made women's rights a fundamental principle in addressing population and development issues. It advocates a comprehensive approach to sexual and reproductive health and reproductive rights, introducing a strategy to empower women, providing them with more choices through expanded access to education and health services, and promoting skill development and employment. The PoA has 16 chapters. Chapter VII exclusively addresses reproductive rights and health. Four other chapters (Chapter IV - Gender Equality, Equity and Empowerment of Women; Chapter VI - Population Growth and Structure; Chapter VIII - Health, Morbidity and Mortality; and Chapter XIII - National Action) are also relevant to sexual and reproductive health and rights (SRHR). The following table summarises the key points stated in the ICPD PoA under various chapters on SRHR.

Sr. NO.	Chapter and Section	Statement
1	IV, Section A: Gender Equality, Equity and Empowerment of Women.	Women's empowerment and improving their status are important ends in themselves and are essential for achieving sustainable development.
2	VII, Section A: Reproductive Rights	All countries are called upon to strive towards making reproductive health accessible through the primary healthcare system to all individuals of appropriate age. People have the right to attain the highest standard of sexual and reproductive health, including their right to make decisions concerning reproduction free of discrimination, coercion, and violence.
3	VII, Section A: Family Planning	It is proposed to a) help couples and individuals meet their reproductive goals; b) prevent unwanted pregnancies, reduce the incidence of high-risk pregnancies, morbidity and mortality; and c) make quality services affordable, acceptable, and accessible to all who need and want them.
3	VII, Section D: Human Sexuality and Gender Relations	Ensure that women and men have access to information, education and services needed to achieve good sexual health and to exercise their reproductive rights and responsibilities.
4	VII, Section E: Adolescents.	Countries must ensure that programmes and attitudes of healthcare providers do not restrict adolescents' access to the services and information they need.
5	VIII: Health, Morbidity and Mortality. VII, Section A: Women's Health and Safe Motherhood	Achieve a rapid and substantial reduction in maternal morbidity and mortality. Actions that improve women's health and nutritional status, especially pregnant and nursing women, are also recommended.
6	XIII, Section C: National Action	All governments are urged to devote more public expenditure to the social sectors.

The year 2024 marks the 30th anniversary of ICPD. In this context, there is a plan to review the progress and gaps of the ICPD+30 in the UN General Assembly Sessions in September 2024 (UNGA, 2022). UNFPA has called for the 57th Commission on Population and Development (CPD) session in 2024 to be dedicated to the discussion of ICPD+30 and has begun generating evidence on it.

On account of the stocktaking and on the eve of 30 years of ICPD, the Asian Pacific Resource and Research Centre for Women (ARROW), a regional women's rights organisation, is collaborating with its national partners to generate evidence on the progress and gaps in the SRHR situation of 17 countries. This report on India's country monitoring is prepared as part of the study conducted by ARROW's partners in these 17 countries.

As an official signatory of the ICPD, the Government of India has agreed that reproductive rights, gender equality, equity, and women's empowerment are essential for improving the quality of life and achieving sustained social and economic growth and sustainable development. However, 30 years since the ICPD PoA, we are still far from achieving its vision. Evidence shows that India's SRHR indicators are far from the ICPD targets (further discussions follow in subsequent sections). Moreover, we live in a world of inequities. These inequities have further widened, and SRHR services were severely impacted during the COVID-19 pandemic.

1.2 Objectives of the research

The purpose of the national research report is to monitor the progress and gaps in the Government of India's commitment towards the ICPD PoA, especially on the sexual reproductive health rights of young people and adults. This evidence was prepared for advocacy at the 2023 Asia Pacific Population Conference (APPC) at the regional level, during the 2024 global review process at the Commission on Population and Development (CPD), and through national-level advocacy with different stakeholders.

The broad objectives of the ICPD30 monitoring research were:

- To document progress, gaps and challenges towards implementing the ICPD Programme of Action at the national level;
- To generate evidence on key SRHR issues identified, particularly on young people's sexuality and maternal health care, including abortion, to inform national-level advocacy on universal access to SRHR;

The report has two main parts. The first provides India's context, policies, and programmes on SRHR, and part two synthesises the literature on the SRHR situation in India from 1995 to 2022. Further, part two has two sub-sections: the first consolidates the literature on SRHR issues of adolescents and young people, and the second synthesises the studies on maternal health (which are in four sections: studies on maternal mortality; maternal morbidity; health services utilisation for maternal health; and abortion).

1.3 India's Demographic Trends

India, with a population of 1,428 million, is the most populous country in the world (UN ESCAP, 2023). Over 580 million people have been added to the country in the last 32 years, a population increase of 68.79 per cent between 1991 and 2023. The overall sex ratio was 940 females per 1000 males in 2011(Census of India 2011). The 2021 census could not be conducted in time because of the COVID-19 pandemic. The sex ratio of the country has been rising slowly over the years, possibly due to the increased life expectancy at birth of females because of the declining maternal mortality ratio. About one-fifth of the country's population were adolescents aged 10-19 years, and one-third were between 10-24 years old (Census of India, 2011). About two-thirds of the population lives in rural areas, and the overall population density of the country is 382 persons per square kilometre.

The total literacy rate of the population increased by 20 per cent between 1991 and 2011. The female literacy rate was 39.29 in 1991 and increased to 64.3 in 2011. The recent NFHS-5 (2019-21) survey results show that about 72 per cent of women in the reproductive age group of 15-49 years were literate. Moreover, caste and class differentials in literacy rates are highly significant. Only 65.8 per cent of Scheduled Caste women and 58 per cent of Scheduled Tribe women were literate, as against 88.4 per cent for the other castes. Likewise, 54 per cent of women in the poorest wealth quintile were illiterate, but in the highest wealth quintile, 92.2 per cent were literate (IIPS 2019-21).

From 1994 to 2020, there has been a sharp decline in birth and death rates (Table 1) of 30 per cent. India's birth and death rates are 19.9 and 6.6 per one thousand population, respectively (SRS 2020). The life expectancy at birth for males and females is 70.5 and 73.6 years, respectively (UN ESCAP 2023). There was a noticeable improvement in life expectancy at birth, which increased by 13.5 years, from 58.5 in 1991 to 72 years in 2023.

Table 1: India's Demographic and Health Profile

Indicators	Census 1991	Census 2011	Estimates* 2020's
Population (in millions)	846	1210	1428 UN ESCAP 2023
Overall sex ratio (females per 1000 males)	927	940	NA
Child sex ratio	945	914	NA
Percentage of young population (10-24 years) to total population	30.1	30.16	NA
Percentage of population (10-19 years) to total population	21.1	21.2	NA
Percentage of population (15-24 years) to total population			17.8 (UN ESCAP 2023)
Literacy rate of population aged 7+	52.21	72.98	NA
Male	64.13	80.88	NA
Female	39.29	64.63	NA
Population density (persons per sq. km)	267	324	382
Life expectancy at birth			
Male	58	64	70.5 (UN ESCAP 2023)
Female	59	67	73.6 (UN ESCAP 2023)
From Different Sources	**1990's**	**2010's**	**2020's**
Crude birth rate per 1,000 population	28.6 (CBH1994)	23.3 (SRS 2011)	19.9 (SRS 2020)
Crude death rate	9.2 (CBHI 1994)	7.6 (SRS 2011)	6.6 (SRS 2020)
Total fertility rate	3.4 (NFHS 1998-99)	2.2 (NFHS 2015-16)	2 (NFHS 2019-21)
Contraceptive prevalence - modern method	42.8 (NFHS 1998-99)	48 2 (NFHS 2015-16)	56 (NFHS 2019-21)
From Different Sources	**1990's**	**2010's**	**2020's**

Unmet need for contraception	15.8 (NFHs 1998-99)	13 2 (NFHS 2015-16)	9 (NFHS 2019-21)
Infant mortality rate	74 (1994 SRS)	42 (SRS 2012)	28 (SRS 2020)
Maternal mortality ratio (per 100,000 live births)	398 (SRS 1997-98)	254 (SRS 2004-06)	97 (2018-20)
Percentage of rural population	74.22 (1994)	68.8 (1994)	65 (Economic Survey 2022-23)
Per capita monthly income in Rs	2,438 (1994)	5,832 (2011)	14,333(NSO-2022-23)
Percentage of population living below Multidimensional Poverty Index	NA	NA	14.9 (NITI Aayog 2023)
Total expenditure on health (THE) as a percentage of gross domestic product - (GDP)	4 (1995)	4	2.1 (WHS 2022- 23)
Out-of-pocket expenditure on health as a percentage of total expenditure on health (THE)	68 (1995)	60 (2011)	47.1 (WHS 2019-2020)

Source : World Health Statistics, 2019, 2012
NFHS, 1998-99, 2015-16, 2019-2021
National Statistical Organisation - NSO 2022-23
Central Bureau of Health Intelligence - 1991-2000
Sample Registration System,
Govt of India 2023, https://pib.gov.in/PressReleasePage.aspx?PRID=1894902
https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1919582#:~:text=The%20share%20of%20Out%2Dof,Universal%20Health%20Coverage%20for%20citizens.
https://pib.gov.in/PressReleasePage.aspx?PRID=1894902
*. 2021 Census was not conduced due to COVID19 pandemic

There has been a sharp decline in India's maternal mortality ratio (MMR): by about 75.6 per cent from 398 per 100,000 live births in 1997-98 to 97 in 2018-20. However, it varied significantly sub-regionally; it was still very high in most of the Empowered Action Group (EAG) states[1] (above 100): Assam (195), Madhya Pradesh (173), Uttar Pradesh (167); and low in many southern states which have MMRs below 70: Kerala (19), Telangana (43), Andhra Pradesh (45) and Tamil Nadu (55) (SRS 2023).

The infant mortality rate (IMR) in India was 28 per thousand live births (SRS, 2020); it has been declining steadily over the last three decades from 74 in 1994, to 42 in 2012, and further to 28 in 2020. The IMR fell 62 per cent during 1994-2020. The rural (31) and urban (19) differences in IMR are significant, but there is no gender difference in the rates (male are 28; females 28). By state, the rate was high (above 40) in Madhya Pradesh, Chhattisgarh, Assam, and Uttar Pradesh and low (below 10) in Kerala, Goa, Sikkim, Mizoram, and Nagaland.

The total fertility rate, which refers to the number of children born to a woman in her reproductive years, has noticeably declined over the last three decades. It has fallen from 3.2 per woman in 1994 to 2 in 2019-21, implying that India has reached the replacement level of fertility (IIPS 2019-21). However, the TFR varied significantly by state, rural-urban location and women's socioeconomic status. It was 2.1 and 1.6 in the rural and urban areas, respectively; and 2.6 among women in the poorest wealth quintile and 1.6 in the highest wealth category (IIPS 2022).

India's national economy has progressed well over a period of time. As per the World Bank's projection, India's gross domestic product (GDP) growth rate is 8.7 per cent for 2022-23. The country's GDP for 2021-22 was 19.75 million rupees at current prices. However, government spending on health in India is meagre: only 2.1 per cent of its GDP was allotted in 2022-23 for health, which is below the World Health Organisation's (WHO) recommended level of 5 per cent. More importantly, the ratio of total health expenditure to GDP has declined from 4 per cent in 1994 to 2.1 in 2023. At the same time, the share of out-of-pocket expenditure on health in total health expenditure has dropped in recent years; it was 68 per cent in 1995, declined to 60 in 2011 (World Health Statistics, 2019) and is 47.1 per cent for 2022-23 (Government of India 2023). One of the possible reasons could be the National Health

1 Eight states in India, namely Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Odisha and Rajasthan, are called Empowered Action Group states. They are more rural and socioeconomically backward compared to the rest of the country. These states have about 47 per cent of the country's population.

Insurance Scheme (PM-JAY) introduced in 2018, which provides health coverage of Rs 5 lakh per family per year for secondary and tertiary care hospitalisation to poor households. However, this needs further exploration.

However, during 2005-22, there has been a steady decline in budget allocation to health. It declined from 5 per cent of GDP in 2005 to 4 per cent in 2011, then 3.2 per cent in 2019, and to 2.1 per cent in 2023. Further, within the health budget, the funds allotted for reproductive and child healthcare have also dropped significantly. The share of funds for the Reproductive and Child Health (RCH) Flexi-pool in the total health budget fell from 40 per cent in 2016-17 to 15 per cent in 2018-19, with a mild surge to 17 per cent in 2021-22 (CPR 2020, 2022). In the last financial year, 2022-23, only 18 per cent of the health budget was allocated for the RCH programme. A higher percentage of 58 per cent was given to Health System Strengthening (HSS), mainly for untied funds, annual maintenance grants, and hospital strengthening costs (CPR 2023).
According to the latest statistics for 2023, about 15 per cent of people in India live below the poverty level (NITI Aayog 2023). About 17 per cent of households in India incur catastrophic health expenditures yearly (WHO 2022), and hence, poor, marginalised women and young people are unable to access healthcare services due to very high out-of-pocket expenditures.

The gender inequality in India is vast. As per the World Economic Forum Report 2024, India ranks 129 out of 146 countries in the Global Gender Gap Index. Under various sub-indexes, India is the worst performer in the world in the "health and survival" sub-index, where it ranked 142, and in the Economic Participation and Opportunity index at 142 (World Economic Forum 2024).

1.4 India's Policies and Programmes on Sexual Reproductive Health and Rights (SRHRs)

Following the ICPD conference and agreement in 1994, the entire context of the Indian government's national population control policies changed. Consequently, several legislations, policies and programmes were amended or newly formulated to promote SRHR in alignment with the commitments made in ICPD. The important acts, policies and programmes that started post-ICPD and their main objectives are listed in Table 2

Table 2: List of Major Acts, Policies and Programmes in India on SRHR

	Name of Act/ Policy/ Programme and Year	Focus
1	Medical Termination of Pregnancy Act (MTP Act), 1971 (amended 2002, 2003, 2021)	Legally allows women to terminate a pregnancy (under four conditions) up to 24 weeks of gestation, as per the 2021 amendment, applicable to married and unmarried women.
2	Pre-Conception and Pre-Natal Diagnostic Techniques Act, 1994 (amended 2003)	Prohibits sex selection and regulation of pre-conception and pre-natal diagnostic techniques.
3	Protection of Women from Domestic Violence Act, 2005	Protects women from domestic violence – physical, sexual, and emotional.
4	Protection of Children from Sexual Offenses (POCSO), 2012	Protects children below 18 years from sexual abuse and sexual exploitation
5	Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal), 2013	Safeguards women from sexual harassment at the workplace and builds enabling work environments that respect women's right to equality of status and opportunity.
6	The HIV and AIDS (Prevention & Control) Act, 2017	Aims to prevent and control the spread of HIV and AIDS, and reinforce legal and human rights of those infected with and affected by HIV and AIDS.
7	National Youth Policy (NYP), 2014	Aims to empower youth to achieve their full potential, so as to develop a strong and healthy younger generation.
8	National Health Policy (NHP), 2017	Aims to attain the highest possible health and well-being levels for all ages and universal access to good-quality healthcare services.
9	Reproductive and Child Health Programmes - RCH-1, (1997-2002)	Aims to reduce infant, child, and maternal mortality rates

	Name of Act/ Policy/ Programme and Year	Focus
10	Reproductive and Child Health Programmes - RCH-2, (2005-10)	Aims to reduce population growth, fertility and maternal mortality rates, and to introduce adolescent education programmes.
11	National AIDS Control Programmes Phase – I 1992-99 Phase – II 1999-2007 Phase – III 2007-12 Phase – IV 2012-21 Phase – V 2021-26	Phases I and II aimed to slow down the spread of HIV infection, reduce morbidity, mortality, and impact of AIDS in the country Phases III and IV focussed on comprehensive care and support and working with high-risk groups Phase V focuses on the elimination of HIV/AIDS-related stigma and promoting universal access to quality STI/RTI services to at-risk and vulnerable populations.
12	National Rural Health Mission (NRHM) 2005-11 NRHM Phase 2 (2012-17) National Health Mission (2013)	NRHM aimed to provide accessible, affordable, accountable, effective, and reliable primary health care, especially to poor and vulnerable sections. NHM aims to provide universal access to equitable, affordable, quality healthcare services. It was launched concurrently to address the wider social determinants of health.
13	Reproductive, Maternal, Neo-natal, Child Health and Adolescents – RMNCH+A, 2013	Aims to provide a continuum of care by defining and implementing evidence-based packages of services for different stages of the lifecycle at various levels in the health system. Provides adolescent-friendly healthcare services, weekly iron and folic acid supplements to adolescents, and sanitary pads at subsidised rates.

	Name of Act/ Policy/ Programme and Year	Focus
14	Rashtriya Kishore Swasthya Karyakram-RKSK, 2014	Broadens the focus of adolescent programmes beyond SRH to cover life skills, nutrition, gender-based violence, mental health, substance abuse and non-communicable diseases.
15	Reproductive, Maternal, Neo-natal, Child, Adolescent Health Plus Nutrition RMNCAH+N, 2018	Focuses on nutrition and the five other components in RMNCAH+N
16	School Health Programme, 2018	Aims to promote the health and well-being of school-going adolescents.
17	Ayushman Bharat, 2018	Adopts a continuum of care approach with two interrelated components: health and wellness centres (HWCs) with plans to convert HSCs and PHCs into HWCs; and the Pradhan Mantri Jan Arogya Yojana (PM-JAY), an insurance scheme for poor households.

1.4.1 Acts related to sexual and reproductive health and prevention of gender-based violence

Medical Termination of Pregnancy Act (MTP Act) 1971, amended in 2002, 2003 and 2021: The Government of India passed the Medical Termination of Pregnancy Act in 1971, which legally allows women to terminate their pregnancy under four conditions: 1) To save the life or health of the pregnant person; 2) Pregnancy caused by rape; 3) Contraceptive failure; and 4) If the foetus has any physical or mental disability. The Act underwent three amendments in 2002, 2003, and 2021. The first two amendments aimed to decentralise the facility approval process to increase the number of facilities and introduce medical abortion services. Initially, the condition for contraceptive failure only applied to married women, but the amendment extended it to unmarried women as well. In the latest amendment, the number of gestation weeks for pregnancy termination has increased from 20 to 24. Additionally, in the case of substantial foetal abnormalities, pregnancy termination even after 24 weeks is permitted, based on recommendations of a state medical board. As per the Act, detailed guidelines were developed. These guidelines permit the use of medical methods up to 9 weeks of pregnancy, up to 12 weeks by manual vacuum aspiration (MVA) and electric vacuum aspiration (EVA), and only by dilation and evacuation procedures for pregnancies beyond 12 weeks. Despite the progressive nature of the MTP Act, aborting a foetus outside these four conditions is a crime under the Indian Penal Code. Moreover, the final decision to terminate a pregna ncy rests with the healthcare provider, leading to instances where women in need are denied abortion services.

Pre-Conception and Pre-Natal Diagnostic Techniques Act, 1994. Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994 (PNDT) was aimed at the prohibition of sex selection and regulation of pre-natal diagnostic techniques. The Act underwent an amendment in 2003, becoming the Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT Act); this amendment primarily focused on enhancing the regulation of the technology used in sex selection before or after conception. The amended Act prohibits: 1) seeking or encouraging prenatal diagnostic techniques for foetal sex detection; 2) service providers communicating the foetal sex to the pregnant woman or her family; and 3) advertising the provision of pre-natal sex determination services. It regulates clinics to compulsory registration, sale of ultrasound machines to registered facilities, personnel qualification, and reporting procedures. Notably, the Act does not explicitly mention the prohibition of abortion. However, a common misinterpretation suggests that it prevents sex-selective abortion, which has impacted people's access to safe abortion services.

Protection of Women from Domestic Violence Act, 2005: The Act aims to protect women from domestic violence. It includes and defines not only physical violence but also other forms of violence, such as emotional/verbal, sexual, and economic abuse. It is an important law, allowing women to file cases against perpetrators. Under the Act, district-level protection officers are appointed to support aggrieved women in filing a complaint against their husbands or adults who commit domestic violence and in taking action legally. Women can get financial compensation, the right to live in their shared household, and can avail of maintenance if living apart from their abuser.

Awareness about the Act is poor: a study found that the budget allocated for broader legal awareness on the PWDVA is very low (Das & Lakshmana 2020). There are implementation gaps in the legislation; protection officers are the first point person for the aggrieved woman under the Act, but they have neither been appointed in adequate numbers with independent charges nor do they have the skills and capacities required for the role (Menon 2016). The Act stipulates that court proceedings related to domestic violence cases must be concluded within 60 days. However, there is an abundance of media reports that describe the plight of the women whose cases have been dragging on for years and where the victims have not received any maintenance during the proceedings (Kanougiya 2022).

Protection of Children from Sexual Offenses (POCSO), 2012: The POCSO Act was introduced to address sexual abuse and sexual exploitation of children below the age of 18. It gives importance to the best interests and well-being of the child. It defines different forms of sexual abuse, sexual harassment, and pornography; talks about provisions related to the encouragement or support of the offence; and prescribes punishment as per the gravity of the offence. The Act criminalises acts of a sexual nature involving a 'child' under the age of 18. Sex with a person below the age of 18 years is statutorily termed as rape under this Act. Consensual relationships between adolescents are therefore criminalised. The Act mandates that anyone who "has apprehension that an offence under this Act is likely to be committed" or "has knowledge that such an offence has been committed" shall report to the special juvenile police unit or the local police. Although intended to ensure effective reporting of child sexual abuse, this mandatory reporting provision conflicts with the confidentiality of the abortion seekers mentioned in the MTP Act, and it creates significant barriers to access to abortion and other SRH services by adolescents. There were many instances when girls were not able to terminate their pregnancies and were forced to marry the person responsible.

The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act 2013: This was enacted to ensure safe working spaces and to build enabling work environments that respect women's right to equality of status and opportunity. As per the Act, a workplace is defined as "any place visited by the employee arising out of or during the course of employment, including transportation provided by the employer for undertaking such a journey." As per this definition, a workplace covers the organised and unorganised sectors. It also defines "sexual harassment" as any of the following unwelcome acts or behaviour (directly or by implication), namely: 1) physical contact or advances; 2) a demand or request for sexual favours; 3) making sexually coloured remarks; 4) showing pornography; and 5) any other unwelcome physical, verbal, or non-verbal conduct of a sexual nature (GOI 2015).

The Act aims to provide a safe environment at the workplace, and the formation of a compliance committee to redress issues related to sexual harassment at the workplace. The three obligations imposed on institutions are: prohibition, prevention of sexual harassment, and redressal. The Act makes it mandatory to form an internal compliance committee (ICC) at the workplace and a local compliance committee (LCC) at the district level to redress issues related to sexual harassment at the workplace. It is assumed that effective implementation of this Act will contribute to realising women's right to gender equality, life and liberty, and equality in working conditions everywhere (GOI 2015). However, there is poor awareness about the Act and the setting up of a sound monitoring and accountability system to implement it. Many establishments do not even constitute an ICC on their premises. A few establishments created the committees in name only – as they are otherwise not functional or dysfunctional. Studies also show the absence of local compliant committees at the district level, and even if they exist, they mostly do conciliation in the interests of the complainant on mutually agreed terms (Anagha 2020, Swaraj [n.d]). The Supreme Court recently flagged "serious lapses" in implementing the Act (Munjal 2023), and another study (Gupta et al. 2021) found that the implementation of the law against sexual harassment was mediated by caste, class, and gender of the survivors and perpetrators. Another initiative to prevent sexual harassment at the workplace is the SHe-Box, an online complaint management system introduced in 2017 for lodging complaints related to workplace sexual harassment.

The HIV and AIDS (Prevention & Control) Act, 2017: This Act was introduced to protect and promote the rights of persons infected with and affected by the Human Immunodeficiency Virus (HIV) and Acquire Immune Deficiency Syndrome (AIDS). Its primary objective was to prevent and control the spread of HIV and AIDS and to reinforce the legal and human rights of those infected with and affected by HIV and AIDS. It also seeks to protect the rights of healthcare providers. The Act addresses stigma and discrimination, and strives to create an enabling environment for enhancing access to services. It provides guidelines to set up diagnostic facilities related to assisted reproductive technology (ART) and opportunistic infection management to people living with HIV and AIDS. The Act also provides for a robust grievance redressal mechanism in the form of an ombudsman at the state level and a complaints officer at the establishment level, aiming to provide speedy redressal. One recent review found that people living with HIV (PLHIV) still experienced HIV-related stigma at different stages of their lives in individual, family, community, and healthcare settings, which may vary from region to region (Irene et al., 2022).

Other laws related to the women's SRHR are 1) The Assisted Reproductive Technology (Regulation) Act, 2021 (ART Bill), which aims to regulate ART clinics and ART banks across the country and implement surrogacy laws; and 2) Trafficking in Person (Prevention, Care and Rehabilitation) Act, 2021, to prevent and combat trafficking of persons. Under the Act, an anti-trafficking committee, protection homes, and rehabilitation homes for victims are set up to tackle human trafficking.

Another set of Acts related to children and adolescents in accordance with the International Convention on the Rights of the Child (CRC 1992) are: 1) The Commission for Protection of Child Rights Act, 2005, which aims to provide speedy trials for offences against children or violations of their rights; 2) Juvenile Justice (Care and Protection of Children) Act, 2000 and its amendment 2015. The Act was framed to reduce the crime rate against children aged between 16 and 18 years and to provide justice to such victims. It also provides a guide for setting up institutional care, rehabilitation, and social reintegration of these children; and 3) The Prohibition of Child Marriage Act 2006, under which child marriages are voidable at the option of the contracting party being a child, if the male has not completed 21 years of age and the female has not completed 18 years.

1.4.2 Policies and Programmes on SRHR

This section summarises the important policies related to SRH. The National Population Policy 2000 affirmed government commitment towards voluntary, informed choices and consent of people in accessing SRH care services and the continuation of a target-free approach in family planning services. The policy's immediate objective was to address the unmet need for contraception; its long-term objective was to achieve a stable population by 2045; and the medium-term objective was to bring total fertility below replacement levels by 2010.

The National Youth Policy (NYP) 2014 provides a holistic vision for the youth of India, which is "to empower the youth of the country to achieve their full potential, and through them enable India to find its rightful place in the community of nations." Its five key objectives are to create a productive workforce; develop a strong and healthy generation; instil social values and promote community service; facilitate participation and civic engagement; support youth at risk; and create equitable opportunity for all (GoI 2014).

The National Health Policy (NHP) 2017 aims to attain the highest possible health and well-being levels for all ages and provide universal access to good quality healthcare services. It outlines three key strategies: 1) strengthen the health system; 2) increase health expenditure to 2.5 per cent of the GDP; and 3) upgrade primary health centres and sub-centres to health and wellness centres (HWCs) to provide comprehensive primary healthcare including SRHR (MOHFW 2017). The policy envisages the attainment of its goal through a preventive and promotive healthcare orientation in all developmental policies and universal access to good quality healthcare services without anyone having to face financial hardship (MOHFW 2017).

Reproductive and Child Health Programmes

India was the first country to introduce a national-level family planning programme in 1952. The programme underwent many changes in its approach and implementation; it moved from the clinic and camp approach to the cafeteria approach. In 1996, the national government replaced method-specific contraceptive targets with a target-free approach, later renamed the community needs assessment approach. After ICPD, the first and most significant programme of the government was the Reproductive and Child Health Programmes (RCH) 1 and 2 (1997-2002 and 2005-10). In 1997, the family welfare programme was integrated with the RCH programme. The

RCH programme aimed to reduce social and geographical disparities in accessing and utilising quality reproductive, maternal, new-born, child, and adolescent health services. It was viewed as a paradigm shift from a target- and quantity-oriented approach to a client- and rights-oriented approach. All the vertical programmes on family welfare and maternal and child health were converged. Notably, it also integrated all the components of the child survival and safe motherhood (CSSM) programme,[2] and included adolescent and young adult sexuality and the management of RTIs/STIs.

The main objective of the RCH-1 (1997-2002) programme was to reduce infant, child, and maternal mortality rates. The main approaches were to: improve maternal healthcare services, including antenatal, delivery and postpartum care services; prevent and manage unwanted pregnancies, child survival services; manage reproductive tract infections and sexually transmitted infections. Adolescent health and reproductive hygiene were also among the interventions of RCH-1. The targets set in the RCH-1 programme were to: 1) bring down the birth rate below 21 per 1,000 population; 2) reduce the infant mortality rate below 60 per 1,000 live births; and 3) bring down the maternal mortality rate. The RCH-1 programme aimed to attain 80 per cent institutional delivery, 100 per cent antenatal care, and 100 per cent immunisation of children. In 2003, emergency contraceptive pills (ECPs) were introduced in the National Family Welfare Programmes as one of the strategies to prevent unwanted pregnancies.

In addition to the RCH-1 components, RCH-2 (2005-10) included adolescent health, including the adolescent education programme. The goals laid down in RCH-2 were to reduce the population growth rate to 16.2 per cent, bring down the infant mortality rate to 35/1,000 live births, maternal mortality ratio to 150/100,000 live births, total fertility rate to 2.2 and to increase the couple protection rate to 65 per cent. Adolescent reproductive and sexual health (ARSH) was introduced in 2006 with a two pronged strategy: Incorporation of adolescent issues in all the RCH training programmes and all RCH materials developed for communication and behaviour change; and dedicated days and dedicated timings for adolescents at PHCs (NHM 2006).

The RCH programme envisaged upgrading public health facilities to provide various interventions and quality care. It planned to set up first referral units (FRUs) at the sub-district level to provide comprehensive

2 CSSM programme had the following components: early registration of pregnancy; providing a minimum of three antenatal check-ups; universal coverage of all pregnant women with TT immunisation; advice on food, nutrition, and rest; detection of high-risk pregnancies and prompt referral; clean deliveries by trained personnel; birth spacing; and promotion of institutional deliveries.

emergency obstetric and new-born care, and proposed improving obstetric care facilities, and introduced MTP and IUD insertions in PHCs. It is also recommended IUD insertions at health sub-centres.

Each of the three programmes, the National AIDS Prevention and Control Programmes (1992-99, 1999-2006, and 2012-17), the National Rural Health Mission (NRHM) (2005-11), and the National Health Mission (NHM) (2012-17) addresses one or more components of SRR for different target groups.

National AIDS Control Programmes

The government launched the National AIDS Control Programme (NACP) in 1992. Phase one of the programme period was 1992 to 1999. NACP I was implemented to slow down the spread of HIV infections, and to reduce morbidity, mortality, and the impact of AIDS in the country. The first phase focused on awareness-generation, setting up a surveillance system for monitoring the HIV epidemic, and measures to ensure access to safe blood and preventive services for high-risk group populations.
Phase II (1999-2007) of the National AIDS Control Programme became effective on 9 November 1999. Its key objectives were to: reduce the spread of HIV infection in India; and increase India's capacity to respond to HIV/AIDS on a long-term basis. Key policy initiatives taken during NACP II were: the adoption of the National AIDS Prevention and Control Policy (2002), the Scale-up of Targeted Interventions for High-risk Groups in High-prevalence States, the Adoption of the National Blood Policy, a strategy for Greater Involvement of People with HIV/AIDS (GIPA), the launch of the National Adolescent Education Programme (NAEP), introduction of counselling, testing and Prevention of Parent-to-Child Transmission (PPTCT) programmes, and launch of the National Anti-Retroviral Treatment (ART) programme (NACO, website).

The programme's third phase [NACP III] (2007-12) was introduced in 2006. In this phase, care and support activities and working with high-risk groups were given more importance. The overall goal of NACP III was to halt and reverse the epidemic in India over the next five years by integrating programmes for prevention, care, support, and treatment. It was implemented to provide a range of preventive services, i.e., behaviour change communication, treatment of STIs, condom promotion, integrated counselling and testing, PPTCT, supply of safe blood, and infection control.

The fourth phase of the NACP (2012-21) was introduced in 2017 with two broad objectives: reduce new infections by 50 per cent (2007 Baseline of

NACP III); and comprehensive care, support and treatment to all persons living with HIV/AIDS. There were five significant components in phase IV: a) intensifying and consolidating prevention services with a focus on high-risk groups (HRGs) and vulnerable populations; b) expanding IEC services for the general population and high-risk groups; c) comprehensive care, support, and treatment; 4) strengthening institutional capacities; and 5) strategic information management systems (SIMS) (NACO 2022).

NACP Phase V (2021-26) started in 2021. It aims to reduce annual new HIV infections and AIDS-related mortalities by 80 per cent by 2025-26, from the baseline value of 2010. It also aims to attain dual elimination of vertical transmission and elimination of HIV/AIDS-related stigma while promoting universal access to quality STI/RTI services to at-risk and vulnerable populations. The following five goals were listed in the programme: 1) Reduce annual new HIV infections by 80 per cent; 2) Reduce AIDS-related mortalities by 80 per cent; 3) Eliminate vertical transmission of HIV and syphilis; 4) Promote universal access to quality STI/RTI services to at-risk and vulnerable populations; and 5) Eliminate HIV/AIDS-related stigma and discrimination (NACO 2022).

National Rural Health Mission

The National Rural Health Mission (NRHM) Phase 1, 2005-11 was introduced in 2005. Its primary objectives were to strengthen public health infrastructure, including RCH-1 and RCH-2 components, and to provide accessible, affordable, accountable, effective, and reliable primary health care, especially to poor and vulnerable sections of the population. It also aimed at bridging the rural healthcare gap by creating a cadre of Accredited Social Health Activists (ASHAs) and improving hospital care, decentralising the programme to the district level to improve intra and inter-sectoral convergence, and utilising resources effectively.

The NRHM aimed to provide an overarching umbrella for existing health and family welfare programmes, including RCH-II and others. It suggested increasing community ownership of the programme through the involvement of panchayat raj institutions, NGOs, and other stakeholders at the national, state, district, and sub-district levels to achieve the goals of the National Population Policy 2000 and the National Health Policy.

The Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Health Mission (NHM). It was launched on 12 April 2005 to reduce maternal and neonatal mortality to promote institutional delivery

among pregnant women, especially those with a lower socio-economic status, i.e., women from the Scheduled Castes, Scheduled Tribes and BPL households. Under this scheme, a rural-based woman who delivers a child at a public health facility or accredited private hospital receives Rs. 1,400, and an urban woman gets Rs 1,000; for a home delivery, a woman gets the cash assistance of Rs 500.

Studies have found state-wide and district-wide variations in the receipt of JSY benefits. For instance, the receipt of benefits was lower in Jharkhand than in Odisha; and within Jharkhand, Ranchi was better placed in receiving benefits than Godda. Jharkhand also reported pro-rich inequality in the receipt of benefits (Thongkong et al. 2017). Studies have also reported challenges in the implementation of the scheme, along with poor quality of care in the empanelled facilities. Implementation challenges included a lack of awareness about the scheme, cumbersome cash disbursement procedures, intricate eligibility criteria, extensive paperwork, and insufficient community involvement (Lahariya et al. 2011, Sabde et al. 2016, Chaturvedi et al. 2015). Private practitioners faced significant barriers to participation due to low reimbursement amounts, delayed reimbursements, issues in interactions with the government and administrative problems, trust deficit based on previous experiences, lack of clarity on the accreditation process, and patient-level challenges (Yadav et al. 2017).

Under NRHM Phase 2 (2012-17), all the SRH services were integrated and converged. In 2013, the two parallel programmes, the National Rural Health Mission and Urban Health Mission, were merged into the National Health Mission (NHM). Its broad objective is universal access to equitable, affordable, and quality healthcare services; convergent action to address the wider social determinants of health was initiated.

The Reproductive, Maternal, Neo-natal, Child Health and Adolescents (RMNCH+A) approach was introduced in 2013. A particular focus on adolescent health care was initiated, which acknowledges that differences in life chances arise mainly due to the broader determinants of health, including the socio-economic conditions in which children are born and compelled to live and grow. Thus, the continuum of care approach of defining and implementing evidence-based packages of services for different stages of the lifecycle at various levels in the health system has been adopted under this programme. The following three goals were listed under the programme: 1) Reduction of the infant mortality rate (IMR) to 25 per 1,000 live births by 2017; 2) Reduction in the maternal mortality ratio (MMR) to 100 per 100,000 live births by 2017; and 3) Reduction in the total fertility rate (TFR) to 2.1 by 2017 (GoI 2013).

The different components of the programme are: adolescent health, child health, maternal health, and family planning. The adolescent health component focuses on strengthening services in adolescent-friendly health clinics to provide clinical and counselling services on various adolescent health issues like nutrition, substance abuse, mental health, gender, gender-based violence, and SRH in public health facilities. Weekly iron and folic acid supplementation (WIFS) was introduced to reduce the prevalence and incidence of anaemia among adolescents, school-going adolescent boys and girls as well as out-of-school adolescent girls through community distribution by anganwadi workers and ANMs. It included the community-level distribution of sanitary pads to adolescent girls at a subsidised rate of Rs. 6 for a pack of six napkins through ASHAs, and ANMs and anganwadi workers.

The Rashtriya Kishore Swasthya Karyakram (RKSK programme) was launched in 2014. It broadened the focus of adolescent programmes beyond SRH, to include life skills, nutrition, gender-based violence, mental health, substance abuse, and non-communicable diseases. It was a paradigm shift from the existing clinic-based services to promotion and prevention, and reaching adolescents in their own environments, such as schools, families, and communities.

The One-Stop Centre (OSC) scheme is a sub-scheme of the National Mission for Empowerment of Women, and it was implemented on 1 April 2015 under the Ministry of Women and Child Development in collaboration with the Ministry of Health and Family Welfare. Its primary aim is to facilitate access to a wide range of services for women affected by violence; one-stop centres (OSCs) were set up in district hospitals to support women affected by violence in private and public spaces, within the family, community, and workplace. Women facing physical, sexual, emotional, psychological, and economic abuse could seek the support and redressal at an OSC.

In 2017, the **Mission Pariwar Vikas** initiative was launched to improve access to contraceptives by delivering services, ensuring commodity security, and accelerating access to high-quality family planning services. Its overall goal is to reduce India's overall fertility rate to 2.1 by 2025. It introduced two new contraceptives , injectable contraceptives MPA (medroxyprogesterone acetate) and chaya (weekly oral pills), which are available to all government hospitals.

In 2017, the national government launched a special programme, **LaQshya**, to improve the quality of care in labour rooms and maternity operation theatres in public health facilities. The main objective of the programme was to improve the quality of care during delivery and in the immediate post-partum period, and provide respectful maternity care (RMC) to pregnant women attending public health facilities.

In 2018, the **Anaemia Mukt Bharat (AMB) scheme** was introduced to provide prophylactic iron and folic acid supplementation and periodic deworming and to encourage behavioural change communication activities. It aimed to reduce the prevalence of anaemia by 3 per cent every year. The AMB programme covers six age groups: 6-9 months, preschool children, children aged 5-9 years, those aged 10-19 years, pregnant women and lactating mothers, and women in the 15-49 age group with a life cycle approach. In order to ensure nutrition across all life stages, a new strategy called Reproductive, Maternal, New Born, Child, and Adolescents Health PLUS Nutrition – RMNCAH+N was introduced, with a particular focus on nutrition along with the five other components mentioned above.

In 2018, under the aegis of Ayushman Bharat, the government introduced the **School Health Programme (SHP),** which aims to promote the health and well-being of school-going adolescents. It is being implemented in government and government-aided schools in many states. Two teachers, preferably one male and one female, in every school, designated as 'Health and Wellness Ambassadors', are trained to transact with schoolchildren (at the upper primary level), for health promotion and to provide disease prevention information on 11 thematic areas. The National Council for Educational Research and Training (NCERT) developed the core curriculum and training manual in collaboration with the Ministry of Human Resource and Development and the Ministry of Health and Family Welfare. However, the core content of the curriculum does not address the key components of adolescent sexuality.

In the maternal health component, the programme aims to provide good quality maternal health care services with a vision of zero preventable maternal and new born deaths and high-quality maternity care delivered with dignity and respect

Ayushman Bharat is a flagship scheme of the government, launched as recommended by the National Health Policy 2017 to achieve universal health coverage (UHC) in the country. This initiative was designed to meet the

Sustainable Development Goals (SDGs) and its underlying commitment "to leave no one behind." It attempts to move from a sectoral and segmented approach in health service delivery to comprehensive need-based healthcare service. It will undertake path-breaking interventions to holistically address the healthcare system (prevention, promotion, and ambulatory care) at the primary, secondary and tertiary levels. For this it adopts a continuum of care approach, comprising two interrelated components: health and wellness centres (HWCs) and the Pradhan Mantri Jan Arogya Yojana (PM-JAY).

HWCs will be created by transforming existing sub-centres and primary health centres. These centres will deliver comprehensive primary healthcare (CPHC), and bring healthcare closer to people's homes. They cover maternal and child health services and non-communicable diseases, including free essential drugs and diagnostic services.

The second important component under Ayushman Bharat is the Pradhan Mantri Jan Arogya Yojna (or PM-JAY, as it is popularly known) launched in 2018. It is the most significant health assurance scheme in the world, aiming to provide health cover of Rs. 5 lakh per family per year for secondary and tertiary care hospitalisation to over 120 million poor and vulnerable families (approximately 550 million beneficiaries) at the bottom 40 per cent of the socio-economic stratum. The households are selected based on the deprivation and occupational criteria of the Socio-Economic Caste Census 2011 (SECC 2011) for rural and urban areas. PM-JAY was earlier known as the National Health Protection Scheme (NHPS), which then subsumed the then-existing Rashtriya Swasthya Bima Yojana (RSBY) launched in 2008. The key features of PM-JAY are that:

- It provides cashless access to health care services for the beneficiary at the point of service, that is, the hospital. Public hospitals are reimbursed for the healthcare services at par with the private hospitals.
- It covers up to 3 days of pre-hospitalisation and 15 days of post-hospitalisation expenses, such as diagnostics and medicines.
- There is no restriction on the family size, age or gender. The services include approximately 1,929 procedures covering all the costs related to treatment, including drugs, supplies, diagnostic services, physician's fees, room charges, surgeon charges, OT and ICU charges, etc. It covers medical treatment for mothers and new-borns, such as delivery, caesarean section, gynaecological services, and treatment for new-borns with congenital disabilities" (NHA 2023).

1.5 India's SRH Situation and Trends

Many large-scale studies in India have reported that awareness about puberty, menstruation, conception, and contraception among adolescents and young people is very poor (IIPS 2006-07; Khan et al. 2019; UNESCO 2022). Studies have also reported that there is a substantial unmet need for sex education among the youth (Tripathi & Sekher 2013; IIPS 2006-07).

In India, there has been a secular decline in the age of menarche in girls (Balaji et al. 2021). One study (Pathak et al. 2014) found a nearly one-month reduction per decade, and another study (UNESCO 2022) done with adolescent girls in seven states of India found that the average age of puberty was 12.75 years.

The Dasra Report (2014) found that around 71 per cent of adolescent girls in India are not aware about periods till menarche (their first period), around 23 million girls drop out of schools after reaching puberty due to a lack of proper sanitary facilities, and 70 per cent of the mothers of menstruating daughters considered periods as dirty. Studies also found many myths and misconceptions surrounding menstruation. As per the latest statistics, a little over three-fifths of the women aged 15-24 in the country were using hygienic protection methods during their menstrual period. However, rural-urban and household economic status are significant determinants in using hygienic materials (IIPS 2019-21, Singh et al. 2022). Likewise, adolescent girls from Scheduled Castes and Tribes have a lower probability of using hygienic products compared to girls from other castes (UNFPA 2022).

Child marriage is still an issue in India; one in three of the world's child brides live in India (UNICEF 2023). As per the latest NFHS-5 (2019-21) survey, 23.3 per cent of married women in the 20-24 age group got married before the legal age of 18 years for girls (Table 3). During the last two and a half decades, this has come down 53 per cent: it was 50 per cent in 1998-99, declined to 47.4 per cent in 2005-06, and dropped to 23.3 per cent in 2019-21 (IIPS 2019-21). However, the prevalence varies noticeably by caste and economic status: 40 per cent of girls from the lowest quintile, as against 8 per cent from the highest quintile, married before 18; and there is a higher prevalence of child marriages among Scheduled Castes and Tribes (26 per cent) than the others (18 per cent) (UNFPA 2022a).

Table 3: Selected SRHR Indicators of Women by Socio-Economic Status (%) (NFHS 5, 2019-21)

SRHR Indicators	Women's Socio-Economic Status							Total
	By Caste				Economic Status (Wealth Index)			
	SC	ST	OBC	Others	Lowest	Middle	Highest	
Menstrual Hygiene								
Women (15-24 years) who use hygienic methods of protection during menstruation	76.70	65.60	77.70	83.70	53.60	82.10	95.10	**77.60**
Maternal Health								
Mothers who had at least four antenatal care visits	55.30	57.60	57.20	64.40	41.80	62.80	71.80	**58.50**
Institutional births	87.30	82.30	89.50	91.20	76.20	92.30	97.40	**88.60**
Public sector share in institutional delivery care	68.10	69.70	59.80	55.90	67.70	66.00	40.10	**66.80**
Total fertility rate (children per woman)	2.08	2.09	2.02	1.78	2.63	1.86	1.57	**1.99**
Contraception								
Currently married women (aged 15-49 years) using modern methods of Contraception	57.00	55.10	56.60	56.40	50.70	58.30	58.70	**56.40**
Total unmet need for contraception	9.20	9.20	9.60	9.40	11.40	8.80	11.50	**9.40**
Nutritional Status (15-49)								
Women (aged 15-49 years) who are anaemic (<12.0 g/dl)	59.20	64.60	56.40	56.40	63.70	56.90	51.00	**57.00**
Domestic violence								
Ever-married women (aged 18-49 years) who have ever experienced spousal violence	37.30	34.70	32.90	22.60	41.20	32.70	19.70	**32.00**

The adolescent fertility rate was very high in India in the early 1990s at 107 per 1,000 women aged 15-19 years; it dropped to 33 in 2012 to 17 in 2021 (World Bank 2023). Despite the overall rate steadily declining over the years, it is still very high in many states. It also varies significantly by rural-urban, caste, and economic status of women it was 49 in rural areas and 27 in urban areas (IIPS 2019-21). It was also observed that the COVID-19 pandemic led to increased instances of child marriages (Jeejeebhoy 2021).

Post-ICPD, the Indian government has introduced many policies and programmes to promote maternal healthcare. The proportion of pregnant women who had an ANC visit during the first trimester increased from 37.59 per cent in 2015-16 (NFHS-4) to 70 per cent in 2019-21 (NFHS-5). Similarly, the proportion of mothers who had four and above ANC visits has increased gradually. It was 37 per cent in 2005-06, rose to 51.2 in 2015-16, and reached 58.1 per cent in 2019-21. The percentage of institutional delivery too has increased, from 33 per cent in 1998-99 to 88.6 per cent in 2019-21. The rate of increase in delivery care was 168 per cent during the above period. Despite this, the overall rate has increased substantially; one-fourth of the women in the poorest wealth quintiles had home delivery. Similarly, more than 93 per cent of women in urban areas delivered their babies in a health facility, but in the rural areas, up to 13 per cent had home births.

Contraception is a promotive component of reproductive health, and is also a right for individuals and couples. The prevalence of modern methods of contraception among currently married women has improved by 53.45 per cent over the last three decades. In 1992-93, only 36.5 per cent of couples used modern methods of contraception, and this increased to 56.4 per cent in 2019-21. Among the modern methods of contraceptives in use, the female contraceptive operation is the only method widely used (37.9 per cent), followed by condoms (9.5 per cent), oral pills (5.1 per cent), and the Copper-T (2.1 per cent). A negligible proportion used vasectomy (0.3 per cent) and injectable contraceptives (0.6 per cent) (Balasubramanian, N.D). The unmet need for contraception[3] among currently married women has dropped from 15.8 in 1998-99 to 9 in 2019-21 (IIPS 2023); it was higher in the rural areas than in the urban areas.

As per the latest study by the Guttmacher Institute, 15.6 million abortions took place in India in 2015. Of these, 73 per cent were medication abortions outside health facilities, and only 22 per cent were in health facilities; the remaining 5 per cent were done outside health facilities, using methods other than medication abortion; the abortion rate was 47 abortions per 1,000 women aged 15-49 years (Singh et

3 The unmet need for contraception refers to the proportion of women who do not want to become pregnant but are not using contraception.

al. 2018). For abortion services, women in India have to depend heavily on the private sector. Non-availability and the limited availability of services force women to choose private providers and spend heavily on out-of-pocket expenditures. Even in public facilities that provide abortion services, the availability of second-trimester abortions was highly restricted, both for married and unmarried women. Unmarried women reported being refused abortions in government hospitals or subjected to abusive and disrespectful care (Sundari et al. 2018). The COVID-19 pandemic severely impacted the provision of SRH services. The interruption in the provision of reproductive health services due to the lockdown led to an additional 2.3 million unintended pregnancies and over 800,000 unsafe abortions (Ben et al. 2021). Marie Stopes International's study in August 2020 estimated that a staggering 9.2 lakh women in India requiring abortion services could not access them between January and June 2020 because of the stringent COVID-19 lockdown.

The prevalence of HIV among adults (15-49 years) has declined since the epidemic's peak in 2000. Estimated at 0.55 per cent in 2000, it fell to 0.32 per cent in 2010, and to 0.21per cent in 2021. The north-eastern states have the highest adult HIV prevalence (2.7 per cent in Mizoram, 1.36 per cent in Nagaland, and 1.05 per cent in Manipur), followed by the southern states (0.67 per cent in Andhra Pradesh, 0.47 per cent in Telangana, and 0.46 per cent in Karnataka). The number of people living with HIV (PLHIV) are estimated at around 24 lakh and annual new infections (ANIs) are estimated at 62.97 thousand in 2021 (NACCO and ICMR 2022)

Anaemia is a major health issue in India. Among the South Asian countries, India has the highest prevalence of anaemia. The findings of the NHHS-5 (2019-21) show that more than two-thirds of the children aged below five years in the country are anaemic. The prevalence of anaemia among children has increased noticeably in recent years: from 59.6 per cent in 2015-16 it increased to 67 per cent in 2019-21. Similarly, more than half the pregnant women in the country are anaemic (IIPS 2019-21). The prevalence of anaemia among women in the reproductive age group of 15-49 years is also still very high: it was 55.3 per cent in 2005-06 and slightly declined to 53.1 per cent (2015-16), but increased to 57 per cent in 2019-21. Again, the rate was very high among women belonging to marginalised groups and poor households. It was 59.2 per cent among Scheduled Castes women, 64 per cent in the Scheduled Tribes, and 56 per cent among others. Likewise, women who belong to the poorest wealth quintile have the highest rates (63.7 per cent) against those from the highest wealth quintile (51 per cent). Thus, women in rural areas, in marginalised castes and poor households, had the highest prevalence of nutritional deficiency and anaemia.

Gender-based violence (GBV) against women is a human rights and serious public health issue. Large-scale national surveys indicate that GBV against women and girls has risen sharply over the years (UPR 2022). Domestic violence was 20 per

cent in 1998-99 and rose to 37 per cent in 2005-06; then there was a slight decline to 31.2 per cent in 2015-16. However, not much change has been observed over the last five years. The findings of the most recent NFHS-5 (2019-21) show that one out of every three ever-married women aged 18-49 years has experienced spousal violence in India (IIPS 2019-21).

The most common type of spousal violence is physical violence (28 per cent), followed by emotional violence (14 per cent), and sexual violence (6 per cent). People with low incomes and marginalised women are more susceptible to domestic violence than others. The prevalence of spousal violence was much higher among poor caste women (37.3 per cent among SCs and 34.3 per cent among STs) than the others (22.5 per cent). Likewise, it was very high in the poorest households (41.2 per cent) and low among the wealthiest households (19.2 per cent), and higher for rural women (31.6 per cent) than their urban counterparts (24.2 per cent). Regional variation in the prevalence of domestic violence is also highly significant. The rate was below 15 in Goa (9.7 per cent), Kerala (12.9 per cent), Punjab (13.4 per cent), Mizoram (11.9 per cent), and Nagaland (11 per cent), but was very high in many southern states (40 per cent and above) in Karnataka (48.4 per cent), Telangana (40.4 per cent), Tamil Nadu (39.4 per cent), and in Bihar (42.5 per cent) and Manipur (41 per cent) (IIPS 2019-21). The reason for these state differences is an important area of exploration.

2. SYNTHESIS OF LITERATURE ON SRH IN INDIA

This section attempted to search and systematically document the literature on 1) SRH of adolescents and young people in India and 2) maternal health in India, including maternal mortality, morbidity, maternal healthcare utilisation and abortion for the period since ICPD: 1995 onwards. Thus, the review covers published studies between 1995 and 2022. It draws on two existing bodies of work that have created annotated bibliographies on the above themes for the periods 1990-2000 and 2000-2014 (RUWSEC[4] 2001a, RUWSEC 2001b, SCTIMST[5] 2015a). For the recent period (2015-22), a systematic online search of articles was carried out from PubMed and Scopus databases using keywords. The methodologies used in identifying relevant studies on the SRH of young people and on maternal health were as follows.

A comprehensive list of articles on the subject was prepared. From the list, all the duplicate entries were removed. Then we removed all the irrelevant articles (which did not focus on young people's SRHR, or on maternal health, or which concentrated on very specific clinical interventions such as drug trials and the use of specific equipment, or did not exclusively focus on India), reviews, and articles for which only the abstract was available. Finally, the short-listed articles were thoroughly reviewed and their results synthesised under major areas.

2.1 Studies on Sexual and Reproductive Health among Adolescents and Young Adults in India (1995 – 2022)

After a through screening, 56 articles were identified on the SRH of young people in India. The themes that emerged when analysing the results were:

4 Rural Women's Social Education (RUWSEC) is a non-governmental women's organisation based in Tamil Nadu, India. It has been working on young people's and women's SRHR issues for over four decades, and published an annotated bibliography on sexuality and maternal health from 1990 to 2000.

5 Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST) is an Institution of National Importance under the central government's Department of Science and Technology, and is situated in Trivandrum, Kerala. It published an annotated bibliography on studies on SRH of adolescents and young people in India from 2000 to 2014. The existing annotated bibliography of the two organisations was used for the period 1994-2014.

a) knowledge on sexual and reproductive health; b) beliefs around sexual and reproductive health; c) sexual and reproductive health problems and associated factors among adolescents and young adults; d) sexual and reproductive health services; and e) interventions to address sexual and reproductive health needs.

2.1.1 Knowledge on sexual and reproductive health

The review clearly documented the limited knowledge as well as the unmet need for information on SRH among adolescents and young adults. A cross-sectional survey among school-going adolescents found that a significant proportion of boys and girls were unaware that a single intercourse can result in pregnancy (Shashikumar et al. 2012). Another survey of young married and unmarried women observed that women scored low composite scores on knowledge around sex and pregnancy, contraception, and abortion (Banerjee et al. 2015). A survey of adolescents found low levels of accurate knowledge on family planning, especially the spacing methods (Rajagopal & Philip 1995).

A hospital-based retrospective study also observed poor knowledge of condom usage among adolescents (Maheswari & Kalaivani 2017). In one study, while young unmarried rural men were familiar with condoms, they had limited knowledge of other types of contraceptives (Tikoo et al. 1995). Female adolescent students associated contraceptive use with impotence, weakness (following sterilisation), and fear of being abused (Shah et al. 2011).

The limited knowledge on sexuality and STDs/HIV/AIDs was also documented. For instance, a significant proportion (46%) of unmarried adolescent boys in a survey had not heard about AIDS, or other STDs (Sharma & Sharma, 1996). A survey among school-going adolescent girls reported that a large proportion of them had no accurate understanding of the signs and symptoms of STDs other than HIV/AIDS. A significant proportion of them believed that HIV/AIDS is curable, and that condoms should not be made available to youth. They were also confused about whether contraceptive pills could protect against HIV infection and whether these should be taken only by married women (McManus & Dhar 2008). However, a mixed methods study among school-going adolescents found that a significant number (of both boys and girls) had heard about contraception and HIV/AIDS. They were also aware of the various modes of HIV transmission (Kotecha et al. 2012). Another mixed methods study among adolescent girls found that

less than half were aware of legal and social issues which have a bearing on SRH; for instance, only 2.6 per cent were aware of the MTP Act (Kansal et al. 2017).

Adolescents and youths also reported inadequate SRH education at the school level and expressed the need for more education on this (Andres et al. 2003, Zohourian et al. 2020, Sreekumar et al. 2019). However, the majority of school-going adolescents in another study were found to know about SRH, as the curriculum gave them the relevant information (Sharma et al. 2004). One study evaluated the knowledge and attitude of medical students towards homosexuals. The findings showed that, overall, they had inadequate knowledge about homosexuality; however, female medical students were found to have positive attitudes towards homosexuals (Banwari, 2015).

Several factors were reported to be associated with knowledge of SRH. For instance, place of residence (Gupta et al. 2015, Ray et al. 2012) and exposure to social media were predictors of sexual activity including sexual intercourse among adolescents (Ray et al. 2012), pregnancy, contraception, and HIV/AIDS (Saha et al. 2022). Low awareness on contraception was found to be associated with poor education of the father, residing in a rural area, and out-of-school status. However, older age adolescents were reported to be better informed (Gupta et al. 2015). Another important factor contributing to awareness was the lack of space to discuss SRH issues, which were less discussed at home, and in the school and college (Shah et al. 2011). Interestingly, knowledge of contraceptives (emergency contraceptives) was found to be significantly higher among adolescents in medical faculties than in nursing faculties (Gothankar et al. 2015). Education was found to be associated with awareness on various issues related to SRH, such as the MTP Act (Kansal et al. 2017). Adolescents and young adults obtained information on SRH through various sources such as electronic mass media (Kotecha et al. 2012, Char et al. 2011), schoolbooks, teachers, friends, parents (Kotecha et al. 2012, Garg et al. 2001), community-based organisations (Khanna et al. 2022), and by word of mouth (Banerjee et al. 2015).

2.1.2 Beliefs around sexual and reproductive health

Studies captured the beliefs of adolescents and young adults on various aspects of SRH. A study exploring experiences of menstruation among young women reported a culture of silence around menarche. Menstruation was a taboo subject. During menstruation women were expected to

avoid sex, as well as participation in religious activities (Garg et al. 2001). Restriction on religious activities during menstruation was also observed in a survey conducted among adolescent girls (Gothankar et al. 2015). Young college girls in a survey described masturbation as a bad thing, and associated it with weakness, disease, infertility, and marital disharmony (Sharma & Sharma 1998). Another qualitative study on sexual negotiation in marriage among young married men and women noted that while women felt it inappropriate to express their sexual desire, men wanted women to be more sexually active and expressive. Men believed they had a right to sex in marriage; women felt they were forced to participate, but also reported that they could limit the coercion through negotiation. There was a consensus among both that the frequency of sex should diminish with the increasing duration of marriage and completed childbearing. Discussions on safer sexual practices remained at the margins (George 1998).

A significant number of school-going adolescent boys with experience of sexual contact reported that having sex proves masculinity (Shashikumar et al. 2012). Adolescents in a survey stated that certain practices, such as premarital sex, multiple partners, masturbation, and non-heterosexual partnerships, were unacceptable. Many of them were able to associate sexual coercion with violence, but refusing sex was found to be unreasonable by a few others (Daruwalla et al. 2018). A study documented several prevalent misconceptions on HIV/STIs (Agarwal & Muralidhar 2016).

Interestingly, a qualitative study conducted among married working-class adolescent women reported that women, through the daily disciplining of sexual relations, transformed themselves from being reluctant, shy, and scared brides to pragmatic women. For instance, newly married women felt that their identity as being married was shaped by sexual intercourse, hence, complying and being sexually available to the husband meant they had a life, as they firmly believed that a woman without a husband had no life. Also, a pragmatic approach towards sexual intercourse was necessary because of its link to conception and motherhood. Having children means they could prove their fertility, and hence they avoided the stigma and marital insecurity which could arise from childlessness. These practices made them 'good wives,' which could be read as both submission and resistance to existing patriarchal norms (George 2002).

2.1.3 Sexual and reproductive health problems and associated factors among adolescents and young adults

Studies documented the various SRH problems faced by adolescents and young adults. A survey of 13-19 year olds found that one-fifth of adolescent girls had at least one gynaecological problem (menstrual, excessive vaginal discharge, prolapse, continuous urine leakage, and burning/increased frequency of urination). Unintended pregnancies were another serious issue reported by adolescents (Rajagopal & Philip 1995). Another survey of young married women reported female sexual disorders among a third of them: these included issues related to hypoactive desire, arousal, and orgasmic disorders, which not only compromised their quality of life but also impaired relationships (Varghese et al. 2016). A secondary data analysis reported more pregnancy and delivery complications among adolescents as compared to adult women. These included problems such as swelling of hands, feet, and face, paleness, giddiness/weakness, excessive vomiting, hypertension; along with major problems such as visual disturbance, excessive fatigue, convulsions, excessive bleeding, and abnormal vaginal discharge. During delivery, adolescents and women experienced premature labour, excessive bleeding, obstructed labour, breech presentation, and convulsions/high blood pressure. A higher proportion of stillbirths were also found among younger adolescents (15-17 years) as compared to older ones (18-19 years) (Patra 2016).

Studies also explored menstrual health challenges among adolescent students and young adults. Some of the menstrual problems reported were premenstrual syndrome (PMS), dysmenorrhea, abnormal bleeding (Verma et al. 2020), and reproductive tract infections (genital sore/ulcer, genital discharge) (Gothankar et al. 2015, Vishwakarma et al. 2021). Reproductive tract infections in menses were found to be associated with unhygienic menstrual practices (Gothankar et al. 2015; Vishwakarma et al. 2021). Hygienic menstrual practices were more closely associated with women having a bank account, using a mobile phone, and involved in household decision-making (Vishwakarma et al. 2021). Regular exercise was reported to be a protective factor against dysmenorrhea. A survey conducted among young physically challenged females, indicated that they experienced a range of sexual health problems, including nerve sensation loss in the genitalia, along with fertility and gynaecological issues (Agarwal & Muralidhar 2016).

A hospital-based retrospective study found a significant number of adolescents and young adults with sexually transmitted infections, and reported this as associated with poor condom knowledge and sexual

promiscuity (Maheswari & Kalaivani 2017). An interesting qualitative study explored the vocabulary men and untrained non-allopathic sexual health practitioners used in describing sexual health problems and associated factors. Men listed several problems such as boils, sores, pus or blood in the urine, ulcers around genitalia, white discharge, thinning of the semen/ reduction in semen quantity, masturbation, wet dream, early ejaculation, and lack of erection. Both men and untrained practitioners associated these problems with the indiscreet waste of semen through excessive masturbation/wet dreams or excessive sexual desire (Verma et al. 2001).

Sexual abuse is another problem, and a significant proportion of adolescents reported experiencing this (Jaya & Hindin 2007, Patel & Andrew 2001). Sexual abuse adversely affected their academic performance, and mental and physical health, and led to greater substance abuse and disturbed parental relationships. The forms of sexual abuse varied with the place of residence: rural boys were more likely to experience coercive sexual intercourse than urban boys. Girls from urban areas were more vulnerable to any form of sexual abuse than rural girls (Patel & Andrew 2001). Factors associated with sexual abuse included adolescents who had ever worked or had a friend of the opposite gender. While female friends were perpetrators for boys, girls reported neighbours as common perpetrators (Jaya & Hindin 2007). Young women's experience of non-consensual sex was documented in a mixed methods study. Factors associated with non-consensual sex included urban residences or in communities characterised by physical fights among the youth. Increased vulnerability to forced sex was reported more among women from the northern states compared to their southern counterparts. Reporting was more common among young women with geographical mobility in their adolescence and who had witnessed parental violence (Santhya et al. 2014).

Studies also documented high-risk behaviour among adolescents and young adults. A secondary data analysis reported an increase in high-risk sexual behaviour among adolescent boys and young men over a decade (2005-15). The associated factors included adolescent boys residing in urban areas, and belonging to affluent families, as well as the use of alcohol (Sharma & Vishwakarma 2020).

A significant proportion of adolescents and young adults in a hospital-based retrospective study was reported to practise high-risk sexual behaviour by patronising casual and multiple partners, including commercial sex workers. Further, condom use was inconsistent (Maheswari & Kalaivani 2017). Premarital sex with multiple partners without proper protection was

reported as high-risk behaviour by studies (Sharma & Sharma 1996, Dave et al. 2013, Rastogi et al. 2013, Marak 2015). One of the studies among the working population found it to be associated with individual income, work shifts, migration, peer influence, friends, and visits to nightclubs (Rastogi et al. 2013).

2.1.4 Sexual and reproductive health (SRH) services

Studies documented challenges in access to/utilisation of SRH services among adolescents and young adults. A survey among married adolescent girls reported low utilisation of maternal and child health services among them; only half the children born to them could get complete doses of primary immunisation (Rajagopal & Philip 1995). Low utilisation of contraceptives, mainly condoms, was also observed (Sharma & Sharma 1996; Maheswari & Kalaivani 2017, Char et al. 2011, Marak 2015). However, a couple of studies found improved usage of condoms among married and unmarried adolescents and young adults. For instance, a significant proportion of college-going male students were using condoms consistently (Dave et al. 2013).

A secondary data analysis found an increase in the uptake of modern contraceptives among married adolescents over two decades (1992-2015), though the pace of increase was low (Singh et al. 2021). Another secondary data analysis reported that a significant proportion of young married women had an unmet need for contraception (Sharma et al. 2021).

Access to and or utilisation of SRH services was reported to be shaped by multiple factors. Barriers to the uptake of contraceptives were observed in many studies. For instance, a qualitative study conducted among tribal couples reported the following challenges in the uptake of contraceptives among them: the practice of banning women who accept family planning methods from worshipping god; the fear of being unable to sexually satisfy the partner, which might lead to remarriage of their spouse; and non-availability of contraceptives with front-line workers (Palo et al. 2020). The taboo around sex without the intention to reproduce also hampered the use of contraceptives (Char et al. 2011, Paul et al. 2017); women seemed to prefer abortion as a method for reproductive control (Paul et al. 2017).

A qualitative study conducted among mothers-in-law to understand their role in fertility and reproductive decision-making reported that while they understood the importance of spacing births, they were not supportive of temporary contraceptives, as they were apprehensive of its side-effects. They were also found to have misconceptions about IUDs (Dixit et al. 2022).

Secondary data analysis from the fourth round of NFHS (2015-16) found the low uptake of modern contraceptives to be associated with the following: poor educational status, rural residence, being from the backward classes or of the Hindu religion, poorest wealth quintile, married adolescent girls or women without children, or with no exposure to family planning messages through media or healthcare workers (Sharma et al. 2021, Singh et al. 2021). Limited agency in decision-making, the lack of freedom of mobility, self-efficacy, and financial resources were associated with the lack of access to healthcare services, along with decision-making on family planning among young married and unmarried women (Banerjee et al. 2015).

A survey among unmarried adolescent boys found an association between low utilisation of condoms and their socio-economic status and the type of sexual partner (prostitute, older woman, or girlfriend) (Sharma & Sharma 1996). Education was also found to be associated with contraceptive use among young physically challenged people (Agarwal & Muralidhar 2016). Adolescents, primarily school dropouts, utilised preventive and curative services significantly less than school-going adolescents (Gupta et al. 2015). Gender also influenced access to SRH services. Another study among young women found an association between condom use and women's age (18-20 years), occupation as student and teacher, and knowledge that HIV can be prevented (Marak 2015).

Studies also examined healthcare system factors which affected access to/utilisation of SRH services. These included providers' attitudes and knowledge, and indifference to ensuring the delivery of contraceptive services (Khanna et al. 2022, Shukla et al. 2022). Healthcare providers were found to be either hesitant or opposed to providing contraceptives, particularly to unmarried girls. They had strong views against premarital sex, which they believed to be against existing social norms. A few were concerned about negative reactions from the community if they provided contraceptives, and some others thought the provision of contraceptives to unmarried youth was illegal (Shukla et al. 2022). While a significant proportion of adolescents in a survey expressed their willingness to consult a doctor for SRH-related issues, they largely preferred to go to a private clinic, mainly because they felt that public facilities were overcrowded and had poor quality services, while a private SRH clinic gave utmost importance to privacy and confidentiality, and had same-sex doctors (Sreekumar et al. 2019). However, another study among adolescents reported their readiness to seek services from an adolescent friendly centre – a public facility (Kotecha et al. 2012).

2.1.5 Interventions to address sexual and reproductive health needs

Studies documented interventions which were designed to address the SRH needs of adolescents and young adults. A meta-analysis on educational interventions reported a significant improvement in knowledge and practices related to menstruation. For instance, there was a substantial increase in the use of sanitary pad and perineum practices during menstruation, along with a significant improvement in knowledge and practice on menstruation (Majeed et al. 2022). A social and behavioural change intervention on menstrual health and hygiene among adolescents documented an improvement in practices on menstrual health and hygiene; the intervention also increased knowledge about puberty and reproductive parts, encouraged positive attitudes towards gender, and promoted discussion and dialogue (Ramaiya et al. 2019). Another experimental study documented the impact of yoga and exercise on polycystic ovarian syndrome (PCOS) among adolescents. The findings showed that yoga and exercise were positively correlated with mean risk reduction (Selvaraj et al., 2020). Evaluation of a project (a hybrid government-NGO model), which aimed to improve the quality and utilisation of adolescent reproductive and sexual health services (ARSH) showed positive results. The project improved ARSH by training government healthcare providers at secondary facilities and strengthening outreach activities to enhance community engagement. This was reflected in the appreciation of the facilities by users. Though it had limitations, the evaluation recommended the need for continuous handholding and backstopping (Barua & Chandramouli 2017).

Another set of interventions under the project PRACHAR, a life-stage tailored social and behaviour change approach, was found to improve contraceptive uptake among young married couples. The project was a hybrid government-NGO model. The improvement was sustained for 4-8 years after the interventions ended. The success was attributed to many factors, including a socio-ecological intervention model with emphasis on behaviour change efforts, encouraging the engagement of both men and women, and calibrating the interventions to different phases in the life-cycle of adolescents and youths. However, there were certain limitations in terms of effectiveness and sustained impacts (Subramanian et al. 2018).

One study documented the effect of an intervention on awareness on SRH, nutrition, and substance abuse among adolescents. The findings indicated increased awareness regarding anaemia, STD and HIV/AIDS, reduced addiction to tobacco, improved menstrual hygiene practices, and engagement with ARSH services (Patel et al. 2018). A systematic review

found mixed effects from peer education programmes on knowledge, attitudes, and behaviour on SRH (Siddiqui et al. 2020).

2.2 Studies on Maternal Health

This section synthesises the literature on maternal health in India, post-ICPD. It consolidates the relevant studies focusing on four major areas of maternal health: maternal mortality, maternal morbidity, utilisation of maternal health services, and abortion.

2.2.1 Maternal mortality in India (1995-2022)

Existing studies were filtered using the same methodology as in the previous section on adolescent and young people's SRHR. After careful screening, 55 articles on maternal mortality were found relevant to topic and were analysed further. The results are summarised below.

2.2.1.1 Causes of maternal mortality

The studies (33) categorised the primary causes of maternal mortality into direct and indirect causes, and major/leading/common causes. Eleven studies discussed the direct and indirect causes of mortality. Direct causes contributing largely to maternal mortality included haemorrhages (antepartum and postpartum), hypertensive disorders of pregnancy (eclampsia/pre-eclampsia), ruptured uterus, septic abortions, infections (sepsis, jaundice), and obstructed labour. The indirect causes noted were anaemia, hepatitis in pregnancy, and cardio-vascular disease complicating pregnancy (Ramteke & Pajai 1996; Ganatra et al. 1996, Jashnani 2009, Bhattacharyya et al. 2008; Sri & Khanna 2012, Iyengear et al. 2009, Shenoy & Shenoy 1999, Rane 2019, Khumanthen et al. 2012, Khanna 2019, Mittal et al. 2019).

Twenty-two studies categorised major/leading/common causes of mortality. This included haemorrhage, infection (sepsis, tuberculosis, scrub typhus, pelvic cellulitis, influenza, hepatitis-E), malaria, anaemia, late recognition of infection, pregnancy-induced hypertension, excessive bleeding, cardio-vascular disease, pulmonary embolism, renal failure, suicide, and burns (Rathod et al. 2016, Patel et al. 2017, Badgire et al. 2022, Maity & Chaudhuri 2022, SkMik et al. 2020, Das & Biswas 2015, Chaudhuri &, Nath 2019,

Eswarappa et al. 2016, Eswarappa 2017, Toppo et al. 2019, Sahai et al. 2015, Singh et al. 2015, Bhattacharjee et al. 2019, Halder 2015, Barnett et al. 2008, Vasudeva et al. 2013, Tripathy & Mishra 2012, Solanke et al. 2016, Tallapureddy et al. 2017, Gupta et al. 2021, Salve et al. 2020, Meh et al. 2022).

The studies described different stages (childbearing/pregnancy/childbirth) at which maternal mortality occurred. A large number of studies found deaths exclusively at the postpartum stage (Jashnani 2009, Patel et al. 2017, Iyengear et al. 2009, Shenoy & Shenoy 1999; Rane 2019, Khumanthen et al. 2012); a few reported it during the antepartum, intrapartum, and postpartum stages (Keskar et al. 1996, Toppo et al. 2019, Barnett et al. 2008); two studies noted deaths within 24 hours of admission in the facility (intrapartum and postpartum) (Ramteke & Pajai 1996, Dasari 2015), and three studies listed the deaths during intrapartum or postpartum (Suresh et al. 2016, Singh et al. 2015, Tripathy & Mishra 2012).

2.2.1.2 Potential factors associated with maternal mortality

Thirty-six studies documented a range of factors found to be associated with maternal mortality. These factors could be divided into individual/community-level factors, healthcare system-level factors, and associated medical conditions.

Individual/community-level factors

Maternal mortality was predominantly reported among women aged 30 years or less (SkMik et al. 2020, Das & Biswas 2015, Suresh et al. 2016, Toppo et al. 2019, Agrarwal et al. 2016, Rane 2019, Khanna, 2019, Halder, 2015, Mittal et al. 2019, Yokoe et al. 2019), while a few studies recorded deaths among women above 30 (Keskar et al. 1996, Khumanthen et al. 2012, Horwood et al. 2020). The deceased women were mostly primiparous (Begom 1998, Toppo et al. 2019, Halder 2015, SkMik et al. 2020, Das & Biswas 2015, Rane 2019), belonged to marginalised communities (Scheduled Caste or Scheduled Tribe), had poor educational levels (mostly illiterate), had low socio-economic status (below the poverty line), and resided in difficult terrains (Das & Biswas 2015, Sri & Khanna 2012, Begom 1998, Khanna, 2019, Barnett et al. 2008, Horwood et al. 2020, Tripathy & Mishra 2012, Meh et al. 2022, Yokoe et al. 2019).

However, an analysis of the Annual Health Survey (2010-13) found that socio-economic status was not associated with maternal mortality (Horwood et al. 2020). Similarly, analysis of data from the Sample Registration System and NFHS-4 conducted in EAG states revealed that on average the wealth status of households was not associated with maternal mortality (Bhatia et al. 2021). Factors found to be significantly associated with maternal mortality included: pregnancies not registered for ante-natal care (Das & Biswas 2015, Khumanthen et al. 2012, Mittal et al., 2019), delays in seeking care due to transportation and financial constraints, perception of low-quality services, and care-seeking at multiple facilities (Sk MIK 2019, Toppo et al. 2019, Mishra et al. 2022, Jat et al. 2015). Additionally, domestic violence (Ganatra et al 1996), and rituals and traditions contributing to underestimation of the severity of the health problems by family members emerged as important factors associated with maternal deaths (Sk MIK 2019, Toppo et al. 2019, Jat et al. 2015, Shenoy & Shenoy 1999).

Healthcare system-level factors

Inadequate/lack of emergency obstetric care (EmOC) was the commonest factor reported to be associated with maternal mortality (Ganatra et al. 1996; Das & Biswas 2015; George 2007; Sri & Khanna 2012, Jat et al. 2015, Iyengear et al. 2009, Shenoy & Shenoy 1999; Rane 2019). Studies also reported poor quality of ANC and PNC services (George 2007, Sri & Khanna 2012, Iyengear et al. 2009), inadequate/lack of referrals (Ganatra et al. 1996; Shenoy & Shenoy 1999; Khumanthen et al. 2012), and inadequate blood bank services at the facilities (Ganatra et al 1996; Shenoy & Shenoy 1999; Khumanthen et al. 2012). While the distance of the healthcare facility from the residence emerged as another significant factor (Sk Mik et al. 2020; Sk MIK 2019) inappropriate behaviour by the healthcare providers, specially towards women (George 2007; Sri & Khanna 2012, Jat et al. 2015) from poor communities, could have prevented women from seeking proper care. While the unavailability/inadequacy of basic services, physical accessibility of the facility, and inappropriate behaviour dissuaded women from seeking care, the provision of care was reported to be equally affected by the poor working conditions of healthcare providers, including shortages of staff such as specialists, lack of supportive supervision, and insufficient training in processing information (Sri & Khanna 2012). Under-reporting/misreporting of deaths and incomplete records furthered hampered accountability and subsequently affected the care provision (Ganatra et al. 1996, Sri & Khanna 2012, Singh et al. 2015).

Associated medical conditions

Studies reported certain medical conditions to be associated with maternal mortality (Tanwar et al. 2018). It was assumed that the second wave of the COVID-19 pandemic might have significantly contributed to maternal mortality, however the evidence remains ambiguous. While hospital-based retrospective studies from Maharashtra and Madhya Pradesh reported higher maternal mortality in COVID-infected women during the second wave of the pandemic (Mishra et al. 2022), a hospital-based study from Odisha reported no significant difference in maternal death between the two waves (Priyadarshini et al. 2022). Meanwhile, another hospital-based retrospective study from Maharashtra associated maternal deaths with pneumonia and respiratory failure due to COVID-19 infections (Mahajan et al. 2019).

2.2.2 Maternal morbidity in India (1995 – 2022)

There were 154 studies relevant to maternal morbidity and the results of these studies were analysed thoroughly. The summary of the review was presented under the following three themes: a) maternal morbidity in general; b) maternal morbidity due to infectious diseases; and c) maternal morbidity due to non-communicable diseases (NCDs).

2.2.2.1 Maternal complications (severe and potentially life-threatening complications) - 55 studies

The commonest maternal complications reported by the studies included pregnancy-induced hypertensive disorders (Sangeeta et al. 2015, Kumar et al. 2021, Lakhute et al. 2021, Chaudhuri & Nath 2019, Bakshi et al. 2015, Kumar & Singh 2019), antepartum/postpartum haemorrhages (PPH) (Pawar & Shrotri 1997, Bakshi et al. 2015), organ dysfunctions (Sangeeta et al. 2015), sepsis (Bakshi et al. 2015), and the rupture of unscarred uteruses (Chaudhuri & Nath 2019, Mansuri & Mall 2019). One study also highlighted neurological complications associated with eclampsia (Singh et al. 2018).

A secondary data analysis of data from NFHS-3 and NFHS-4 found the place of delivery and postnatal care to be the most significant factors associated with maternal complications, followed by education, BMI, and tobacco use (Kumar et al. 2021). While anaemia disorders in pregnancy (Sangeeta et al. 2015), haemorrhages, and ectopic pregnancy (Chaudhuri & Nath 2019) were reported as causal factors for complications, inadequate numbers of

ANCs, lack of iron supplementation, and the COVID-19 infection were found to be associated (Sangeeta et al. 2015, Geller et al. 2008, Kumar et al. 2021). Specifically, the rupture of unscarred uteruses was caused by obstruction, uterine anomalies, oxytocin administration, institutional deliveries, and other factors (Mansuri & Mall 2019), and pregnancy-induced hypertensive disorders were found to be associated with primi-parity, age over 30 years, poor socioeconomic status, lower education levels, living in a joint family, >36 weeks of gestation, high salt intake, and moderate-to-severe anaemia (Lakhute et al. 2021).

Some studies reported severe maternal outcomes including maternal near-misses and maternal mortality, and perinatal outcomes such as low birth weight and perinatal mortality (Sangeeta et al. 2015, Marwah et al. 2022, Pawar & Shrotri 1997, Chaudhuri & Nath 2019, Mansuri & Mall 2019, Iyengar et al. 2012, Bakshi et al. 2015). One study reported severe complications as a risk factor for depression among women at eight weeks and twelve months of their pregnancies (Iyengar et al. 2012).

Maternal near-miss events

Studies reported haemorrhages, pre-eclampsia, eclampsia, and severe anaemia (Kulkarni et al. 2016, Mansuri & Mall 2019, Thakur et al. 2022, Abha et al. 2016, Agarwal et al. 2022, Tallapureddy et al. 2017) as leading causes of maternal near-miss events. Low educational status (Thakur et al. 2022), poor socio-economic status (Kumar & Tewari 2018; Thakur et al. 2022), and parity/gravida (primiparous and higher, multigravida) (Kumar et al. 2022, Kumar & Tewari 2018, Abha et al. 2016) were found to be significantly associated with near-miss events. Events were more commonly reported either in the third trimester or in full-term pregnancies (Kumar & Tewari 2018). One study highlighted the finding that adequate ANC and iron and folic acid supplementation acted as protective factors against near miss-events (Kumar & Tewari 2018).

A few studies documented pre-term deliveries, still-births, and maternal deaths among women with near-miss events (Kumar et al. 2022, Parmar et al. 2016, Thakur et al. 2022, Agarwal et al. 2022).

The unavailability of treatment at lower-level health facilities along with transportation constrains were found to be significant challenges in seeking care. Interestingly, there was no significant association between distance of the facility/hospital from the residence and near-miss events (Kulkarni et al.

2016, Mansuri & Mall 2019). Another study highlighted the role of COVID-19 pandemic in increasing the time taken to reach the hospital as compared to the pre-pandemic period (Thakur et al. 2022).

Maternal anaemia (and BMI)

Studies reported a significant association between maternal anaemia and low educational levels, belonging to a rural area, multi-parity, the lack of ANC, pre-term delivery, close birth spacing, and poor nutrition (Bone et al. 2022, Rohilla et al. 2010, Kant et al. 2018, Singal et al. 2018). Along with anaemia, low BMI was also found to be significantly higher among rural women (Patel et al. 2018).

Moderate-to-severe (mostly severe) maternal anaemia was reported to be associated with pregnancy-induced hypertension, specifically pre-eclampsia and postpartum haemorrhages (Bone et al. 2022, Nair et al. 2016). Further, one study documented the association of anaemia with premature rupture of the membranes, abruption, pre-term deliveries, and congestive cardiac failures (Rohullah et al. 2010).

Severe maternal and perinatal outcomes, such as maternal deaths, foetal distress, 'small-for- gestational-age', still-births, and neonatal deaths were reported. The risk of these outcomes increased when women were both anaemic and underweight (Rohilla et al. 2010). Interestingly, another study did not find any significant difference in baseline characteristics, antenatal complications, gestational age, mode of delivery, and neonatal outcome between mild-to- moderately anaemic and non-anaemic pregnant women (Bone et al. 2022). Maternal complications at delivery were also found to be associated with overweight/obesity during pregnancy, but were reported to be positively associated with perinatal outcomes by reducing the risk of LBW babies (Bang et al. 2004).

Obstetric ICU admissions

Seven studies reported a range of maternal morbidities – obstetric haemorrhages, hypertensive disorders, sepsis, ruptured uterus, and severe anaemia – leading to ICU admission (Chawla et al. 2015, Dasgupta et al. 2017, Pandher et al. 2023, Panda et al. 2018, Gupta et al. 2021, Sailaja & MK R 2019). Non-obstetric morbidities such as pre-existing heart diseases also increased ICU admissions (Gupta et al. 2021).

A few other studies reported multi-organ dysfunctions, maternal mortality, and perinatal mortality among women admitted to the ICU for maternal morbidities (Chawla et al. 2015, Dasgupta et al. 2017, Vaishnav et al. 2016, Pandher et al. 2023, Gupta et al. 2021, Sailaja & MK R 2019). Further, patients with sepsis had high ICU mortality (Sailaja & MK R 2019).

Maternal morbidity (including severe acute maternal morbidity)

Five studies reported morbidities at different stages of pregnancy and labour, with postpartum morbidities being more common. While intrapartum morbidities were caused by prolonged labour, prolonged rupture of the membranes, and abnormal presentation (Bang et al.,2004), postpartum morbidities comprised of excessive bleeding, loss of consciousness/ convulsions, infections including puerperal genital infections, breast problems, secondary postpartum haemorrhage, insomnia, postpartum anaemia, and depression (Bhatia & Cleland 1996; Bang et al. 2004, Iyengar 2012). A few studies reported morbidities without specifying the stages. These morbidities included an abnormal lipid profile, thrombocytopenia, cardiac diastolic dysfunctions, amenorrhea, Sheehan and Asherman syndrome, obstetric fistulas, stress urinary incontinence, pelvic inflammatory diseases, uterine prolapse, and urinary tract infections (Bhatia & Cleland 1996, Alluvala et al. 2019).

Studies also reported a significant association between maternal morbidities and lower educational levels, low socio-economic status, belonging to the SC/ST community, inadequate ANC, parity (three or more), prolonged labour, home deliveries, and delays in accessing emergency obstetric care (Bhatia & Cleland 1996, Swain et al. 2020, Iyengar 2012). Interestingly, maternal morbidities were found to be higher among urban women, which could be due to higher educational status and better reporting of problems (Bhatia & Cleland 1996). While perineal conditions were frequently reported among women who had institutional deliveries, breast conditions were common among those with perinatal death (Iyengar 2012). Two studies found adverse maternal outcome included suicidal thoughts among women due to depression, whereas averse perinatal outcomes were stillbirth, severe birth asphyxia, and perinatal death (Bang et al. 2004, Alluvala et al. 2019).

Two studies under this category reported an association between intimate partner violence (IPV) and gender-based household maltreatment by husbands and in-laws (GBHM) with maternal morbidities (Jain et al. 2017,

Silverman et al. 2016). While IPV was found to be associated with depression during pregnancy (Jain et al. 2017), GBHM was associated with a multitude of morbidities including high blood pressure, vaginal bleeding, and premature rupture of the membranes. Additionally, it was associated with premature births (Silverman et al. 2016).

2.2.2.2 Maternal morbidity and infectious diseases - 50 studies

COVID-19 in pregnant women

Eleven studies analysed the effect of COVID19 in pregnant women. Of these, three studies reported that most pregnant women had mild infection during different waves (Mahajan et al. 2022, Bachani et al. 2021, Kapadia et al. 2021), while one study documented severe infection during the second wave (Mahajan et al. 2019). However, evidence regarding the association of COVID-19 infections and complications/adverse outcomes among pregnant women remain patchy. While a few studies documented preterm deliveries due to spontaneous abortions, low average birth weight, foetal distress, increased maternal mortality, and the risk of stillbirth (Mahajan et al. 2021, Gupta et al. 2021, Nanavati et al. 2022) other studies did not find any such association (Agarwal et al. 2022, Rajan et al. 2022, Kapadia et al. 2021).

Interestingly, one of the studies reported complications in pregnancies, an increase in high-risk pregnancies and admissions to the ICU, due to delays in healthcare seeking. The delay was attributed to the lockdown and the fear of contracting an infection during the pandemic (Goyal et al. 2021)

Malaria in pregnant women

Ten studies found the incidence of malaria in different stages of a pregnancy: malaria during near-term and term (Singh et al., 2014), in the antenatal period and during delivery (Singh et al. 2012, Hamer et al. 2009), and during 14-28 weeks of gestation (Nayak et al. 2009). Several factors were found to be associated with malaria in pregnancy. These included women being of a younger age (20 years), being from rural areas, the lack of formal education, severe anaemia, lack of knowledge about preventive measures, lack of awareness about ANC services, and belonging to a malaria transmission zone (dense forest areas) (Singh et al. 2012, Garg et al.,2020, Hamer et al. 2009). A couple of other studies found gravida (primigravida) correlated with malaria in pregnancy (Guin et al. 2012, Garg et al. 2020).

Five studies, including a systematic review, reported pre-term births, low birth weights, abortions, maternal and perinatal mortalities associated with malaria infections (Diamond-Smith et al. 2009, Guin et al. 2012, Nayak et al. 2009, Jain et al. 2022, Chandrashekar et al. 2019). However, another study did not find any association between malaria infections and average birth weight, proportion of preterm babies, incidence of still births and early neonatal deaths (Singh et al. 2014).

Tuberculosis in pregnancy

Five studies reported that pregnant women were found to develop TB during the antenatal as well as in the early postpartum periods (Gupta et al. 2007, Sharma et al. 2021, Yadav et al. 2019). Two studies on TB-HIV coinfection among pregnant women found it to be associated with abortions, and maternal and perinatal mortality (Gupta et al. 2007, Goyal et al. 2021). A significant association was reported between extra-pulmonary TB and the incidence of oligoamnios, preterm rupture of the membrane, and average LBW (Yadav et al. 2019).

While one study reported the factors associated with TB in pregnant women, another documented challenges in healthcare delivery and proposed solutions to overcome these. Factors associated with TB included gravida (multigravida), belonging to the Muslim religion, and being in the first trimester (Sharma et al. 2021). Healthcare providers highlighted a number of challenges in providing effective care, including a lack of awareness among clients and providers, lack of dedicated staff, the perception that TB screenings are a low-yield, low-priority activity, and losses in the referral process. However, these challenges could be overcome with having a dedicated staff and space for screenings, encouraging self-reporting among women through posters and videos, and creating a one-stop care provision facility (Vijayageetha et al. 2019).

HIV in pregnancy

Analysis of HIV sentinel surveillance data from different states revealed the highest prevalence in Karnataka and Andhra Pradesh, followed by Telangana, Odisha, Tamil Nadu, and Kerala. All states except Kerala had the highest prevalence among illiterate women; spousal occupation in Karnataka and Odisha and spousal migration in Andhra Pradesh and Karnataka were found

to be associated with the prevalence of HIV (Aridoss et al. 2020). Age-segregated analysis revealed a lower risk of HIV among those who had studied till the 5th standard and were under 25 years of age, compared to those who were illiterate. The reduction with increasing educational levels was more pronounced among women 25 years or above. Some level of education had a positive effect compared to no schooling (David et al. 2017). However, another large study conducted among 24,800 women did not find any association between HIV prevalence and demographic factors (Santhakumar et al. 2017).

Studies reported LBWs, pregnancy wastage including spontaneous abortions, and still births among women infected with HIV; the increase in pregnancy wastage was associated with living in a joint family compared to a nuclear family (Halli et al. 2015, Ganguly et al. 2020).

Dengue in pregnancy

Studies mostly reported complications/adverse outcomes among pregnant women with dengue infection. Two studies attempted to investigate dengue-chikungunya-zika con-infections, however they could only detect dengue (Gupta et al. 2021, Kallur et al. 2019). Dengue infection was found to be associated with LBW, pre-term births, and maternal and perinatal mortality (Sagili et al. 2022, Brar et al. 2021). It was also associated with frequent hospitalisations among pregnant women, and near-miss cases (Kallur et al. 2019). Studies also documented higher rates of thrombocytopenia among infected pregnant women (Sagili et al. 2022, Kallur et al. 2019). Only one study enquired into the association of dengue with demographic factors and did not find any major difference between those who were positive for dengue and those who were negative (Naik et al. 2020).

Two studies in this category reported bacterial vaginosis and vaginitis as the commonest vaginal infections among pregnant women (Tellapragada et al. 2017, Bhavana et al. 2019). These were found to be associated with preterm deliveries (Tellapragada et al. 2017). Vaginitis was recorded primarily in the third trimester of pregnancy (Bhavana et al. 2019).

2.2.2.3 Maternal morbidity and non-communicable diseases (NCDs) - 49 studies

Mental health-related issues in pregnancy

Eleven studies documented a range of mental health-related issues in pregnancy both during normal times as well as during the pandemic (COVID-19). These included depression (antepartum/postpartum/perinatal), anxiety (mild/moderate/severe), emotional difficulties, and mental health issues in general (Shivalli & Gururaj 2015, George et al. 2022, Bachani et al. 2022, Shriraam et al. 2019, Chainani 2021, Roberts et al. 2021, Nazir et al. 2022, Tikka et al. 2021, Badiya et al. 2020, Kalra et al. 2021). Four studies specifically investigated postpartum/postnatal depression (Shivalli & Gururaj 2015, Shriraam et al. 2019, Chainani 2021, Roberts et al. 2021).

A significant correlation was found between postpartum/postnatal depression (PD) and a history of abortions, poor relationships with in-laws, marital conflicts, and substance abuse in the husband (Aslam et al. 2022). A couple of studies reported the association of PD with other factors including multiple births, vaginal delivery, low Vitamin B12 levels, the presence of domestic violence, a history of psychiatric illness in the mother, marital conflict, lack of support from the husband, the birth of a female, and financial difficulties (Shivalli & Gururaj 2015, Shriraam et al. 2019, Dhiman et al. 2021, Aslam et al. 2022, Upadhyay et al. 2017). One study documented the association of antepartum/antenatal depression (AD) and bodyweight with obese pregnant women having a higher prevalence of antenatal depression than with overweight and normal weight pregnant women (Arora & Aeri 2021). A further study investigating perinatal depression, found that while it was associated with urban-site and recent adverse life events, AD was associated with an irregular menstrual history and PD with chronic health issues (Badiya et al. 2020). Other studies also reported the association of perinatal depression with physical illness in the mother, a previous history of abortion, poor financial status, and ill-treatment by in-laws (Raghavan et al. 2021, Sarna et al. 2019). Perinatal depression among HIV-positive women on ART was found to be associated with poor illness perceptions (Sarna et al. 2019). A study on mental health problems among women with a history of recent childbirth and stillbirth/infant deaths reported symptoms of postnatal depression and perinatal grief. These were found to be associated with participants' status (socio-economic status, general health, psychosocial factors), number of stillbirths, social support received, religious coping, life satisfaction, wishful thinking, postnatal depression, and perinatal grief (Roberts et al. 2021).

A study conducted among antenatal women during COVID-19 reported the prevalence of mild, moderate, and severe anxiety. While higher COVID-19 risk perceptions, greater antenatal COVID-19 anxiety, and lower perceived support were found to predict moderate and severe generalised anxiety, antenatal anxiety was predicted by a greater number of weeks of gestation, lower education, semiurban habitat, and lower perceived support (Tikka et al. 2021). Another study investigated depression, anxiety, and stress among COVID-19 infected women. It reported significant correlation between higher levels of depression, anxiety, and stress and bad obstetric history, educational status (literate females), being in the third trimester, and working women (Nazir et al. 2022).

A systematic review and meta-analysis on common antenatal mental disorders reported these to be associated with negative reactions from husbands and in-laws to dowries, difficult relationships with husbands/in-laws, lack of support and intimate partner violence, and a preference for or feeling pressured to have a male child. However, a higher education and being employed, having a supportive husband, and opportunities for recreation during pregnancy acted as protective factors (Upadhyay et al. 2017).

Diabetes/pre-diabetes in pregnancy

A majority of studies (8 out of 11) under this category was centred on gestational diabetes mellitus (GDM) in pregnancies (Mishra et al. 2020, Kumari et al. 2018, Arora et al. 2015, Mohan & Chandrakumar 2016, Kurian et al. 2022, Nayak et al. 2022, Bahl et al. 2022, Li et al. 2018). Of the remaining three studies, one examined dysglycaemia (Type-2 DM and pre-diabetes) (Gupta et al. 2017), another diabetic retinopathy (DR) (Makwana et al. 2018), and the third hyperglycaemia (Nielsen et al. 2016). Interestingly, two studies including a systematic review and meta-analysis, compared different screening and diagnostic criteria for GDM, which revealed significant difference in its prevalence. For instance, the systematic International Association of Diabetes and Pregnancy Study Groups (IADPSG) criteria revealed more GDM cases than the WHO 1999 criteria and Diabetes in Pregnancy Study Group India (DIPSI) criteria (Arora et al. 2015).

Studies found several factors reportedly associated with GDM: the pre-diabetic status of women at the time of pregnancy, age, BMI, socio-economic status (middle), family history of DM, history of GDM, history of giving birth to a large baby, gestational hypertension, low level of physical activity, low

intake of green leafy vegetables, urban habitat, and severity of COVID-19 infection (Mishra et al. 2020, Kumari et al. 2018, Kragelund Nielsen et al. 2016, Arora et al. 2015, Mohan & Chandrakumar 2016, Gupta et al. 2017, Bahl et al. 2022). One of the studies reported higher maternal height as a protective factor for GDM (Bahl et al. 2022). Another investigating dysglycaemia (T2DM and pre-diabetes) observed its association with age, BMI, the presence of acanthosis nigricans, and postpartum screening intervals (Gupta et al. 2017). The duration of diabetes and diastolic blood pressure were also found to be associated with DM (Makwana et al. 2018).

A few studies reported maternal and neonatal complications/adverse outcomes among women with diabetes/pre-diabetes. Maternal complications included vaginal candidiasis, premature rupture of membranes, and hyperbilirubinemia (Mohan & Chandrakumar, 2016). Neonatal complications included higher birth weight and large-for-date babies (Kumari et al. 2018). However, the incidence of stillbirths remained the same between women with GDM and those without diabetes (Nayak et al. 2022). Diabetes among COVID-19 infected pregnant women was associated with a higher risk of caesarean section births and ICU admissions for new-borns (Kurian et al. 2022)

Kidney-related issues in pregnancy

The majority of the studies (6 out of 9) examined acute kidney injury (AKI) in pregnancy (Tyagi et al. 2018, Gopalakrishnan et al. 2015, Saini et al. 2020, Sahay et al. 2022, Chowdhary et al. 2021, Prakash et al. 2018). Two studies focused on renal cortical necrosis (RCN) (Prakash et al. 2015, Bhaduaria et al. 2019), and one on nephrotic syndrome (Kaul et al. 2021). The studies noted a significant declining trend in the incidence of RCN in pregnancy over the past few decades (Prakash et al. 2015, Bhaduaria et al. 2019).

The results reported several causes of AKI in pregnancy. These included pre-eclampsia/eclampsia, post-partum haemorrhage, sepsis, placental abruption, acute diarrheal disease complicating pregnancy, thrombotic micro-angiopathy, glomerular diseases, and pregnancy-associated atypical haemolytic-uremic syndrome (Gopalakrishnan et al. 2015, Saini et al. 2020, Chowdhary et al. 2021, Prakash et al. 2018). The causes of RCN were septic abortion, sepsis, postpartum haemorrhage, and post-partum thrombotic micro-angiopathy (Prakash et al. 2015, Bhaduaria et al. 2019).

Studies documented pre-term births, intrauterine growth restrictions, and renal failure as complications among women with kidney-related issues. Maternal and foetal/perinatal mortality were common adverse outcomes (Tyagi et al. 2018, Gopalakrishnan et al. 2015, Saini et al. 2020, Bhaduaria et al. 2019, Prakash et al. 2018).

Liver-related issues in pregnancy

Two studies documented chronic liver diseases among pregnant women reportedly leading to several complications/adverse outcomes including preterm births, preeclampsia, postpartum haemorrhaging, puerperal infections, variceal haemorrhages, hepatic decompensation, and maternal deaths (Jena et al. 2017, Keepanasseril et al. 2020). Only abortion was found to be associated with liver-related issues in pregnancy (Jena et al. 2017).

Hypertension in pregnancy (different from pregnancy-induced hypertension)

Two studies under this category examined hypertension among pregnant women. One study, using data from a community based randomised controlled trial, observed it to be significantly associated with pollutants (PM 2.5 and CO) in the initial two semesters (Ye et al. 2022). Pulmonary hypertension in the other study was reported secondary to congenital heart disease and Eisenmenger syndrome. The study findings revealed maternal deaths, heart failures, and foetal growth restrictions as potential complications/adverse outcomes (Keepanasseril et al. 2019).

Other conditions

Eight studies under this category examined other conditions in pregnancy, including non-communicable diseases (NCDs) in general, congenital heart diseases (CHDs), an association of unintended pregnancy and postnatal depression with child stunting, acute respiratory distress syndrome (ARDS), neurological disorders, obstetric anal sphincter injuries, primary hyperparathyroidism, and deranged thyroid. A study on NCDs in pregnancy documented chronic hypertension as the commonest one followed by cardiovascular, neurological, endocrine, autoimmune, chronic kidney, and chronic respiratory diseases, psychiatric disorders, cancers, and chronic

liver disease. While most of these were diagnosed before pregnancy, some were reported during pregnancy. It further described complications/adverse outcomes such as low birth weight, maternal near- misses, and maternal deaths (Kumari et al. 2022). Pregnant women with CHD were reported with low birth weights, pre-term births, and neonatal deaths (Arora et al. 2015).

In another interesting study, unintended pregnancies and postnatal depression were observed to be associated with childhood stunting even after controlling for social support and other socioeconomic and residence-related factors (Upadhyay & Srivastava 2016). Community- acquired pneumonia was found to be the commonest cause of ARDS in pregnant women followed by pulmonary tuberculosis, complicated malaria, acute pancreatitis, and transfusion-related lung injury. However, ARDS outcomes remained similar among pregnant and non-pregnant women (Muthu et al. 2019). Another study described a range of neurological disorders in pregnancy, with primary headaches being the most prevalent one. This was followed by peripheral neuropathy, epilepsy, neurological back pain, cerebrovascular disorders, other disorders (such as neuropsychiatric Wilson's disease, myasthenia gravis, and compressive myelopathy), and secondary headaches (Gupta et al. 2022). Studies also documented hypothyroidism and hyperparathyroidism during pregnancy. While hypothyroidism was associated with anaemia, pre-eclampsia, high caesarean rates and neonatal morbidities (Mahadik et al. 2020), hyperparathyroidism manifested as acute pancreatitis, and renal stone disease. History of miscarriages and pre-eclampsia were also reported (Pal et al. 2021).

2.2.3 Maternal Health Care Service Utilisation (1995-2022)

In the review, there were 99 articles on maternal health care service utilisation for the period 1995-2022. The main themes that emerged in analysing the results are: 1) challenges faced by women in utilising maternal healthcare services; and 2) challenges faced by healthcare providers in the delivery of maternal healthcare services.

2.2.3.1 Challenges faced while utilising maternal health care services

Studies reported multiple challenges encountered by women while utilising maternal health care services, including full ANC, institutional delivery, skilled birth attendance, and postnatal care. The studies found that women sought care both in public and private facilities, with the choice of facility

shaped by factors such as maternal and paternal education, economic status, pregnancy-related problems, and the perception of quality of care, which was rooted in the socio-cultural context (Bruce et al. 2015, Thind et al. 2008, Alcock et al. 2015, Kesterton et al. 2010, Thakur et al. 2019). A secondary data analysis revealed state-wide differences in the use of public and private facilities. While Tamil Nadu showed the highest utilisation of public facilities, Bihar and West Bengal depended on private facilities (Bango et al. 2022). However, evidence of difference in the quality of care in both types of facilities remained debatable.

Women with low educational status, residing in rural areas, belonging to marginalised communities (Muslims, Scheduled Caste, Scheduled Tribe), and from poor economic backgrounds faced significant challenges in availing ANC and safe delivery services in public facilities (Jungari & Paswan 2019; Jat et al 2011, Devasenapathy et al 2015, Yadav et al 2021, Singh et al 2012, Kumar et al 2019, Yadav et al 2020, Bango et al 2022, Gandhi et al 2022, Singh et al 2019, Singh et al 2021, Ali et al 2021, Gandhi et al 2022, Kumar et al 2016, Awasthi et al 2016, Sk Mik et al 2022, Singh et al 2022).

Women specifically preferred private facilities for deliveries (Bruce et al 2015, Thakur et al 2019). Studies reported a significant increase in institutional deliveries over the last two decades, an increase that was reportedly higher in the private sector (Kesterton et al 2010; Joe et al 2018). The lack of husband's participation, mass media exposure, women's autonomy, teenage/unintended pregnancies, and high birth order were other significant factors associated with low utilisation of maternal health services (Singh et al. 2019, Sudhinaraset et al. 2016, Huang et al. 2020, Modi et al. 2019, Vidler et al. 2016, Thind et al. 2008, Yadav et al. 2021, Kumar et al. 2019, Yadav et al. 2020, Gandhi et al. 2022, Singh et al. 2019, Ali et al. 2021, Ali & Chauhan 2020, Gandhi et al. 2022, Sk Mik et al. 2022). Not possessing a health card also deterred utilisation (Yadav et al. 2020). Studies also reported significant geographical variations in the utilisation of maternal healthcare services across India. For instance, the utilisation of ANC was found to be lowest in northern Kerala and highest in eastern Maharashtra. However, institutional deliveries were highest in northern Kerala and lowest in Nagaland (Hiwale et al. 2022). Disparities were also reported between hilly regions and the plains, with the odds of utilising ANCs, institutional deliveries, and PNC visits less likely in the hills than in the plains (Mishra et al. 2021, Mustafa & Shekhar 2021).

A study conducted among women from the Bru community found that the distance of facilities from camps and the multiple costs (for transport, medicines, and informal payments to facility staff) deterred women from accessing maternal health services (Rajbangshi et al. 2022). Another study on migrant brick kiln workers reported the following barriers to availing services: misconceptions and mistrust about the public health system, sub-standard quality of care at private facilities, location of brick kilns, and timing of the services (Siddaiah et al. 2018). The perception of poor quality of care and lack of knowledge of ANCs were also found to be associated with low utilisation (Vidler et al. 2016, Rusagi et al. 2021. Non-adherence to iron and folic acid (IFA) supplements were reported due to the associated side-effects, lack of information from healthcare providers on the causes of anaemia, its seriousness and solutions, and low social support (Williams et al. 2020). Having greater trust in traditional birth attendants and the notion of childbirth being a natural event also restrained women from using institutional services in the public system (Vellakkal et al. 2017).

Studies conducted during lockdown induced by the COVID-19 pandemic reported mixed results. While respondents in a couple of studies acknowledged that routine immunisation services and ANC remained uninterrupted during the lockdown, though they had to pay for certain services (Pandhye et al. 2022, Sahoo et al. 2022), other studies reported poor quality of services, and a sense of mistrust in the public health system and functionaries as deterrents to the utilisation of these services (Sinha et al. 2022, Bankar & Ghose 2022).

Disrespect and ill-treatment towards women were reported as other significant factors that shaped the utilisation of maternal healthcare services. The various forms of disrespect documented by the studies were: non-consent, verbal abuse, threats, and discrimination. A few instances of physical abuse and detention in the facilities were also noted (Sharma et al, 2019, Ansari & Yeravdekar 2020, Jungari et al. 2021). Factors which were found to be associated with the poor treatment of women included: the women's age, socio-economic status, caste, parity, autonomy, and co-morbidities; as well as infrastructural issues such as overcrowding, ill-equipped facilities, and supply constraints (Dey et al. 2017, Ansari & Yeravdekar 2020).

Poor rural women were reported to be more likely to use the government, free ambulance services (Singh et al. 2016). Maternal engagement with community health workers was also reported as a positive predictor for utilising services (Bhushan et al. 2020, Dalal et al. 2022, Vellakkal et al. 2017). For instance, support from ASHAs and their awareness generation of the benefits of institutional healthcare positively influenced the use of healthcare services (Vellakkal et al. 2017).

2.2.3.2 Challenges faced by healthcare providers in the delivery of maternal healthcare services

Studies documented several challenges healthcare providers face in delivering quality maternal healthcare services. The providers reported that severe workforce shortages at the primary level in rural areas resulted in overcrowding of secondary and tertiary delivery centres (Nagraj et al. 2019). The disproportionate distribution of specialists, such as anaesthetists, was another major concern, as this had dire consequences for the delivery of emergency obstetric procedures in rural areas (Mavlankar & Rosenfield 2005). An attempt to contract EmOC specialists in rural areas was met with multiple problems, including inadequate infrastructure, longer distances to private specialists, insufficient financial provision for contracting, and poor management capacities (Randive et al. 2012).

AYUSH practitioners were brought in to deal with the shortage of staff. An exploration into their conditional involvement in skilled birth attendance-(SBA)-related work reported discrimination at the workplace and lack of legal/regulatory authorisation as barriers that restricted them from service provision (Chandhiok et al. 2015). Community health workers (CHWs) and others were also encouraged to share the tasks of medical experts. However, their effectiveness was hampered by the lack of sufficient training, limited availability of medications, the questionable validity of blood pressure devices, and the ability to correctly diagnose and intervene in HDPs and other high-risk conditions (GDM) (Charanthimath et al. 2018, Nagraj et al. 2019). Interestingly, one study documented that while medical doctors, including specialists, were unaware of the associations between HDP and GDM, CHWs were aware of this (Nagraj et al. 2019). However, another study reported that both doctors and nurses at PHCs and CHCs had limited knowledge of and practices for screening common high-risk conditions and assessing complications in pregnancy. As a result, many of them would refer such cases to higher-level facilities (Singh et al. 2019). Healthcare providers prioritised anaemia and HDP, whereas GDM was not seen as a problem (Nagraj et al. 2019, Singh et al. 2019). This was also reflected in a secondary data analysis of HMIS data conducted for the state of Telangana. The findings indicated a high coverage of haemoglobin tests for anaemia but low testing for GDM and syphilis (Radovich et al. 2022).

Challenges in timely referrals were another concern reported by studies. Referrals from peripheral centres were hampered by: low skills and confidence of providers, reluctance to induce labour, confusion over the clinical criteria for referrals, non-uniform standards of care at referral

institutions, a tendency to by-pass middle-level institutions, a lack of referral communication and supervision, and poor compliance (Singh et al. 2016). A systematic review documented barriers faced by midwives in delivering quality midwifery services. These included the lack of competence of maternity care providers, the absence of legislation recognising midwives as autonomous professionals and limited scope of practice, and a lack of basic health system infrastructure (McFadden et al. 2020).

Issues related to medicine supply chains and blood and blood products hampered maternal health care services, including EmOC in rural areas. Healthcare providers, in a study, reported that blood shortages forced them to ask patients' families to donate. And often, they had to wait for long hours before they could get blood. This also forced them to refer their patients to distant and often poorly equipped centres (Sood et al. 2019). Blood availability was also hampered by blood safety policies for the prevention of HIV infection (Mavlankar & Rosenfield 2005). Inadequate provider-patient communications, including counselling, was reported as another barrier in the provision of quality maternal health services. A secondary data analysis reported deficiencies in symptom checking and communications between the woman and her provider regarding birth preparedness and danger signs during ANC visits (Radovich et al. 2022). Another important parameter which had implications for quality of care was related to discrepancies between HMIS data and field reality which raised concern about the generation of quality data (Dehury & Chatterjiee 2018).

While many studies reported poor quality of care associated with poor infrastructure, inadequate supplies and shortage of staff, a study found that despite these being available, women experienced challenges during delivery and post-delivery stages, such as compromised patient safety, inadequate clinical care, partially compromised privacy, and a few cases of abuse and demand for informal payments (Saxena et al. 2018). Another study reported that challenges in containing maternal mortality remained despite promoting partnerships with private specialists to provide delivery care to poor women, organising a relatively short training of healthcare providers (medical officers and nurses) to provide EmOC, and improving the emergency transport system (Mavalankar et al. 2009). A study conducted among tribal women reported that while the community recognised the need for health system interventions in cases of high-risk births or complications, no substantial effort was observed from the health system to build on traditional understandings related to safety and children. Traditional health providers who played an important role in such communities were not given due recognition by the system. Despite these challenges, women did make

attempts to access health facilities; however, language barriers, cultural inappropriateness of services, and experiences of gross violations further restrained them from accessing services (Vellakkal et al. 2017).

Along with extensively documenting challenges at the healthcare system level, studies have also highlighted facilitators in delivering maternal health care services. For instance, ASHAs' frequent home visits and accompaniment to ANC visits alleviated antenatal anxiety (Bhushan et al. 2020). A case study reported that the appreciation of public-private partnerships, availability of clinical guidelines such as wall posters in health facilities, efforts to translate knowledge and evidence through practice, and enthusiasm for the value of guidelines facilitated the delivery of good quality care (Karvande et al. 2016). Another study reported SBA training among AYUSH practitioners led to skill enhancement with the adoption of appropriate maternal and newborn care (Chandhiok et al. 2015). A systematic review recorded that more hands-on experience during training, supportive supervision, utilising midwives to their full scope of practice with sound referral systems, and improving health system infrastructure enhanced the quality of care by midwives (McFadden et al. 2020). A set of policy strategies that contributed to improved access to maternal healthcare services among marginalised women included the introduction of ASHAs, free maternal healthcare services, Janani Shishu Suraksha Karyakram, and changes in the cultural acceptability of institutional delivery (Patel et al. 2018).

2.2.4 Abortion in India (1995 – 2022)

In the systematic review, 60 studies were identified as relevant to abortions, and these were analysed and summarised below under different themes.

2.2.4.1 Possible reasons for abortion

Studies reported several reasons for young, married women as well as adolescents for seeking abortions: limiting family size, spacing pregnancies, low contraceptive use, failure of contraception, and female sex of the foetus (Varkey et al. 2000, Ganatra & Hirve 2002, Kathpalia 2016, Duggal & Ramachandran 2004). Unintended/unwanted pregnancies were another significant reason both among young and older women having experienced sexual violence and non-consensual sex (Sundari & Balasubramanian 2004, Kant et al. 2015, Dasgupta et al. 2019). Women infected with HIV reported being fearful of transmitting the infection to the child as a reason for

abortion (Iyengar et al. 2016). In addition, studies also documented medical reasons for abortions, including bleeding per vaginum and unviable foetus diagnosed by ultrasonography (Kant et al. 2015).

Most of the studies examined reasons for abortions which were conducted in the first trimester of a pregnancy (Varkey et al. 2000, Unisa 2016, Holla et al. 2014, Kathpalia 2016, Kathpalia 2016, Jha et al. 2011). A couple of studies focused on second-trimester abortions (Jejeebhoy et al. 2010, Zavier et al. 2012). One among these listed reasons for such abortions among unmarried young women: failure to recognise the pregnancy immediately, exclusion from abortion-related decision-making, seeking confidentiality in the selection of facility, unsuccessful previous attempts to terminate the pregnancy, and lack of partner support (Jejeebhoy et al. 2010(27). Another study reported abortion-related decision-making, unsuccessful prior attempts to terminate the pregnancy, and distance from the facility in which their abortion was performed as significant reasons for second-trimester abortions (Zavier et al. 2012).

Along with documenting explicit reasons for abortions, studies also underscored the multiple factors associated with an abortion: low educational status, rural residence, caste, socio-economic status, domestic violence/ intimate partner violence, size of family, number of living offspring, and not having a male child. For instance, women with no/low educational status and from rural areas were significantly less likely to opt for an abortion (Pallikadavath & Stones 2006). Similarly, women with two or more live births before an HIV diagnosis were significantly more likely to terminate their pregnancy (Darak et al. 2016). Also, women from poor households, with uneducated spouses and from rural areas were significantly more likely to opt for unsafe abortions (Dasgupta et al. 2019). Younger women in urban settings were more vulnerable to unsafe abortion (Rahaman et al. 2022).

Secondary analysis of three decades of census data (1991, 2001, 2011) and four rounds of the NFHS reported a significant increase in selective abortions of female foetus/missing female births, especially among women who had a living female offspring (Jha et al. 2011, Pallikadavath & Stones 2006, Agarwal & Agarwal 2013, Rastogi & Sharma 2022; Saikia et al. 2021). Interestingly, analysis of NFHS-4 data observed an association between legal restrictions on sex-selective abortions and the rise in the number of female children, a trend that was more evident in poorer households, as they did not have the resources to evade the law (Rastogi & Sharma 2022).

2.2.4.2 Post-abortion side-effects/morbidities/complications and possible associated factors

Some studies reported post-abortion complications among women. Women who had undergone abortions in rural Haryana perceived their health status as worse than women who had not experienced an abortion. They reported pain in the lower abdomen and weakness, and were typically reported more among rural women than urban. These increased with an increase in gestational age (beyond the first trimester) (Unisa 2016). Specific reproductive issues such as abnormal vaginal discharge, severe lower abdominal pain, itching, and pain during intercourse were found to be associated with several abortions (Agarwal & Agarwal 2013). Further, bleeding with/without clots, cramps, fever/chill, vomiting/nausea, and injury/perforation were also reported (Banerjee & Andersen 2012).

Attempting to induce an abortion at home could have been associated with these morbidities. On the contrary, one study reported that attempts to abort at home by women themselves were less likely to result in morbidity than those made with the assistance of someone else (government/private/non-medical provider); surgical abortions were found to be associated with higher morbidities (Nyblade et al. 2010). Symptoms of post-traumatic stress disorder (PTSD) were also found (Kotta et al. 2018). Incomplete abortions following a medical abortion was found to be associated with morbidities and subsequent hospitalisation among women (Singh et al. 2020); another study mentioned minor side effects with medical abortion (Covaji et al. 2002).

2.2.4.3 Access to abortions

State-wise variation in seeking abortion was reported in a secondary data analysis. While women from the southern and western states of India (Kerala, Tamil Nadu, Andhra Pradesh, Goa, and Maharashtra) and certain other states/union territories (Bihar, Nagaland, Delhi, and Dadra and Nagar Haveli) sought abortions mostly in private facilities, women from northern states (other than Punjab and Haryana) preferred public facilities (Sharma et al. 2021).

Studies reported significant challenges encountered by women while seeking abortions in public facilities. These included the unwelcoming attitude of providers, providers' asking for the husband's consent before performing an abortion, and providers' pressuring women to accept contraception

following an abortion (Varkey et al 2000, Sri & Ravindran 2012, Gupte et al 1999). Interestingly, women who sought an abortion at a public facility were reportedly more likely to choose contraception than women who chose a private facility for an abortion (Gaur et al. 2022). The inadequacy of post-abortion family planning services in the public sector was also highlighted (Kathpalia 2016).

The shortage of trained staff and necessary equipment, as well as the geographical inaccessibility of facilities, were observed as other crucial factors (Pyne et al. 2020, Duggal & Ramachandran 2004). Community health workers were willing to assist women who needed medical abortions as well as post-abortion care if equipped with appropriate training, regular supplies, and job aids (Gupta et al. 2017). A study conducted at several facilities, both government and private, ranked abortion services in government facilities of intermediate quality. Both women and health workers criticised the quality of abortion services provided by government facilities (Ramachandran & Pelto 2004).

The cost of abortion at public facilities being several times higher than private facilities was reported as a major barrier to seeking care in the private sector (Sri & Ravindran 2012, Gupte et al. 1999, Duggal & Ramachandran 2004). However, women still preferred private facilities over public, as they perceived private services as being safer and with better treatment. Other important reasons were the availability of qualified healthcare providers and better facilities (Banerjee et al. 2015, Duggal & Ramachandran 2004). Facilitation by grassroots-level workers (village health nurses) to obtain services in the private sector also encouraged women to approach private providers (Ramachandran & Pelto 2002). In addition, providers in private clinics were more likely to offer abortion services, including medical abortions, than public clinics (Ganatra & Hirve 2002, Chatuvedi et al. 2010, Creanga et al. 2008, Duggal & Ramachandran 2004). Good quality and safe abortion services in private facilities were also reported in a multi-facility study.

Accrediting private healthcare facilities and supporting them in providing abortion-related services free of charge to rural and low-income urban women resulted in good quality care and satisfaction among women in Bihar. However, there were multiple challenges associated with the process, including stringent requirements for site approval, long waiting time for accreditation, a complicated and delayed reimbursement process, and low reimbursement fees for abortion services (Banerjee et al. 2015).

Along with formal private facilities, studies noted that women sought abortions from informal/unqualified/traditional practitioners as well. In many cases, informal providers served as a link between formal providers and women seeking abortions, especially in rural areas (Varkey et al. 2000, Kant et al. 2015, Ganatra 2005, Duggal & Ramachandran 2004). These providers were mainly approached by unmarried girls/adolescents (Ramachandran & Pelto 2002). The reasons for seeking an abortion from them, despite being reportedly unsafe, included cost, limited mobility, lack of family and partner support, privacy concerns, and stigma (Ramachandran & Pelto 2002, Ganatra & Hirve 2002).

Women inducing an abortion at home using medication or homemade concoctions were also documented by studies (Ganatra & Hirve 2002). While the drugs were mainly obtained with a doctor's prescription, over-the-counter (OTC) sales were also seen (Dasgupta et al. 2019). The ability of the client to afford the drugs, as well as familiarity with pharmacists, promoted OTCs, though this is illegal (Percher et al. 2021). The demand for cheaper drugs over expensive drugs like mifepristone and misoprostol was also observed (Ganatra 2005). Women using drugs to abort were found to be familiar with the experience.

It was found that a pharmacist could not provide good quality information to their clients, especially about dosage and side effects of these drugs (Smith et al. 2019). Barriers that prevented them from sharing detailed information included perceptions about what information clients could understand and need, and a lack of comfort in sharing information with young unmarried women (Smith et al. 2019). An intervention – a two-pager infographic on medical abortions – aimed at improving pharmacists' holistic knowledge was tested in multiple pharmacies in a district, but the findings remained ambiguous.

Healthcare providers were willing to provide medical abortions to women, but had reservations about providing these to some categories of women (poor, uneducated, and rural) (Acarya et al. 2012). Poor awareness about the availability of abortion services, as well as its legality also shaped access to safe abortions. For instance, a study reported better awareness among men than women about medical abortion pills. This was also found to be associated with women's education and status within the household (Broussard et al. 2019). Studies also documented interventions targeting multiple aspects of abortions, and noted a significant increase in awareness of the legality of abortion, knowledge of where to obtain safe services, and utilisation of safe abortion services (Banerjee et al. 2014, 2017).

3. SUMMARY AND DISCUSSIONS

While examining the legislations, policies, and programmes implemented post-ICPD, the research review reveals that the government of India has enacted a few laws, amended other legislation, and formulated new policies and programmes to promote SRHR in alignment with the commitments made in the ICPD. There are a few progressive laws in the country to protect women's sexual and reproductive rights and improve access to SRHR services. Nevertheless, there are contradictions between the old and recently introduced legislation. For instance, the MTP Act 1971 allows abortion on the grounds of rape, and the confidentiality clause of the Act mandates medical practitioners to protect the personal identity of abortion-seekers. However, according to the POCSO Act 2012, when a girl below 18 years of age seeks sexual health-related services, including abortion, the provider is required to mandatorily report a sexual offence against the 'child' to the local police. The POCSO Act criminalises minors (based on legal age) who engage in consensual sexual activity. This contradiction has been addressed by the Supreme Court ruling (on 29 September 2022) stating that the names and identifiers of the girl/individual should not be reported. However, the community, medical professionals, and law enforcement authorities, such as the police, are unaware of this ruling. The lack of awareness and misinterpretation of the Acts and their provisions act as strong barriers for unmarried and married minor girls to access safe abortions and other SRH services.

Likewise, the PCPNDT Act was amended in 2003 to regulate techniques used in sex selection before and after conception, but it does not say anything about abortions. There continues to be a misconception, even among health professionals, that any abortion is illegal as it would be done for sex selection. There are documented instances of the denial of abortion services by a provider who believed that all second-trimester abortions were sex-selective (Sundari et al. 2018). So, it is imperative to address the points of conflict between the Acts, and to create awareness about the legislation to dispel misconceptions about the inappropriate linking of MTP and PCPNDT. The protection of women from domestic violence and the prevention of sexual harassment of women in the workplace are vital legislations to protect women's rights. However, awareness about the domestic violence Act and its implementation have been very weak. Protection officers appointed at the district level under the

PDWAV are not trained to provide women-centred counselling services. Moreover, as per the Act, cases of domestic violence should be resolved within 60 days, but in reality, there is ample evidence that cases have dragged on over years (Kanougiya 2022). Likewise, there were severe lapses in implementing the Prevention of Sexual Harassment at Workplace Act. Recently, the Supreme Court of India flagged issues of lapses in its implementation.

On signing the ICPD agreement (PoA XIII on National Action, Section C), the government of India committed to increasing the budget allotment to the social sector. However, there has been a constant decline in budget allocation for health. It declined from 5 per cent of GDP in 2005 to 2.1 per cent in 2023, which is very low compared to the WHO recommended level. Again, the share of funds for the Reproductive and Child Health programme in the total health budget fell from 40 per cent in 2016-17 to 18 per cent in 2022-23 (CPR 2022, 2023). The reduction in the overall health budget and RCH programme costs has impacted the implementation and provision of essential SRH services like adolescent-friendly healthcare services and MCH services for married women, including contraception and abortion services.

ICPD PoA (Chapter VII Section D on Human Sexuality and Gender Relations) stressed the importance of providing SRH information and services to adolescents and young people. In alignment with that, the government of India introduced many policies and programmes, including Reproductive and Child Health (RCH) -1 and 2 (1997-2002, 2005-10), National AIDS Control Programme (NACP -1) (1996-2006), National Youth Policy 2003, Reproductive Maternal Newborn Child Health + Adolescent health (RMNCH+ A), and Rashtriya Kishor Swasthya Karyakram (RKSK) that address the SRHR of adolescents and young people. Following the NACP-1, the Adolescent Education Programme was introduced in 2006, which was closest to the Comprehensive Sexuality Education (CSE) programme, but immediately after its introduction it met with controversy. There was strong opposition from fundamentalist groups, and 12 banned its implementation. Consequently, the core content of the curriculum on reproductive anatomy, sexuality information, and rights were removed. In 2019, under the Ayushman Bharat, the school health programme was introduced. The NCERT and MoHFW developed a curriculum with 12 modules, but this does not address the issues of sexuality, reproduction, and SRH rights. Some studies reported that adolescents and youths had reported inadequate SRH education at the school level and expressed a need for it (Andrew et al. 2003, Sreekumar et al. 2019, Zohorian et al. 2020).

Evidence also suggests that the implementation of adolescent health programmes is weak. A review (by Jeejeebhoy et al. 2014) pointed out that adolescent health programmes are limited to safe issues such as nutrition and menstrual hygiene, and skip topics related to sexuality such as access to contraceptives, abortion-related

information and so on. Programmes (and official data, too) also tend to focus on married adolescents, largely excluding unmarried girls and boys. Shah et al. (2022) also found inadequate infrastructural facilities in implementing the RKSK. Another review observed that the human and financial resources mobilised for the programme are inadequate, and clinical services for adolescents are few and far between. The review also found low awareness of the programme among adolescents and that peer educators needed better training and support (Barua et al., 2020).

In the literature review of studies done with adolescents and young people from 1995 to 2022, it was found that many studies reported adolescents had limited knowledge about sexuality, and engaged in high-risk sexual behaviour (Tikoo 1995, Shashikumar et al. 2012). The review indicates that there are strong myths and misconceptions about menstruation, sexuality, conception, and contraception. Studies also found that the lack of awareness and sexual violence were more common among rural, poor, and marginalised adolescents than the others (Gupta et al. 2015).

There are studies documenting challenges in access to and utilisation of SRH services among adolescents and young adults. Notably, the utilisation of contraceptives was very low (Sharma et al. 1996, Char et al. 2011, Maheswari 2017). Many studies observed sociocultural barriers to the uptake of contraceptives and the non-availability of contraceptives with front-line workers as challenges in the uptake of contraceptives (Palo et al. 2020). A few other studies observed providers' attitudes, knowledge, and indifference to ensuring the delivery of contraceptive services (Shukla et al. 2022, Khanna et al. 2022).

Post ICPD, the government of India's primary focus was to improve MCH services. As a result, there has been significant progress in utilising maternal healthcare services, especially in the coverage of antenatal care and delivery care services. The recent NFHS-5 (2019-21) survey found that about three-fifths of the mothers in the country have had four or more ANC visits, and an overwhelming majority of births are institutional (IIPS 2019-21). Universal Health Coverage (UHC) was the key goal of the 12th five-year plan (2012-17), and the NHM's focus is to provide UHC. However, there are wide disparities in ANC coverage and institutional delivery by geographic location, rural-urban, caste, and economic status of households (IIPS 2019-21). During the last two decades, there has been a significant improvement in the rate of institutional deliveries. However, a noticeable proportion of women in rural marginalised communities and from the poorest houses continue to have home deliveries. Thus, the overall increase in institutional delivery rate masks the inequality among different groups and communities.

Likewise, the maternal mortality ratio (MMR) has been noticeably declining, but it varies widely across states. Almost all the EAG states continue to have a high

MMR; in contrast, most of the southern states have already reached the SDG target of MMRs below 70. India's total fertility rate has come down noticeably and has now reached the replacement level of fertility (SRS 2022). The national and state governments believe that institutional delivery is the path to reducing maternal mortality. However, without addressing the social determinants of maternal health, including nutritional anaemia, a further reduction in the MMR would not be possible. From the review of the literature on maternal health, it is observed that maternal deaths were high among those belonging to marginalised communities, having a low socio-economic status and residing in remote areas. Thus, targeted interventions are needed to reduce the MMR in specific regions and groups.

The review of literature on maternal morbidity in India reported ectopic pregnancy, pregnancy-induced hypertensive disorders, haemorrhage, pre-eclampsia, eclampsia, and severe anaemia as leading causes of maternal morbidity and near-miss events. Poor socio-economic status and parity/gravida were also significantly associated with near-miss events. Among the infectious diseases, tuberculosis, malaria, dengue and COVID-19 during pregnancy are the main reasons for maternal morbidity. Likewise, diabetes, hypertension and mental health issues were common non-communicable diseases among women during the pregnancy, delivery, and postpartum periods.

Despite India having special programmes like WIFS and Anaemia Mukt Bharat to reduce nutritional anaemia among adolescents and women, the rate of anaemia continues to be very high, and has increased in recent years (IIPS 2015-16, 2019-21). Without addressing the broader determinants of anaemia, merely providing iron and folic acid tablets will not reduce its prevalence. There is a strong linkage between anaemia and the reproductive health status of women.

The National Population Policy 2000, RCH 1, and RCH 2 adopt a target-free approach in the provision of contraceptive services and focus on the 'method mix' in contraception. Nevertheless, female sterilisation and insertion of the intra-uterine copper device (IUCD) are the only two methods promoted by the public health system. Male contraceptive methods, spacing between the births and delaying the first pregnancy are not given due importance. Some recent studies from different states indicate there are indirect targets, and the coercive use of contraception, especially the insertion of IUCDs without the women's consent, which is a clear violation of women's bodily integrity and reproductive rights (HRLN, n.d, CommonHealth 2022, RUWSEC 2022, TOI 2018, 2021). This is entirely against the ICPD POA on reproductive rights and family planning. It is also against gender justice.

Generally, care-seeking behaviour was very low for the reproductive morbidities. Many women reported that it was not necessary to seek treatment for their menstrual problems as they believed these would get cured. The perception of symptoms as normal, feeling embarrassed, the lack of female health workers, distance to a health facility, and lack of the availability of treatment were identified as major aabarriers to not seeking treatment for menstrual and reproductive tract infections (Balasubramanian & Sundari 2012, Vanitha 2013, Rejoice & Ravishankar 2014). Evidence also showed that treatment for gynaecological morbidities is not available at the primary and secondary-level public health facilities.

Even though abortion has been legal in India under certain conditions for over five decades, there are problems with access to and utilisation of abortion services. Studies reported significant challenges encountered by women while seeking an abortion in public facilities. These include the unwelcoming attitude of providers, denial, discrimination, and providers' asking for the husband's consent before performing an abortion and pressuring women to accept contraception following an abortion. On the other side, the cost of care in the private sector is very high and so inaccessible to poor, marginalised women and young girls.

NHM advocates for universal health care, but there are wide disparities in access to and utilisation of SRH services by geographic location, caste, class, and gender. Thus, special SRHR services should target the most disadvantaged: the poor, the rural, the poorly educated, the young, and other marginalised groups.

4.
CONCLUSION AND RECOMMENDATIONS

Post-ICPD, India's government introduced several legislations, policies, and programmes on sexual and reproductive health rights (SRHR). However, there are wide gaps in implementing these policies and programmes due topoor accountability and monitoring mechanisms. The review found that the implementation of the adolescent sexual and reproductive health (SRH) programme is very weak: there are still strong myths and misconceptions about menstruation, sexuality, conception, and contraception; the government's narrow focus and approach on promoting institutional deliveries have not addressed the broader social determinants of SRH; and maternal morbidity and mortality are still high among women from poorer socio-economic groups, and living in rural areas. Despite steady progress in selected SRHR indicators, such as declining maternal mortality rates (MMRs) and infant mortality rates (IMRs), the increasing rate of institutional deliveries, and contraceptive prevalence, there are wide inequities across regions, the rural-urban divide, castes, and class. Universal health care is still a distant dream in India. The review also found that women face challenges in accessing safe abortion services; the attitudes of providers towards abortions include stigma, discrimination, and the denial of services in public facilities. Again, male involvement in contraception is very weak. There are indirect targets and a coercive use of contraceptives in public facilities, which go against the ICPD's commitment.

RECOMMENDATIONS

For UN Agencies and policymakers

- Ensure our government's commitment to implementing policies on universal access to SRH care services as outlined in the international treaties; and
- Develop a mechanism and systems for periodic reporting of national-level progress and gaps in the implementation of international agreements.

For the government

- Amend laws and policies that restrict the right to bodily autonomy and safe abortion services, and increase budget allocations to health, especially to SRH programmes, as agreed in the international agreements;
- Implement SRH policies and programmes as outlined in the policy documents and strengthen the monitoring and accountability systems for effective implementation;
- Create an enabling environment for active and meaningful participation of civil society organisations in the policymaking process, monitoring, and accountability mechanisms;
- Integrate comprehensive sexuality education (CSE) into school curricula and ensure the effective implementation of age-appropriate CSE in schools and in out-of-school settings in local languages;
- Strengthen health systems to deliver SRHR services using adolescent, youth, and other diversityfriendly approaches, as defined by international guidelines;
- Ensure the access, availability, affordability, and quality of SRHR services to the marginalised communities and implement people-friendly SRHR services in the public sector;
- Provide high-quality contraception and safe abortion services for unmarried and married females through an inclusive, non-judgemental, and rights-based approach, which empowers informed decisions;
- Conduct abortion values clarification and attitudes transformation (VCAT) and sensitisation training to healthcare providers to reduce prejudice, stigma, and discrimination in the provision of abortion and other SRH services to unmarried and married people; and
- Ensure that universal health coverage plans explicitly include SRH services for all diversities, irrespective of cost-efficiency considerations, to ensure no one is left behind.

For Civil Society Organisations

- Generate evidence on gaps in the implementation of SRHR policies and programmes and advocate with government and policymakers;
- Generate evidence on the social determinants of SRH through a gender and justice lens;
- Create awareness on SRHR among different target groups, namely boys, girls, men, women, and healthcare providers to help dispel myths and misconceptions about sexuality and abortion; it is also important to educate service seekers about the obligations and entitlements of service providers; and
- Document health and human rights violations, like gender-based violence against women, the coercive use of contraceptives like CU-T, and denial of abortion services in public health facilities, and use this to advocate with the government.

5. REFERENCES

Abha, S., Chandrashekhar S, Sonal D. 2016. "Maternal Near Miss: A Valuable Contribution in Maternal Care." *J Obstet Gynaecol India.* Oct;66 (Suppl 1):217–22.

Agarwal, N., Gupta M, Agrawal A. 2022. "Maternal and perinatal outcome in Covid-19 complicated pregnancies in a Level-3 Covid facility of North India." *Med J Dr Patil Vidyapeeth*. 2022;15(8):311–6.

Agarwal, N., Jain V, Bagga R, Sikka P, Chopra S, Jain K.2022. "Near miss: determinants of maternal near miss and perinatal outcomes: a prospective case control study from a tertiary care center of India." *J Matern-Fetal Neonatal Med* Off J Eur Assoc Perinat Med Fed Asia Ocean Perinat Soc Int Soc Perinat Obstet. Dec;35(25):5909–16.

Agarwal, R., Chawla D, Sharma M, Nagaranjan S, Dalpath SK, Gupta R, et al. 2018. "Improving quality of care during childbirth in primary health centres: a stepped-wedge cluster-randomised trial in India." *BMJ Glob Health*. 3(5):e000907.

Agrawal, A., Agarwal S, Kumar V, Nawal CL, Mital P, Chejara R. 2016. "A study of an influenza A (H1N1)pdm09 outbreak in pregnant women in Rajasthan, India." *Int J Gynaecol Obstet* Off Organ Int Fed Gynaecol Obstet. Feb;132(2):146–50.

Agrawal, S., Agrawal PK. 2013. "Induced abortion and women's reproductive health in India." *Global J Med Public Health* [Internet] [cited 2023 Sep 29];2(5). https://gjmedph.com/Uploads/R2-Vo2No5.pdf

Alcock, G., Das S, Shah More N, Hate K, More S, Pantvaidya S, et al. 2015. "Examining inequalities in uptake of maternal health care and choice of provider in underserved urban areas of Mumbai, India: a mixed methods study." *BMC Pregnancy Childbirth*. Sep 28;15:231.

Ali, B., Chauhan S. 2020. "Inequalities in the utilisation of maternal health Care in Rural India: Evidences from National Family Health Survey III & IV." *BMC Public Health.* Mar 20;20(1):369.

Ali, B., Debnath P, Anwar T. 2021. "Inequalities in utilisation of maternal health services in urban India: Evidences from National Family Health Survey-4." *Clin Epidemiol Glob Health.* Apr 1;10:100672.

Alluvala, S.A., Aziz N, Tumkur A, Boorugu HK. 2019. "One-Year Follow-Up of Women with Severe Acute Maternal Morbidity (SAMM): A Cohort Study." *J Obstet Gynecol India.* 69(3):211–7.

Ansari, H., Yeravdekar R. 2020. "Respectful maternity care during childbirth in India: A systematic review and meta-analysis." *J Postgrad Med*. 66(3):133–40.

Aridoss, S., Jaganathasamy N, Kumar A, Natesan M, Adhikary R, Arumugam E. 2020. "Socio-demographic factors associated with HIV prevalence among pregnant women attending antenatal clinics in six Southern States of India: Evidences from the latest round of HIV sentinel surveillance." *Indian J Public Health*.64:S26–31.

Arora, G.P., Thaman RG, Prasad RB, Almgren P, Brøns C, Groop LC, et al.2015. "Prevalence and risk factors of gestational diabetes in Punjab, North India: results from a population screening program." *Eur J Endocrinol.* Aug;173(2):257–67.

Arora, N., Kausar H, Jana N, Mandal S, Mukherjee D, Mukherjee R. 2015. "Congenital heart disease in pregnancy in a low-income country." *Int J Gynaecol Obstet* Off Organ Int Fed Gynaecol Obstet. Jan;128(1):30–2.

Arora, P., Aeri BT. 2021. "Association between high pre-pregnancy body mass index and antenatal depression: A study among pregnant women of upper socio-economic strata in North-West Delhi, India*." Clin Epidemiol Glob Health* [Internet]. 11. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85107131985&doi=10.1016%2fj.cegh.2021.100787&partnerID=40&md5=8f12048f76297e65d7b1ad362b77856b

Aslam, M., Nawab T, Ahmad A, Abedi AJ, Azmi SA. 2022. "Postpartum Depression and its Clinico-Social Correlates-A Community-Based Study in Aligarh." *Indian J Public Health.* 66(4):473–9.

Awasthi, A., Pandey CM, Chauhan RK, Singh U. 2016. "Disparity in maternal, newborn and child health services in high focus states in India: A district-level cross-sectional analysis." *BMJ Open*. 2016 Aug 5;6(8):e009885.

Bachani, S., Arora R, Dabral A, Marwah S, Anand P, Reddy KS, et al. 2021 "Clinical Profile, Viral Load, Maternal-Fetal Outcomes of Pregnancy With COVID-19: 4-Week Retrospective, Tertiary Care Single-Centre Descriptive Study." *J Obstet Gynaecol Can.* 2021 Apr 1;43(4):474–82.

Bachani, S., Sahoo SM, Nagendrappa S, Dabral A, Chandra P. 2022. "Anxiety and depression among women with COVID-19 infection during childbirth—experience from a tertiary care academic center." *AJOG Glob Rep* [Internet]. (1). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85127303076&doi=10.1016%2fj.xagr.2021.100033&partnerID=40&md5=4f1aece81671618e83973c2dfb94f406

Badgire, S.A., Gadappa S, Deshpande S. 2022. "Shadow of Pandemic: An Analysis of Maternal and Neonatal Outcomes before, during, and after the First and Second COVID-19 Waves." *J SAFOG.* 14(3):238–41.

Badiya, P.K., Siddabattuni S, Dey D, Javvaji SK, Nayak SP, Hiremath AC, et al. 2020. "Identification of clinical and psychosocial characteristics associated with perinatal depression in the south Indian population." *Gen Hosp Psychiatry*. 66:161–70.

Bahl, S., Dhabhai N, Taneja S, Mittal P, Dewan R, Kaur J, et al. 2022. "Burden, risk factors and outcomes associated with gestational diabetes in a population-based cohort of pregnant women from North India." *BMC Pregnancy Childbirth*. Jan 14;22(1):32.

Bakshi, R., Aggarwal P, Roy D, Nautiyal R, Kakkar R. 2015. "Indicators of maternal 'near miss' morbidity at different levels of health care in North India: A pilot study." *Bangladesh J Med Sci.*Jun 20;14:254.

Banerjee, S.K., Andersen K, Pearson E, Warvadekar J, Khan DU, Batra S. 2017. "Evaluating the relative effectiveness of high-intensity and low-intensity models of behaviour change communication interventions for abortion care-seeking in Bihar and Jharkhand, India: a cross-sectional study." *BMJ Open*. 2017 Feb;7(2):e012198.

Banerjee, S.K., & K. Andersen. 2012. "Exploring the pathways of unsafe abortion in Madhya Pradesh, India." *Glob Public Health*. Sep;7(8):882–96.

Banerjee, S.K., Andersen KL, Baird TL, Ganatra B, Batra S, Warvadekar J. 2014. "Evaluation of a multi-pronged intervention to improve access to safe abortion care in two districts in Jharkhand." 2014. *BMC Health Serv Res*. Dec;14(1):227.

Banerjee, S.K., Andersen KL, Navin D, Mathias G. 2015. "Expanding availability of safe abortion services through private sector accreditation: a case study of the Yukti Yojana program in Bihar, India." *Reprod Health*. Dec;12(1):104.

Banerjee, S.K., Andersen KL, Warvadekar J, Aich P, Rawat A, Upadhyay B. 2015. "How prepared are young, rural women in India to address their sexual and reproductive health needs? A cross-sectional assessment of youth in Jharkhand." *Reprod Health.* Dec;12(1):97.

Banerjee, S.K., Kumar R, Warvadekar J, Manning V, K.L. Andersen. 2017. "An exploration of the socio-economic profile of women and costs of receiving abortion services at public health facilities of Madhya Pradesh, India." *BMC Health Serv Res*. Dec;17(1):223.

Bang, R.A., Bang AT, Reddy MH, Deshmukh MD, Baitule SB, Filippi V. 2004. "Maternal morbidity during labour and the puerperium in rural homes and the need for medical attention: A prospective observational study in Gadchiroli, India." *BJOG Int J Obstet Gynaecol.* Mar;111(3):231–8.

Bango, M., & S. Ghosh. 2022. Social and Regional Disparities in Utilization of Maternal and Child Healthcare Services in India: A Study of the Post-National Health Mission Period. *Front Pediatr.* 10:895033.

Bankar, S., & D. Ghosh. 2022. "Accessing Antenatal Care (ANC) services during the COVID-19 first wave: insights into decision-making in rural India." *Reprod Health*. Jul 8;19(1):158.

Barnett, S., Nair N, Tripathy P, Borghi J, Rath S, Costello A. 2008. "A prospective key informant surveillance system to measure maternal mortality – findings from indigenous populations in Jharkhand and Orissa, India." *BMC Pregnancy Childbirth*. Dec;8(1):6.

Begom, A. 1998. "High-Risk Pregnancies and Their Clinical Outcomes: A Prospective Descriptive Study of the Clinical Outcomes of High-Risk Pregnancies at a Public Sector Tertiary Care Centre, Kerala." Thiruvananthapuram: Achutha Menon Centre for Health Science Studies.

Bhaduaria, D., Kaul A, Lal H, Mishra P, Jain M, Prasad N, et al. 2019. "Acute Cortical Necrosis in Pregnancy Still an Important Cause for End-Stage Renal Disease in Developing Countries." *Saudi J Kidney Dis Transplant.* Apr;30(2):325.

Bhatia, J.C. & J. Cleland. 1996. "Obstetric morbidity in south India: Results from a community survey." *Soc Sci Med.* Nov;43(10):1507–16.

Bhatia, M., Dwivedi LK, Banerjee K, Bansal A, Ranjan M, Dixit P. 2021. "Pro-poor policies and improvements in maternal health outcomes in India." *BMC Pregnancy Childbirth* [Internet]. 21(1). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85106038581&d

oi=10.1186%2fs12884-021-03839-w&partnerID=40&md5=951a183ec0a67e0b1a0243be2d-4150cf

Bhattacharjee, R., Raithatha N, Sapre S, Vaishnav SB, Sheth V. 2019. "An analysis of large volume blood and blood product transfusion in critically ill obstetric patients: A retrospective study." *J SAFOG*. 2019;11(3):148–52.

Bhattacharyya, S., Issac A, Rajbangshi P, Srivastava A, Avan BI. 2015. "'Neither we are satisfied nor they' – Users and provider's perspective: A qualitative study of maternity care in secondary level public health facilities, Uttar Pradesh, India." *BMC Health Serv Res.* 5 Sep 27;15(1):421.

Bhattacharyya, S., Srivastava A, Roy R, Avan BI. 2016. "Factors influencing women's preference for health facility deliveries in Jharkhand state, India: a cross sectional analysis." *BMC Pregnancy Childbirth.* Mar 7;16(1):50.

Bhattacharyya, S., Srivastava A, Saxena M, Gogoi M, Dwivedi P, Giessler K. 2018. "Do women's perspectives of quality of care during childbirth match those of providers? A qualitative study in Uttar Pradesh, India." *Glob Health Action*. Oct 8;11(1):1527971.

Bhattacharyya, S.K., Majhi AK, Seal SL, Mukhopadhyay S, Kamilya G, Mukherji J. 2008. "Maternal mortality in India: A 20-year study from a large referral medical college hospital, West Bengal." *J Obstet Gynaecol Res.* Aug;34(4):499–503.

Bhavana, A.M., Kumari PHP, Mohan N, Chandrasekhar V, Vijayalakshmi P, Manasa RV. 2019. "Bacterial vaginosis and antibacterial susceptibility pattern of asymptomatic urinary tract infection in pregnant women at a tertiary care hospital, Visakhaptn, India." *Iran J Microbiol.*11(6):488–95.

Bhushan, N.L., Krupp K, Jaykrishna P, Ravi K, Khan A, Shidhaye R, et al. 2020. "The association between social support through contacts with Accredited Social Health Activists (ASHAs) and antenatal anxiety among women in Mysore, India: a cross-sectional study." *Soc Psychiatry Psychiatr Epidemiol*. Oct;55(10):1323–33.

Bone, J.N., Bellad M, Goudar S, Mallapur A, Charantimath U, Ramadurg U, et al. 2022. "Anemia and adverse outcomes in pregnancy: subgroup analysis of the CLIP cluster-randomized trial in India." *BMC Pregnancy Childbirth*. May 13;22(1):407.

Brar, R., Sikka P, Suri V, Singh MP, Suri V, Mohindra R, et al. 2021. "Maternal and fetal outcomes of dengue fever in pregnancy: a large prospective and descriptive observational study." *Arch Gynecol Obstet*. Jul;304(1):91–100.

Broussard, K., P. Hathi, & D. Coffey. 2019. "Assessing public awareness and use of medical abortion via mobile phone survey in India." *Contraception*. Dec;100(6):457–63.

Bruce, S.G., Blanchard AK, Gurav K, Roy A, Jayanna K, Mohan HL, et al. 2015. "Preferences for infant delivery site among pregnant women and new mothers in Northern Karnataka, India." *BMC Pregnancy Childbirth.* Feb 27;15(1):49.

Centre For Policy Research (CPR). 2020. "National Health Mission Budget Briefs, 2019-20." https://cprindia.org/wp-content/uploads/2021/12/NHM 2019-2020.

Centre for Policy Research (CPR). 2022. "National Health Mission Budget Briefs 2021-22." https://cprindia.org/wp-content/uploads/2021/12/NHM_2021_22.pdf.

Centre for Policy Research (CPR). 2023. "National Health Mission Budget Briefs 2023-24." https://accountabilityindia.in/wp-content/uploads/2023/02/National-Health-Mission-2023-24.pdf CPR 2023.

Chainani, E.G. 2021. "Incidence of Postpartum Depression in a Tertiary Care Hospital in Navi Mumbai amid COVID-19 Pandemic." *J SAFOG*. 13(4):240–4.

Chandhiok, N., Joglekar N, Shrotri A, Choudhury P, Chaudhury N, Singh S. 2015. "Task-shifting challenges for provision of skilled birth attendance: a qualitative exploration." *Int Health*. May 1;7(3):195–203.

Chandrashekar, V.N., Punnath K, Dayanand KK, Achur RN, Kakkilaya SB, Jayadev P, et al. 2019. "Malarial anemia among pregnant women in the south-western coastal city of Mangaluru in India." *Inform Med Unlocked* [Internet]. 15. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85064822556&doi=10.1016%2fj.imu.2019.02.003&partnerID=40&md5=6a08a5890a54732058a342a8c3706103

Charanthimath, U., Vidler M, Katageri G, Ramadurg U, Karadiguddi C, et al. 2018. "The feasibility of task-sharing the identification, emergency treatment, and referral for women with pre-eclampsia by community health workers in India." *Reprod Health*. Jun;15(S1):101.

Chaudhuri, S. & S. Nath. 2019. "Life-threatening Complications in Pregnancy in a Teaching Hospital in Kolkata, India*." J Obstet Gynaecol India.* Apr;69(2):115–22.

Chawla, J., Arora D, Paul M, Ajmani SN. 2015. "Emergency Obstetric Hysterectomy: A Retrospective Study from a Teaching Hospital in North India over Eight Years." *Oman Med J.* May;30(3):181–6.

Chowdhary, P.K., Tibrewal A, Kale SA. 2021. "Postpartum Acute Kidney Injury in Tertiary Care Center: Single-Center Experience from Central India." *Saudi J Kidney Dis Transplant* Off Publ Saudi Cent Organ Transplant Saudi Arab. 32(4):1111–7.

Creanga, A.A., Roy P, Tsui AO. 2008. "Characteristics of abortion service providers in two northern Indian states." *Contraception.* Dec;78(6):500–6.

Dalal, S., Nagar R, Hegde R, Vaishnav S, Abdullah H, Kasper J. 2022. "Referral care for high-risk pregnant women in rural Rajasthan, India: a qualitative analysis of barriers and facilitators." *BMC Pregnancy Childbirth*. Apr 11;22(1):310.

Darak, S., Hutter I, Kulkarni V, Kulkarni S, Janssen F. 2016. "High prevalence of unwanted pregnancies and induced abortions among HIV-infected women from Western India: need to emphasize dual method use?" *AIDS Care*. Jan 2;28(1):43–51.

Das, R., Biswas S. 2015. "Eclapmsia: The Major Cause of Maternal Mortality in Eastern India." *Ethiop J Health Sci*. 25(2):111–6.

Dasari, P. 2015. "Maternal mortality and its relationship to emergency obstetric care (EmOC) in a tertiary care hospital in South India." *Obstet Med.* 8(2):86–91.

Dasgupta, P., Biswas R, Das D, Roy J. 2019. "Occurrence and predictors of abortion among women of the reproductive age group in a block of Darjeeling District, West Bengal, India." *Indian J Public Health*. 63(4):298.

Dasgupta, S., Jha T, Bagchi P, Singh SS, Gorai R, Choudhury SD. 2017. "Critically ill obstetric patients in a general critical care unit: A 5 years' retrospective study in a public

teaching hospital of Eastern India." *Indian J Crit Care Med.* 21(5):294–302.

David, J.K., Pant R, Allam RR, Priya VMP, Aridoss S, Arumugam E. 2020. "The relationship between educational attainment and hiv prevalence among pregnant women attending antenatal clinics in six states of India: Sentinel surveillance from 2010 to 2017." *Indian J Public Health.* 64:S15–21.

Dehury, R.K., & S.C. Chatterjee. 2018. "Assessment of health management information system for monitoring of maternal health in Jaleswar Block of Balasore District, Odisha, India." *Indian J Public Health*. 62(4):259–64.

Devasenapathy, N., Jerath SG, Allen E, Sharma S, Shankar AH, Zodpey S. 2015. "Reproductive healthcare utilization in urban poor settlements of Delhi: Baseline survey of ANCHUL (Ante Natal and Child Health care in Urban Slums) project." *BMC Pregnancy Childbirth.* Sep 8;15(1):212.

Dey, A., Shakya HB, Chandurkar D, Kumar S, Das AK, Anthony J, et al. 2017. "Discordance in self-report and observation data on mistreatment of women by providers during childbirth in Uttar Pradesh, India." *Reprod Health*. 2017 Nov 15;14:149.

Dhiman, P., Pillai RR, Wilson AB, Premkumar N, Bharadwaj B, Ranjan VP, et al. 2021 "Cross-sectional association between vitamin B12 status and probable postpartum depression in Indian women." *BMC Pregnancy Childbirth* [Internet]. 21(1). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85100878707&doi=10.1186%2fs12884-021-03622-x&partnerID=40&md5=c4699835f8431801eddbf0a31ac81d06

Diamond-Smith, N., Percher J, Saxena M, Dwivedi P, Srivastava A. 2019 "Knowledge, provision of information and barriers to high quality medication abortion provision by pharmacists in Uttar Pradesh, India." *BMC Health Serv Res.* Dec;19(1):476.

Diamond□Smith, N., Phillips B, Percher J, Saxena M, Dwivedi P, Srivastava A. 2019. "An intervention to improve the quality of medication abortion knowledge among pharmacists in India." *Int J Gynecol Obstet*. Dec;147(3):356–62.

Diamond-Smith, N., Singh N, Gupta RD, Dash A, Thimasarn K, Campbell OM, et al. 2009. "Estimating the burden of malaria in pregnancy: a case study from rural Madhya Pradesh, India." *Malar J*. Feb 12;8(1):24.

Duggal, R., Ramachandran V. 2004. "The Abortion Assessment Project—India: Key Findings and Recommendations." *Reprod Health Matters*. Jan;12(sup24):122–9.

Eswarappa, M., Madhyastha PR, Puri S, Varma V, Bhandari A, Chennabassappa G. 2016. "Postpartum acute kidney injury: a review of 99 cases." *Ren Fail*. 38(6):889–93.

Eswarappa, M., Rakesh M, Sonika P, Snigdha K, Midhun M, Kaushik K, et al. 2017. "Spectrum of renal injury in pregnancy-induced hypertension: Experience from a single center in India." *Saudi J Kidney Dis Transplant,* Off Publ Saudi Cent Organ Transplant Saudi Arab. 28(2):279–84.

Ganatra, B., Coyaji K, Rao V. 1996. "Community cum hospital-based case-control study on maternal mortality: a final report. Pune (India): KEM Hospital Research Centre." Pune: KEM Hospital Research Centre, Dec.

Ganatra, B., Hirve S. 2002. "Induced Abortions Among Adolescent Women in Rural Ma-

harashtra, India." *Reprod Health Matters*. Jan;10(19):76–85.

Ganatra, B., Manning V, Pallipamulla SP. 2005. "Availability of Medical Abortion Pills and the Role of Chemists: A Study from Bihar and Jharkhand, India." *Reprod Health Matters*. Jan;13(26):65–74.

Gandhi, S., Dash U, Suresh Babu M. 2022. "Horizontal inequity in the utilisation of Continuum of Maternal Health care Services (CMHS) in India: an investigation of ten years of National Rural Health Mission (NRHM)." *Int J Equity Health.* Jan 15;21(1):7.

Gandhi, S., Gandhi S, Dash U, Suresh Babu M. 2022. "Predictors of the utilisation of continuum of maternal health care services in India." *BMC Health Serv Res*. May 5;22(1):602.

Ganguly, S., Chakraborty D, Goswami DN. 2020. "A retrospective study on adverse obstetric outcomes in HIV-infected pregnancy in West Bengal, India." *HIV AIDS Rev.* 9(1):39–42.

Garg, S., Dewangan M, Barman O. 2020. "Malaria prevalence in symptomatic and asymptomatic pregnant women in a high malaria-burden state in India." *Trop Med Health* [Internet]. 48(1). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090012960&doi=10.1186%2fs41182-020-00259-y&partnerID=40&md5=0e48cb655708a3aa35a17aaef5bbe1a8

Gaur, K., Shukla A, Acharya R. 2022. "Association between the place of abortion and post-abortion contraceptive adoption and continuation: the case of India." *Sex Reprod Health Matters*. Jan 1;29(2):1966983.

Geller, S.E., Goudar SS, Adams MG, Naik VA, Patel A, Bellad MB, et al. 2008. "Factors associated with acute postpartum hemorrhage in low-risk women delivering in rural India." *Int J Gynecol Obstet*. Apr;101(1):94–9.

George, A. 2007. "Persistence of High Maternal Mortality in Koppal District, Karnataka, India: Observed Service Delivery Constraints." *Reprod Health Matters*. Jan;15(30):91–102.

George, A.S., Mohan D, Gupta J, LeFevre AE, Balakrishnan S, Ved R, et al. 2018. "Can community action improve equity for maternal health and how does it do so? Research findings from Gujarat, India." *Int J Equity Health.* Aug 20;17(1):125.

George, M., Johnson A, Thimmaiah S. 2022. "Prevalence and determinants of antepartum psychiatric disorders: A cross-sectional study in 25 villages of Sarjapur PHC area, Bangalore Urban district." *Indian J Soc Psychiatry.* 38(3):264–9.

Gera, R., Muthusamy N, Bahulekar A, Sharma A, Singh P, Sekhar A, et al. 2015. "An in-depth assessment of India's Mother and Child Tracking System (MCTS) in Rajasthan and Uttar Pradesh." *BMC Health Serv Res.* Aug 11;15(1):315.

Gopalakrishnan, N., Dhanapriya J, Muthukumar P, Sakthirajan R, Dineshkumar T, Thirumurugan S, et al. 2015. "Acute kidney injury in pregnancy--a single center experience." *Ren Fail.* 37(9):1476–80.

Guin, G., Shaw K, Khare S. 2012. "Placental Malaria Prevalence of Infestation amongst Febrile Pregnant Women in Central India: Maternal and Perinatal Outcome." *J Obstet Gynecol India.* Feb 1;62(1):25–31.

Gupta, A., Jain P, Venkatesh V, Agarwal A, Reddy DH, Jain A. 2021. "Prevalence of Dengue, Chikungunya, and Zika Viruses in Febrile Pregnant Women: An Observational Study at a Tertiary Care Hospital in North India." *Am J Trop Med Hyg*. Oct 4;106(1):168–73.

Gupta, A., Nayak U, Ram M, Bhosale R, Patil S, Basavraj A, et al. 2007. "Postpartum Tuberculosis Incidence and Mortality among HIV-Infected Women and Their Infants in Pune, India, 2002-2005*." Clin Infect Dis.* Jul 15;45(2):241–9.

Gupta, H., Gandotra N, Mahajan R. 2021. "Profile of Obstetric Patients in Intensive Care Unit: A Retrospective Study from a Tertiary Care Center in North India." *Indian J Crit Care Med Peer-Rev,* Off Publ Indian Soc Crit Care Med. Apr;25(4):388–91.

Gupta, H., Gandotra N, Mahajan R. 2021. "Profile of obstetric patients in intensive care unit: A retrospective study from a tertiary care centre in North India*." Indian J Crit Care Med*. 25(4):388–91.

Gupta, M., Angeli F, Bosma H, Prinja S, Kaur M, Van Schayck OCP. 2017. "Utilisation of Intergovernmental Funds to Implement Maternal and Child Health Plans of a Multi-Strategy Community Intervention in Haryana, North India: A Retrospective Assessment." *PharmacoEconomics - Open*. 2017 Dec;1(4):265–78.

Gupta, P., Iyengar SD, Ganatra B, Johnston HB, Iyengar K. 2017. "Can community health workers play a greater role in increasing access to medical abortion services? A qualitative study." *BMC Womens Health.* Dec;17(1):37.

Gupta, P., Kumar S, Sharma SS. 2021. "SARS□CoV□2 prevalence and maternal□perinatal outcomes among pregnant women admitted for delivery: Experience from COVID□19□ dedicated maternity hospital in Jammu, Jammu and Kashmir (India)." *J Med Virol.* Sep;93(9):5505–14.

Gupta, S., Chakraborty U, Chandra A, Dutta A, Pal J, Ray BK, et al. 2022. "Spectrum of Neurological Illnesses in Pregnancy – An Observational Study from a Tertiary Care Centre of Eastern India." *J Assoc Physicians India.* 70(5):91–5.

Gupta, Y., Kapoor D, Desai A, Praveen D, Joshi R, Rozati R, et al. 2017. "Conversion of gestational diabetes mellitus to future Type 2 diabetes mellitus and the predictive value of HbA1c in an Indian cohort"*. Diabet Med J Br Diabet Assoc.* Jan;34(1):37–43.

Gupte, M., Badewar S, Pisal H. *Women's Perspectives on the Quality of Health and Reproductive Health Care: Evidence from Rural Maharashtra. In: Improving Quality of Care in India's Family Welfare Programme* [Internet]. New York: Population Council; 1999 [cited 2023 Sep 29]. http://www.cehat.org/cehat/uploads/files/a104.pdf

Halder, A., Vijayselvi R, Jose R. 2015. "Changing perspectives of infectious causes of maternal mortality." *J Turk Ger Gynecol Assoc.* 16(4):208–13.

Halli, S.S., Khan CGH, Shah I, Washington R, Isac S, Moses S, et al. 2015. "Pregnancy wastage among HIV infected women in a high HIV prevalence district of India." *BMC Public Health* [Internet]. 15(1). https://www.scopus.com/inward/record.uri?eid=2-s2.0-84933518981&doi=10.1186%2fs12889-015-1965-1&partnerID=40&md5=fef68ca9dc00ecb3db6d3153677d06ea

Hamer, D.H., Singh MP, Wylie BJ, Yeboah-Antwi K, Tuchman J, Desai M, et al. 2009. "Burden of malaria in pregnancy in Jharkhand State, India." *Malar J.* Sep 3;8(1):210.

Hiwale, A.J., Das KC. 2022. "Geospatial differences among natural regions in the utilization of maternal health care services in India." *Clin Epidemiol Glob Health* [Internet]. Mar 1 [cited 2023 Oct 1];14. https://cegh.net/article/S2213-3984(22)00019-7/fulltext

Holla, R., Kanchan T, Unnikrishnan B, Kotian MS, Kumar N, Thapar R, et al. 2014. "Profile of women seeking medical termination of pregnancy in South India." *Int J Gynecol Obstet*. Jun;125(3):253–5.

Horwood, G., Opondo C, Choudhury SS, Rani A, Nair M. 2020. "Risk factors for maternal mortality among 1.9 million women in nine empowered action group states in India: secondary analysis of Annual Health Survey data." *BMJ Open*. 10(8):e038910.

Huang, V.S., Morris K, Jain M, Ramesh BM, Kemp H, Blanchard J, et al. 2020. "Closing the gap on institutional delivery in northern India: a case study of how integrated machine learning approaches can enable precision public health." *BMJ Glob Health*. Oct;5(10):e002340.

Human Rights Law Network. 2016. "Women's experience with post-partum intra-uterine contraceptive device fact-finding: Delhi." https://slic.org.in/uploads/2018/02/Coercive-IUD-2016.pdf

Iyengar, K., Iyengar SD. 2016. "Improving access to safe abortion in a rural primary care setting in India: experience of a service delivery intervention." *Reprod Health.* Dec;13(1):54.

Iyengar, K., Klingberg Allvin M, Iyengar SD, Paul M, Essén B, Gemzell□Danielsson K. 2016. "Home use of misoprostol for early medical abortion in a low resource setting: secondary analysis of a randomized controlled trial." *Acta Obstet Gynecol Scand*. Feb;95(2):173–81.

Iyengar, K., Yadav R, Sen S. 2012. "Consequences of maternal complications in women's lives in the first postpartum year: a prospective cohort study." *J Health Popul Nutr*. Jun;30(2):226–40.

Iyengar, K 2012. "Early postpartum maternal morbidity among rural women of Rajasthan, India: a community-based study." *J Health Popul Nutr*. Jun;30(2):213–25.

Jain, K., Gupta P, Balodhi A, Deeba F, Salam N. 2022. "Prevalence of Pregnancy Associated Malaria in India." *Front Glob Womens Health* [Internet]. 3. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85144718227&doi=10.3389%2ffgwh.2022.832880&partnerID=40&md5=c1a6b1c5bc878d748a586e1ec2de706f

Jain, S., Varshney K, Vaid NB, Guleria K, Vaid K, Sharma N. 2017. "A hospital-based study of intimate partner violence during pregnancy." *Int J Gynaecol Obstet Off Organ Int Fed Gynaecol Obstet*. Apr;137(1):8–13.

Jain, Y., Chaudhary T, Joshi CS, Chotiya M, Sinha B, Nair TS, et al. 2022. Improving quality of intrapartum and immediate postpartum care in public facilities: experiences and lessons learned from Rajasthan state, India. *BMC Pregnancy Childbirth*. Jul 23;22(1):586.

Jashnani, K.D., Rupani AB, Wani RJ. "Maternal mortality: an autopsy audit." 2009. *J Postgrad Med.*55(1):12–6.

Jat, T.R., Deo PR, Goicolea I, Hurtig AK, Sebastian MS. 2015. "Socio-cultural and service delivery dimensions of maternal mortality in rural central India: A qualitative exploration using a human rights lens." *Glob Health Action* [Internet]. 8(1). https://www.scopus.com/inward/record.uri?eid=2-s2.0-84930623824&doi=10.3402%2fgha.v8.24976&partnerID=40&md5=c2309d8aa44c7caa1d5f290a8acc8db8

Jat, T.R., Ng N, San Sebastian M. 2011. "Factors affecting the use of maternal health services in Madhya Pradesh state of India: a multilevel analysis." *Int J Equity Health*. Dec 5;10(1):59.

Jejeebhoy, S.J., Kalyanwala S, Zavier AJF, Kumar R, Jha N. 2010. "Experience seeking abortion among unmarried young women in Bihar and Jharkhand, India: delays and disadvantages." *Reprod Health Matters*. Jan;18(35):163–74.

Jena, P., Sheela CN, Venkatachala RP, Devarbhavi H. 2017. "Obstetric Outcome in Women with Chronic Liver Disease. J Obstet Gynaecol India." Aug;67(4):263–9.

Jha, P., Kesler MA, Kumar R, Ram F, Ram U, Aleksandrowicz L, et al. 2011. "Trends in selective abortions of girls in India: analysis of nationally representative birth histories from 1990 to 2005 and census data from 1991 to 2011." *The Lancet*. Jun;377(9781):1921–8.

Joe, W., Perkins JM, Kumar S, Rajpal S, Subramanian SV. 2018. "Institutional delivery in India, 2004-14: unravelling the equity-enhancing contributions of the public sector*." Health Policy Plan*. Jun 1;33(5):645–53.

Jungari, S., Paswan B. 2019. "What does he know about her, and how does it affect her? Husband's knowledge of pregnancy complications and maternal health care utilization among tribal population in Maharashtra, India." *BMC Pregnancy Childbirth*. Feb 13;19(1):70.

Jungari, S., Sharma B, Wagh D. 2021. "Beyond Maternal Mortality: A Systematic Review of Evidences on Mistreatment and Disrespect During Childbirth in Health Facilities in India. *Trauma Violence Abuse*." Oct;22(4):739–51.

Kalra, H., Tran TD, Romero L, Chandra P, Fisher J. 2021. "Prevalence and determinants of antenatal common mental disorders among women in India: a systematic review and meta-analysis." *Arch Womens Ment Health.* Feb;24(1):29–53.

Kant, S., Kaur R, Goel AD, Malhotra S, Haldar P, Kumar R. 2018. "Anemia at the time of delivery and its association with pregnancy outcomes: A study from a secondary care hospital in Haryana, India." *Indian J Public Health.* 2018;62(4):315–8.

Kant, S., Srivastava R, Rai SK, Misra P, Charlette L, Pandav CS. 2015. "Induced abortion in villages of Ballabgarh HDSS: rates, trends, causes and determinants*." Reprod Health*. Dec;12(1):51.

Kapadia, S.N., Mehta A, Mehta CR, Soni ST, Joharwal N, Dixit M, et al. 2021. "Study of pregnancy with covid-19 and its clinical outcomes in a tertiary care teaching hospital in Western India." *J SAFOG*. 13(2):125–30.

Karvande, S., Sonawane D, Chavan S, Mistry N. 2016. "What does quality of care mean for maternal health providers from two vulnerable states of India? Case study of Bihar and Jharkhand." *J Health Popul Nutr*. Feb 20;35:6.

Kathpalia, S.K. 2016. "Acceptance of family planning methods by induced abortion seekers: An observational study over five years." *Med J Armed Forces India*. Jan;72(1):8–11.

Kathpalia, S.K. 2016. "Emergency contraception: Knowledge and practice among women and the spouses seeking termination of pregnancy." *Med J Armed Forces India*. Apr;72(2):116–9.

Kaul, A., Bhaduaria D, Pradhan M, Jain M, Prasad N, Patel M, et al. 2021. "Feto-maternal and renal outcomes of nephrotic syndrome in pregnancy*." Saudi J Kidney Dis Transplant*. 32(5):1397–406.

Kanougiya, S., M. Sivakami, N. Daruwalla, et al. 2022. "Prevalence, Pattern, and Predictors of Formal Help-seeking for Intimate Partner Violence Against Women: Findings from India's Cross-sectional National Family Health Surveys-3 (2005-06) and 4 (2015-16), BMC Public Health, 22, 2386. https://doi.org/10.1186/s12889-022-14650-3

Keepanasseril, A., Gupta A, Ramesh D, Kothandaraman K, Jeganathan YS, Maurya DK. 2020. "Maternal–fetal outcome in pregnancies complicated with non-cirrhotic portal hypertension: experience from a Tertiary Centre in South India*." Hepatol Int.* Sep 1;14(5):842–9.

Keepanasseril, A., Pillai A, Yavanasuriya J, Raj A, Satheesh S, Kundra P. 2019. "Outcome of pregnancies in women with pulmonary hypertension: a single□centre experience from South India." *BJOG Int J Obstet Gynaecol***.** Aug;126(S4):43–9.

Keskar, M., Nagonkar A, Tambe M, Soundale S, Thite G. 1996. "Life-time maternal mortality risk: A coomunity-based study by sisterhood method." *J Obstet Gynaecol India*. 207–11.

Kesterton, A.J., Cleland J, Sloggett A, Ronsmans C. 2010. "Institutional delivery in rural India: the relative importance of accessibility and economic status." *BMC Pregnancy Childbirth*. Jun 6;10(1):30.

Khanna, D., Singh JV, Agarwal M, Kumar V. 2019. "Bio-social characteristics as determinants of maternal death: A community based case-control study." *Indian J Public Health Res Dev*. 10(8):23–7.

Kotta, S., Molangur U, Bipeta R, Ganesh R. 2018. "A cross-sectional study of the psychosocial problems following abortion." *Indian J Psychiatry*. 60(2):217–23.

Koul, P.A., Bali NK, Mir H, Jabeen F, Ahmad A. 2016. "Influenza Illness in Pregnant Indian Women: A Cross-Sectional Study." *Infect Dis Obstet Gynecol* [Internet]. https://www.scopus.com/inward/record.uri?eid=2-s2.0-84958580920&doi=10.1155%2f2016%2f1248470&partnerID=40&md5=42ab10658700f5ea8d2d973cf8941550

Kragelund, Nielsen K., Damm P, Kapur A, Balaji V, Balaji MS, Seshiah V, et al. 2016. "Risk Factors for Hyperglycaemia in Pregnancy in Tamil Nadu, India." *PloS One.* 11(3):e0151311.

Krishna, Kumar M., Joshi A, Saraswat M, Jose T, Kapoor R, Saha M, et al. 2022. "Near-Miss Incidents in Obstetric Patients Admitted to an Intensive Care Unit of a Tertiary Care Center in Eastern India: A Retrospective Cohort Study." *J Obstet Gynaecol India*. Aug; 72(Suppl 1):89–95.

Kulkarni, R., Chauhan S, Daver R, Nandanwar Y, Patil A, Bhosale A. 2016. "Prospective observational study of near□miss obstetric events at two tertiary hospitals in Mumbai, Maharashtra, India." *Int J Gynecol Obstet.* Feb;132(2):170–3.

Kumar, A., Singh A. 2016. "Explaining the gap in the use of maternal healthcare services between social groups in India." *J Public Health Oxf Engl*. Dec 2;38(4):771–81.

Kumar, G., Choudhary TS, Srivastava A, Upadhyay RP, Taneja S, Bahl R, et al. 2019. Utilisation, equity and determinants of full antenatal care in India: analysis from the National Family Health Survey 4. *BMC Pregnancy Childbirth*. Dec;19(1):327.

Kumar, G., RSR. 2022. Availability of public health facilities and utilization of maternal and child health services in districts of India. *Clin Epidemiol Glob Health*. May 1;15:101070.

Kumar, M., Singh A, Garg R, Goel M, Ravi V. 2021. "Hypertension during pregnancy and risk of stillbirth: challenges in a developing country." *J Matern-Fetal Neonatal Med* Off J Eur Assoc Perinat Med Fed Asia Ocean Perinat Soc Int Soc Perinat Obstet. 2021 Dec;34(23):3915–21.

Kumar, N., Singh AK. 2019. "Maternal serum uric acid as a predictor of severity of hypertensive disorders of pregnancy: A prospective cohort study." *Curr Hypertens Rev*. 15(2):154–60.

Kumar, P., Shah P, Gupta M, Arya S, Chaudhary V, Gupta P, et al. Why Anemia is still a Challenge in Pregnant Women in India? J South Asian Fed Obstet Gynaecol. 2022 Nov 16;14(5):563–7.

Kumar, P., Srivastava S, Maurya C, Dhillon P. An assessment of the role of socio-economic, maternal and service utilization factors in increasing self-reported maternal complications in India. *BMC Pregnancy Childbirth*. 2021 Jul 21;21(1):519.

Kumar, R., Tewari A. "Near-Miss obstetric events" and its clinico-social correlates in a secondary referral unit of Burdwan District in West Bengal. *Indian J Public Health.* 2018 Jul 1;62:235.

Kumari, N., Kathirvel S, Arora A, Jain V, Sikka P. Pattern of non-communicable diseases during pregnancy and their effect on feto-maternal outcome: A prospective observational study. *Int J Gynaecol Obstet* Off Organ Int Fed Gynaecol Obstet. 2022 Feb;156(2):331–5.

Kumari, R., Dalal V, Kachhawa G, Sahoo I, Khadgawat R, Mahey R, et al. Maternal and perinatal outcome in gestational diabetes mellitus in a Tertiary Care Hospital in Delhi. *Indian J Endocrinol Metab*. 2018;22(1):116–20.

Kurian, S., Mathews M, Reshmi VP, Divakaran B, Ajith S. Impact of diabetes on the severity of COVID-19 infection in pregnant women - A single-center descriptive study. *Diabetes Metab Syndr Clin Res Rev*. 2022 Jan 1;16(1):102362.

Lakhute, S., Kendre V, DIxit J. A study of epidemiological factors in antenatal mothers with pregnancy-induced hypertension at the tertiary care hospital. *Med J Dr Patil Vidyapeeth.* 2021;52–6.

Mahadik, K., Choudhary P, Roy PK. Study of thyroid function in pregnancy, its feto-maternal outcome; a prospective observational study. *BMC Pregnancy Childbirth.* 2020 Dec 10;20(1):769.

Mahajan, N.N., Ansari M, Gaikwad C, Jadhav P, Tirkey D, Pophalkar MP, et al. 2021. Impact of SARS-CoV-2 on multiple gestation pregnancy. *International Journal of Gynecology*

and Obstetrics.152(2):220–5.

Mahajan, N.N., Kesarwani S, Salunke C, Kumbhar P, Yenkure P, Shaikh J, et al. 2022. "Clinical presentation, pregnancy complications, and outcomes of pregnant women with COVID □19 during the Omicron□dominant third wave in Mumbai, India." *International Journal of Gynecology and Obstetrics*. Dec;159(3):968–73.

Mahajan, N.N., Pophalkar M, Patil S, Yewale B, Chaaithanya IK, Mahale SD, et al. 2021. "Pregnancy Outcomes and Maternal Complications During the Second Wave of Coronavirus Disease 2019 (COVID-19) in India." *Obstetrics and Gynecology*. Oct;138(4):660–2.

Mahajan, N.N., Pophalkar M, Patil S, Yewale B, Chaaithanya IK, Mahale SD, et al. 2021. "Pregnancy Outcomes and Maternal Complications During the Second Wave of Coronavirus Disease 2019 (COVID-19) in India." *Obstetrics and Gynecology*. 138(4):660–2.

Maity, S., Chaudhuri S. An observational study on maternal mortality and maternal near miss in a selected facility of West Bengal*. Indian J Public Health*. 2022;66(3):371–4.

Makwana, T., Takkar B, Venkatesh P, Sharma JB, Gupta Y, Chawla R, et al. 2018. "Prevalence, progression, and outcomes of diabetic retinopathy during pregnancy in Indian scenario." *Indian Journal of Ophthalmology.* Apr;66(4):541–6.

Mansuri, F., Mall A. 2019. " Analysis of Maternal Near Miss at Tertiary Level Hospitals, Ahmedabad: A Valuable Indicator for Maternal Health Care." *Indian Journal of Community Medicine* Off Publ Indian Assoc Prev Soc Med. 44(3):217–21.

Marwah, S., Dabral A, Bhagwati NM, Panwar S, Malik S, Gupta N. 2022. "Preeclampsia in COVID-19: A Masquerading Errant—An Exploration of Foeto-Maternal Outcome from a Tertiary Care Hospital In India." *Journal of Obstetrics and Gynecology India.* Aug 1;72(1):204–8.

Mavalankar, D.V., Vora KS, Ramani KV, Raman P, Sharma B, Upadhyaya M. 2009. "Maternal Health in Gujarat, India: A Case Study." *Journal of Health and Popul Nutrition*. Apr;27(2):235–48.

McFadden, A., Gupta S, Marshall JL, Shinwell S, Sharma B, McConville F, et al. 2020. "Systematic review of barriers to, and facilitators of, the provision of high-quality midwifery services in India." *Birth Berkeley Calif.* Dec;47(4):304–21.

Meh, C., Sharma A, Ram U, Fadel S, Correa N, Snelgrove JW, et al. 2022. "Trends in maternal mortality in India over two decades in nationally representative surveys." *BJOG International Journal of Obstetrics and Gynaecology.* 129(4):550–61.

Mishra, P.S., Pautunthang N, Marbaniang SP, N AK. 2020. "Geographical divide led inequality in accessing maternal healthcare services between hills and valley regions of Manipur state, India." *Clinical Epidemiology and Global Health* [Internet].11. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85114522879&doi=10.1016%2fj.cegh.2021.100744&partnerID=40&md5=8ec39f710dd3d06682819227635ba226

Mishra, S., Natu N, Chandwaskar N, Dhakar BPS, Kosta S. 2022. "Comparative Study of Maternal Mortality in SARS-CoV-2 Infected Pregnant Women in the First and Second Waves of COVID-19 Pandemic in Tertiary Care at Madhya Pradesh, India." *J SAFOG*. 14(4):400–3.

Mittal, P., Kapoor G, Bajaj B. 2019. "Maternal mortality at a tertiary care hospital in north India: A 4 year review." *Indian Journal of Public Health Res Dev.*10(7):11–6.

Modi, D., Dholakia N, Gopalan R, Venkatraman S, Dave K, Shah S, et al. 2019. "Health intervention 'ImTeCHO' to improve delivery of maternal, neonatal, and child care services-A cluster-randomized trial in tribal areas of Gujarat, India." *PLoS Med*. Oct;16(10):e1002939.

Mohan, M.A., Chandrakumar A. Evaluation of prevalence and risk factors of gestational diabetes in a tertiary care hospital in Kerala. *Diabetes Metab Syndr*. 2016;10(2):68–71.

Mustafa, A., Shekhar C. Contrast in utilization of maternal and child health services between Himalayan region and rest of India: Evidence from National Family Health Survey (2015–16). *BMC Pregnancy Childbirth*. 2021 Sep 5;21(1):606.

Muthu, V., Agarwal R, Dhooria S, Prasad KT, Aggarwal AN, Suri V, et al. 2019. "Epidemiology, lung mechanics and outcomes of ARDS: A comparison between pregnant and non-pregnant subjects." *Journal of Critical Care.* 50:207–12.

Nagraj, S., Hinton L, Praveen D, Kennedy S, Norton R, Hirst J. 2019. "Women's and healthcare providers' perceptions of long□term complications associated with hypertension and diabetes in pregnancy: a qualitative study. BJOG *International Journal of Obstetrics and Gynaecology*. Aug;126(S4):34–42.

Naik, S., Robinson ML, Alexander M, Chandanwale A, Sambarey P, Kinikar A, et al. 2020. "Intensified short symptom screening program for dengue infection during pregnancy, India." *Emerg Infect Dis.* 26(4):738–43.

Nair, M., Choudhury MK, Choudhury SS, Kakoty SD, Sarma UC, Webster P, et al. 2016. "Association between maternal anaemia and pregnancy outcomes: A cohort study in Assam, India." *BMJ Global Health* [Internet]. 1(1). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85063023994&doi=10.1136%2fbmjgh-2015-000026&partnerID=40&md5=a7656cd46afb7590a946a3e459e73d9d

Nanavati, R., Mayadeo N, Goyal M, Mascarenhas D, Shah J, Ranadive A. 2022. "Perinatal COVID-19 Infection and Outcomes: A Retrospective Observational Study from a Low–Middle Income Setting." *Journal of South Asian Fed Obstetris and Gynaecology*. Aug 22;14(4):374–80.

Nayak, H., Gadhavi R, Solanki B, Aroor B, Gameti H, Shringarpure KS, et al. Screening for gestational diabetes, Ahmedabad, India. *Bull World Health Organ*. 2022;100(8):484–90.

Nayak, K.C., Khatri MP, Gupta BK, Sirohi P, Choudhary V, Verma SK, et al. Spectrum of vivax malaria in pregnancy and its outcome: a hospital-based study. *J Vector Borne Dis*. 2009 Dec;46(4):299–302.

Nazir, T., Amin R, Maqbool M. 2022. "Emotional difficulties in pregnant females who tested positive for COVID-19: A cross-sectional study from South Kashmir, India." *Journal of Educational Health Promotion*.11(1):13.

Nyblade, L., Edmeades J, Pearson E. 2010. "Self-Reported Abortion-Related Morbidity: A Comparison of Measures in Madhya Pradesh, India." *International Perspectives on Sexual Reproductive Health*. 36(3):140–8.

Panda, S.R., Jain M, Jain S. 2018. "Clinical Profile of Obstetric Patients Getting Admitted to ICU in a Tertiary Care Center Having HDU Facility: A Retrospective Analysis." *Journal of Obstetrics and Gynaecolology India.* Dec;68(6):477–81.

Pandher, D.K., Sehgal A, Aggarwal N. 2015. "Frequency, Indications and Maternal Outcome in Obstetric Hysterectomy in a Tertiary Care Centre in India" [Internet]. [cited 2023 Sep 21]. https://www.jkscience.org/archives/3-Original%20Articlejan.pdf

Parmar, N.T., Parmar AG, Mazumdar VS. 2016. "Incidence of Maternal 'Near-Miss' Events in a Tertiary Care Hospital of Central Gujarat, India." *Journal of Obstetrics and Gynaecology India*. Oct; 66(Suppl 1):315–20.

Patel, A., Prakash AA, Das PK, Gupta S, Pusdekar YV, Hibberd PL. Maternal anemia and underweight as determinants of pregnancy outcomes: cohort study in eastern rural Maharashtra, India. *BMJ Open*. 2018 Aug 8;8(8):e021623.

Patel, A.B., Prakash AA, Raynes-Greenow C, Pusdekar YV, Hibberd PL. Description of inter-institutional referrals after admission for labor and delivery: a prospective population based cohort study in rural Maharashtra, India. *BMC Health Serv Res.* 2017 Dec;17(1):360.

Patel, L., Bennett TA, Halpern CT, Johnston HB, Suchindran CM. Support for provision of early medical abortion by mid-level providers in Bihar and Jharkhand, India. *Reprod Health Matters.* 2009 Jan;17(33):70–9.

Patel, P., Das M, Das U. The perceptions, health-seeking behaviours and access of Scheduled Caste women to maternal health services in Bihar, India. *Reprod Health Matters*. 2018 Nov 8;26(54):114–25.

Paul, M., Essén B, Sariola S, Iyengar S, Soni S, Klingberg Allvin M. Negotiating Collective and Individual Agency: A Qualitative Study of Young Women's Reproductive Health in Rural India. *Qual Health Res*. 2017 Feb;27(3):311–24.

Percher, J., Saxena M, Srivastava A, Diamond-Smith N. Differential treatment in the provision of medication abortion at pharmacies in Uttar Pradesh, India. *AJOG Glob Rep*. 2021 Nov;1(4):100025.

Prakash, J., Ganiger VC, Prakash S, Iqbal M, Kar DP, Singh U, et al. Acute kidney injury in pregnancy with special reference to pregnancy-specific disorders: a hospital based study (2014–2016). *J Nephrol*. 2018 Feb 1;31(1):79–85.

Prakash, J., Pant P, Singh AK, Sriniwas S, Singh VP, Singh U. Renal cortical necrosis is a disappearing entity in obstetric acute kidney injury in developing countries: our three decade of experience from India. *Ren Fail.* 2015 Aug 9;37(7):1185–9.

Pratiksha, A., Pawar, Shrotri A. Maternal morbidity due to massive obstetric haemorrhage. . Obstet Gynecol of Ind. 1997 Feb;47(18):18–22.

Priyadarshini, S., Rath SK, Verma C, Das A. Poorer Obstetrics Outcomes During the Second Wave of COVID-19 in India. *J Obstet Gynecol India*. 2022;72(5):402–8.

Pyne, S., Ravindran TKS. Availability, Utilization, and Health Providers' Attitudes Towards Safe Abortion Services in Public Health Facilities of a District in West Bengal, India. Womens Health Rep. 2020 Jan 3;1(1):80–8.

Radovich, E., Chaudhry M, Penn-Kekana L, Raju KRK, Mishra A, Vallabhuni R, et al. 2022. "Measuring the quality of antenatal care in a context of high utilisation: evidence from Telangana, India.: *BMC Pregnancy Childbirth* [Internet]. 2022;22(1). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85142499669&doi=10.1186%2fs12884-022-05200-1&partnerID=40&md5=9dcc0a4f768ba24f08bc3c5d64c76dd7

Raghavan, V., Khan HA, Seshu U, Rai SP, Durairaj J, Aarthi G, et al. 2021. "Prevalence and risk factors of perinatal depression among women in rural Bihar: A community-based cross-sectional study." *Asian Journal of Psychiatry* [Internet]. 56. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099302243&doi=10.1016%2fj.ajp.2021.102552&partnerID=40&md5=c282d24599c3d17afd74353bba60b52f

Rahaman, M., Das P, Chouhan P, Das KC, Roy A, Kapasia N. 2022. "Examining the rural-urban divide in predisposing, enabling, and need factors of unsafe abortion in India using Andersen's behavioral model." *BMC Public Health.* Aug 5;22(1):1497.

Rajan, M., Sachan S, Abhinay A, Verma B. 2022. "Maternal and fetal outcomes of COVID-19 infection in pregnant women with chronic rheumatic heart disease in a South Asian population: A case series, *Journal of Obstetrics and Gynaecology Research*. June;48(6):1480–3.

Rajbangshi, P.R., Nambiars D, Srivastava A. 2022. "'We wish to have good medical care': Findings from a qualitative study on reproductive and maternal health of internally displaced women in India." *Sex Reprodtive Health Matters* [Internet],29(2). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85129212059&doi=10.1080%2f26410397.2022.2059324&partnerID=40&md5=1a647dee4092d61cd9e21cfc5f21d6c6

Ramachandar, L., Pelto PJ. 2004. Abortion Providers and Safety of Abortion: A Community-Based Study in a Rural District of Tamil Nadu, India. *Reprod Health Matters.* Jan;12(-sup24):138–46.

Ramachandar, L., Pelto PJ. 2005. Medical Abortion in Rural Tamil Nadu, South India: A Quiet Transformation. *Reprod Health Matters.* Jan;13(26):54–64.

Ramachandar, L., Pelto PJ. 2002. "The Role of Village Health Nurses in Mediating Abortions in Rural Tamil Nadu, India." *Reproductive Health Matters*. Jan;10(19):64–75.

Ramani, K.V., Mavalankar DV, Govil D. 2009. Study of Blood-transfusion Services in Maharashtra and Gujarat States, India. *Journal of Health and Population Nutrition*. Apr;27(2):259–70.

Ramteke, S., Pajai SP. 1996. "A Study of Maternal Mortality in a Rural Medical College Hospital." *Journal of Obstetrics and Gynecology India*. 1996;77–82.

Randive, B., Chaturvedi S, Mistry N. 2012. Contracting in specialists for emergency obstetric care- does it work in rural India? *BMC Health Serv Res*. Dec 31;12(1):485.

Rane, T.M., Mahanta TG, Baruah M, Baruah SD. 2019. "Epidemiological study of maternal death in Assam." *Clinical Epidemiology Global Health*. 7(4):634–40.

Rural Women's Social Education Centre (RUWSEC). 2022."The Impact of COVID-19 on the Sexual, Reproductive Health and Rights of Rural Women and Girls in Chengalpattu District of Tamil Nadu." Unpublished report.

Rastogi, G., Sharma A. 2022. "Unwanted daughters: the unintended consequences of a ban on sex-selective abortions on the educational attainment of women." *Journal of Population Economics*. Oct;35(4):1473–516.

Rathod, A.D., Chavan RP, Bhagat V, Pajai S, Padmawar A, Thool P. 2016. "Analysis of near-miss and maternal mortality at tertiary referral centre of rural India." *Journal of Obstetrics and Gynecology India*. 6;66:295–300.

Roberts, L., Renati SJ, Solomon S, Montgomery S. 2021. "Stillbirth and infant death: mental health among low-income mothers in Mumbai." *BMC Pregnancy Childbirth*. April 10;21(1):292.

Rohilla, M., Raveendran A, Dhaliwal LK, Chopra S. 2010. "Severe anaemia in pregnancy: a tertiary hospital experience from northern India." *J Obstet Gynaecol J Inst Obstet Gynaecol*. 30(7):694–6.

Rustagi, R., Basu S, Garg S, Singh M, Mala Y. 2021. "Utilization of antenatal care services and its sociodemographic correlates in urban and rural areas in Delhi, India." *European Journal of Midwifery*. Sep 10;5(September):1–5.

Sagili, H., Krishna RS, Dhodapkar R, Keepanasseri A. 2022. "Maternal & perinatal outcome of fever in pregnancy in the context of dengue - A retrospective observational study." *Indian Journal of Med Res*. 156(4 & 5):619-23.

Sahai, S., Kiran R. Acute liver failure in pregnancy: Causative and prognostic factors. *Saudi J Gastroenterol.* 2015;21(1):30–4.

Sahai, S., Mishra V, Ganga D, Jatav OP. Viral hepatitis in pregnancy – A study of its effect on maternal and foetal outcome. *J Assoc Physicians India*. 2015;63(JAN):28–33.

Sahay, M., Priyashree null, Dogra L, Ismal K, Vali S. Pregnancy-related Acute Kidney Injury in Public Hospital in South India: Changing Trends. *J Assoc Physicians India*. 2022 Aug;70(8):11–2.

Sahoo, K.C., Doley C, Negi S, Das S, Verma P, Kanungo S, et al. Experiences of Urban Slum-Dwelling Women With Maternal and Child Health Services During COVID-19 Pandemic: A Multi-City Qualitative Study From India. *Int J Public Health*. 2022 Sep 20;67:1604348.

Saikia, N., Meh C, Ram U, Bora JK, Mishra B, Chandra S, et al. Trends in missing females at birth in India from 1981 to 2016: analyses of 2·1 million birth histories in nationally representative surveys. *Lancet Glob Health*. 2021 Jun;9(6):e813–21.

Sailaja, K. B., MK R. Critically Ill Obstetric Admissions to an Intensive Care Unit: A Prospective Analysis from a Tertiary Care University Hospital in South India. *Indian J Crit Care Med Peer-Rev* Off Publ Indian Soc Crit Care Med. 2019 Feb;23(2):78–82.

Saini, S., Chaudhury AR, Divyaveer S, Maurya P, Sircar D, Dasgupta S, et al. 2020. "The changing face of pregnancy-related acute kidney injury from eastern part of India: A hospital-based, prospective, observational study." *Saudi J Kidney Dis Transplant* Off Publ Saudi Cent Organ Transplant Saudi Arab. 2020;31(2):493–502.

Salve, P.S., Naikar SK, Golandaj JA, Hallad J. 2020. "Situational analysis of maternal death review in India: Evidence from health management information system." *Child*

Youth Serv Rev [Internet]. 119. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096653729&doi=10.1016%2fj.*childyouth*.2020.105723&partnerID=40&md5=b5e2c8d-4c42554665420ce3500596021

Sangeeta, G., Leena W, Taru G, Sushma K, Nupur G, Amrita P. 2015. "Evaluation of Severe Maternal Outcomes to Assess Quality of Maternal Health Care at a Tertiary Center." *J Obstet Gynecol India.* 65(1):23–

Santhakumar, A., Ganesh B, Malathi M, Nagaraj J, Manikandan N, Padmapriya VM, et al. 2017. "Confined vulnerability of HIV infection among pregnant women attending antenatal care clinics in Karnataka, India: Analysis of data from the HIV sentinel surveillance." *Clin Epidemiol Glob Health*. 2020;8(4):1127–33.

Sarna, A., Singh RJ, Duggal M, Chandra P, Reynolds N. 2019. "The prevalence and determinants of depression among HIV-positive perinatal women receiving antiretroviral therapy in India*.: Arch Womens Ment Health*. 22(3):399–404.

Saxena, M., Srivastava A, Dwivedi P, Bhattacharyya S. 2018. "Is quality of care during childbirth consistent from admission to discharge? A qualitative study of delivery care in Uttar Pradesh, India." *PLOS ONE*. September 27;13(9):e0204607.

Shah, S., Shinde A, Anand A, Modi D, Desai G, Bhatt H, et al. 2018. "The role of an mH ealth intervention in improving knowledge and skills of accredited social health activists in tribal areas of Gujarat, India: a nested study within an implementation research trial." *Acta Paediatr.* Dec;107(S471):72–9.

Sharma, G., Penn-Kekana L, Halder K, Filippi V. 2019. "An investigation into mistreatment of women during labour and childbirth in maternity care facilities in Uttar Pradesh, India: A mixed methods study." *Reprod Health*. January 23;16(1):7.

Sharma, K.A., Singh N, Hillman S, Mathur P, Yadav K, Garg A, et al. 2023. "Seroprevalence of SARS-CoV-2 antibodies among first-trimester pregnant women during the second wave of the pandemic in India*." Int J Gynaecol Obstet* Off Organ Int Fed Gynaecol Obstet. January;160(1):74–8.

Sharma, P., Marimuthu Y, Basu S, Sharma N, Mala YM, Nagappa B. 2021. "Intensified case finding for screening tuberculosis among antenatal women in Delhi, India; A facility-based prospective observational study." *Clin Epidemiol Glob Health* [Internet]. 12. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85110150253&doi=10.1016%2fj.cegh.2021.100816&partnerID=40&md5=05d0c975bdfe6f422acdeaeb4c732074

Sharma, S., Jaiswal AK, Singh RK, Kumar P, Mehra S. 2021. "Differential access to facilities for medical termination of pregnancy and delivery in India: A secondary analysis." *Clin Epidemiol Glob Health.* October;12:100825.

Shenoy, S., Shenoy KT. 1999. "Safe motherhood initiative in Kerala." *J Clin Epidemiol.* March;52:28S.

Shivalli, S., Gururaj N. 2015. "Postnatal depression among rural women in South India: do socio-demographic, obstetric and pregnancy outcome have a role to play?" *PloS One*. 10(4):e0122079.

Shriraam, V., Shah PB, Anitha Rani M, Sathiyasekaran BWC. 2019. "A community-based study of postpartum depression in rural Southern India." *Indian J Soc Psychiatry*.

35(1):64–8.

Siddaiah, A., Kant S, Haldar P, Rai SK, Misra P. 2018. "Maternal health care access among migrant women labourers in the selected brick kilns of district Faridabad, Haryana: Mixed method study on equity and access". *Int J Equity Health.* 2018 Nov 20;17(1):171.

Silverman, J.G., D. Balaiah, J. Ritter, A. Dasgupta, S.C. Boyce, M.R. Decker, et al. 2016. "Maternal morbidity associated with violence and maltreatment from husbands and in-laws: Findings from Indian slum communities." *Reproductive Health* [Internet]. 3(1). https://www.scopus.com/inward/record.uri?eid=2-s2.0-84986218294&doi=10.1186%2fs12978-016-0223-z&partnerID=40&md5=2fd65b9d71ce92b1d04becbe6ab9fe30

Singal, N., G. Setia, B.K. Taneja, and K.K. Singal. 2018. "Factors associated with maternal anaemia among pregnant women in rural India." *Bangladesh Journal of Medical Sciece*;17(4):583–92.

Singh, J., D. Soni, D. Mishra, H.P. Singh, and S. Bijesh. 2014. "Placental and neonatal outcome in maternal malaria." *Indian Pediatrics.* April 1;51(4):285–8.

Singh, L., R. Bubey, P.K. Singh, S. Nair, R.K. Rai, M.K. Vardhana Rao, et al. 2022. "Coverage of Quality Maternal and Newborn Healthcare Services in India: Examining Dropouts, Disparity and Determinants." Annual Global Health. 88(1):39.

Singh, L., Dubey R, Singh S, Goel R, Nair S, Singh P. 2019. "Measuring quality of antenatal care: a secondary analysis of national survey data from India." *BJOG Int J Obstet Gynaecol*. 26(S4):7–13.

Singh, N., Singh MP, Wylie BJ, Hussain M, Kojo YA, Shekhar C, et al. 2012. "Malaria prevalence among pregnant women in two districts with differing endemicity in Chhattisgarh, India." *Malar J.* August 10;11(1):274.

Singh, N., Tyagi S, Tripathi R, Mala YM. 2015. "Maternal and fetal outcomes in pregnant women with Takayasu aortoarteritis: Does optimally timed intervention in women with renal artery involvement improve pregnancy outcome?" *Taiwan J Obstet Gynecol*. October. 54(5):597–602.

Singh, P., Singh KK, Singh P. 2021. "Maternal health care service utilization among young married women in India, 1992–2016: Trends and determinants." *BMC Pregnancy Childbirth.* February 10;21(1):122.

Singh, P.K., R.K. Rai, M. Alagarajan, L. Singh. 2012. "Determinants of Maternity Care Services Utilization among Married Adolescents in Rural India." Z. A. Bhutta (Ed.). *PLoS ONE*. February 15;7(2):e31666.

Singh, R., M. Chaudhary, K. Shrivastava, B.V. Agarwal, S. Mitra. 2021. "Seroprevalence of Hepatitis B Infection among Antenatal Women in a Tertiary Care Center in Eastern UP and Assessment of the Associated High-risk Factors." *Journal of J SAFOG*. 13(6):378–81.

Singh, R., N. Hayaran, D. Nagar, A. Jain. 2018. "Spectrum of Neurological Complications in Eclampsia in a Tertiary Care Hospital in India." *Journal of Obstetrics and Gynaecology Canada.* Jul 1;40(7):876–82.

Singh, R., S.B. Neogi, A. Hazra, L. Irani, J. Ruducha, D. Ahmad, et al. 2019. "Utilisation of maternal health services and its determinants: a cross-sectional study among women in rural Uttar Pradesh, India." *Journal of Health and Population Nutrition.* May 27;38(1):13.

Singh, S., P. Doyle, O.M. Campbell, M. Mathew, G.V.S. Murthy. 2016. "Referrals between Public Sector Health Institutions for Women with Obstetric High Risk, Complications, or Emergencies in India – A Systematic Review." *PLOS ONE*. August 3;11(8):e0159793.

Singh, S., P. Doyle, O.M.R. Campbell, & G.V.S. Murthy. 2019. "Management and referral for high-risk conditions and complications during the antenatal period: knowledge, practice and attitude survey of providers in rural public healthcare in two states of India." *Reproductive Health*. Jul 10;16(1):100.

Singh, S., P. Doyle, O.M.R. Campbell, G.V.R. Rao, G.V. S. Murthy GVS. 2016. "Transport of pregnant women and obstetric emergencies in India: an analysis of the '108' ambulance service system data." *BMC Pregnancy Childbirth*. October 21;16(1):318.

Singh, S., R. Hussain, C. Shekhar, R. Acharya, M. Stillman, & A.M. Moore. 2020. "Incidence of treatment for postabortion complications in India, 2015." *BMJ Glob Health* [Internet]. 5(7). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089031472&doi=10.1136%2fbmjgh-2020-002372&partnerID=40&md5=bc0e1b44bdad28c63773b5846bf2b6cc

Singh, S., J.A. Kashyap, N. Chandhiok, V. Kumar, V. Singh, R. Goel, et al. 2018. "Labour & delivery monitoring patterns in facility births across five districts of India: A cross-sectional observational study." *Indian J Med Res.* September;148(3):309–16.

Singh, S., S. Mohakud, S. Naik, S.K. Jena, P. Sethi, & P. Nayak. 2021. "Predictors of posterior reversible encephalopathy syndrome in women with hypertension in pregnancy: A prospective observational study." *Pregnancy Hypertens*. March;23:191–95.

Singh, S., G.V.S. Murthy, A. Thippaiah, S. Upadhyaya, M. Krishna, R. Shukla, et al. 2015. "Community Based Maternal Death Review: Lessons Learned from Ten Districts in Andhra Pradesh, India." *Matern Child Health J*. 19(7):1447–54.

Singh, S., C. Shekhar, R. Acharya, A.M. Moore, M. Stillman, M.R. Pradhan, et al. 2018. "The incidence of abortion and unintended pregnancy in India, 2015." *Lancet Glob Health*. January 6(1):e111–20.

Sinha, B., N. Dudeja, S. Mazumder, T. Kumar, P. Adhikary, N. Roy, et al. 2022. "Estimating the Impact of COVID-19 Pandemic Related Lockdown on Utilization of Maternal and Perinatal Health Services in an Urban Neighborhood in Delhi, India." *Front Glob Womens Health.* March 29;3:816969.

Sk, M.I.K., B. Ali, M.M. Biswas, & M.K. Saha. 2022. "Disparities in three critical maternal health indicators amongst Muslims, vis-a-vis the results reflected on National Health Mission." *BMC Public Health.* February 9;22(1):266.

Sk, M.I.K., B. Paswan, A. Anand, P. Chowdhury, T.K. Naskar. 2020. "Deaths during pregnancy, childbirth and puerperium: Exploring causes, context and evidence from Eastern India." *J Obstet Gynaecol Res.*;46(11):2366–74.

Sk, M.I.K., B. Paswan, A. Anand, & N.A. Mondal. 2019. "Praying until death: Revisiting three delays model to contextualize the socio-cultural factors associated with maternal deaths in a region with high prevalence of eclampsia in India." *BMC Pregnancy Childbirth* [Internet].19(1). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85071610995&doi=10.1186%2fs12884-019-2458-5&partnerID=40&md5=6af9783e5c5e7807e0d55b9bb05c93c0

Solanke, D., Rathi C, Pandey V, Patil M, Phadke A, Sawant P. Etiology, clinical profile, and outcome of liver disease in pregnancy with predictors of maternal mortality: A prospective study from Western India. *Indian J Gastroenterol*. 2016;35(6):450–8.

Sood, R., Yorlets RR, Raykar NP, Menon R, Shah H, Roy N. The global surgery blood drought: frontline provider data on barriers and solutions in Bihar, India. *Glob Health Action*. 2019 Jan 1;12(1):1599541.

Sri, B.S., N S, Khanna R. An investigation of maternal deaths following public protests in a tribal district of Madhya Pradesh, central India. *Reprod Health Matters*. 2012 Jan;20(39):11–20.

Sri, .BS., Ravindran TKS. Medical abortion: Understanding perspectives of rural and marginalised women from rural South India. *Int J Gynecol Obstet* [Internet]. 2012 Sep [cited 2023 Sep 29];118(S1). https://obgyn.onlinelibrary.wiley.com/doi/10.1016/j.ijgo.2012.05.008

Srivastava, A., Singh D, Montagu D, Bhattacharyya S. Putting women at the center: a review of Indian policy to address person-centered care in maternal and newborn health, family planning and abortion. *BMC Public Health*. 2017 Jul 14;18(1):20.

Sudhinaraset, M., Beyeler N, Barge S, Diamond-Smith N. Decision-making for delivery location and quality of care among slum-dwellers: a qualitative study in Uttar Pradesh, India. *BMC Pregnancy Childbirth*. 2016 Jul 7;16(1):148.

Sundari, Ravindran T.K., Balasubramanian P. 2004. "Yes" to Abortion but "No" to Sexual Rights: The Paradoxical Reality of Married Women in Rural Tamil Nadu, India. *Reprod Health Matters.* Jan;12(23):88–99.

Sunil, B. 202.1Running an obstacle course: a qualitative study of women's experiences with abortion-seeking in Tamil Nadu, India. *Sex Reprod Health Matters*.;29(2):e1966218.

Suresh, S., Sharath BN, Anita S, Lalitha R, Prasad TJ, Rewari BB. 2016. TB-HIV co-infection among pregnant women in Karnataka, South India: A case series. *J Infect Public Health*.;9(4):465–70.

Swain, D., Parida SP, Jena SK, Das M, Das H. Prevalence and risk factors of obstetric fistula: Implementation of a need-based preventive action plan in a South-eastern rural community of India. *BMC Womens Health* [Internet]. 2020;20(1). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081292714&doi=10.1186%2fs12905-020-00906-w&partnerID=40&md5=1652c38d94e7f5af23de9c36dcf6f4d8

Tallapureddy, S., R. Velagaleti, H. Palutla, & C.V. Satti. 2017. "'Near-Miss' Obstetric events and maternal mortality in a Tertiary Care Hospital.' *Indian J Public Health*. 61(4):305–8.

Tanwar, R.S., D. Agarwal, R.K. Gupta, V. Rathore, P. Beniwal, P. Joshi, et al. 2018. "Characteristics and outcome of postpartum acute kidney injury requiring dialysis: A single-center experience from North India." *Saudi J Kidney Dis Transplant* (Off Publ Saudi Cent Organ Transplant Saudi Arab.) 29(4):837–45.

Tellapragada, C., V.K. Eshwara, P. Bhat, A. Kamath, S. Aletty, & C. Mukhopadhyay. 2017. "Screening of vulvovaginal infections during pregnancy in resource constrained settings: Implications on preterm delivery." *J Infect Public Health*;10(4):431–37.

Thakur, B., S. Kar, M. Pathak, & N. Thakur. 2019. "Public-private share in maternal health care services utilization in India: A multinomial logistic regression analysis from three consecutive survey data." *Clin Epidemiol Glob Health*. March 1;7(1):22–8.

Thakur, G., A. Arora, P. Sikka, & V. Jain. 2022. "Impact of covid 19 pandemic on severe maternal outcomes -An observational study from a referral institute of India." *Clin Epidemiol Glob Health*;17:101121.

Thind, A., A. Mohani, K. Banerjee, & F. Hagigi. 2008. "Where to deliver? Analysis of choice of delivery location from a national survey in India." *BMC Public Health*. January 24;8(1):29.

Tikka, S.K., S. Parial, A. Pattojoshi, A. Bagadia, C. Prakash, D. Lahiri D, et al. 2021. "Anxiety among pregnant women during the COVID-19 pandemic in India: A multicentric study." *Asian J Psychiatry*. December 66:102880.

Times of India (TOI) February 22, 2018. "At government hospitals, women being given IUDS without consent," Kolkotta. https://timesofindia.indiatimes.com/city/kolkata/at-government-hospitals-women-being-given-iuds-without-consent/articleshow/63021211.cms.

Times of India (TOI). November 26, 2021. "Woman claims GRH inserted IUD without her consent." http://timesofindia.indiatimes.com/articleshow/87918640.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst.

Toppo, M., D.K. Pal, D. Gour, V. Melwani, A. Khan, & S. Sethia. 2019. "Addressing maternal mortality in selected Districts of Madhya Pradesh, India: A human rights-based approach." *Indian J Community Med.*;44(2):138–41.

Tyagi, A., A. Luthra, M. Kumar & S. Das. 2018. "Epidemiology of acute kidney injury and the role of urinary [TIMP-2]·[IGFBP7]: A prospective cohort study in critically ill obstetric patients." *Int J Obstet Anesth*. November;36:77–84.

Unisa, S. 2016. "Pregnancies, Abortion and Women's Health in Rural Haryana, India Sutapa." 2016. *J Community Med Health Educ* [Internet, cited 2023 Sep 29];3(3). https://www.omicsonline.org/pregnancies-abortion-and-womens-health-in-rural-haryana-india-sutapa--2161-0711.1000207.php?aid=12429

Upadhyay, R.P., R. Chowdhury, Aslyeh Salehi , K. Sarkar, S.K. Singh, B. Sinha, et al. 2017. "Postpartum depression in India: a systematic review and meta-analysis." *Bull World Health Organ*. October 1;95(10):706-717C.

Vaishnav, S.B., B. Vaishnav, K.N. Desai, N.S. Raithatha, & N.S. Bose. 2016. "Critically ill obstetric patients requiring mechanical ventilation in rural western India: A retrospective analysis." *Natl Med J India.* 29(2):68–72.

Varghese, B., J. Krishnamurthy, B. Correia, R. Panigrahi, M. Washington, V. Ponnuswamy, et al. 2016. "Limited Effectiveness of a Skills and Drills Intervention to Improve Emergency Obstetric and Newborn Care in Karnataka, India: A Proof-of-Concept Study." *Glob Health Sci Pract.* December 23;4(4):582–93.

Varkey, P., P.P. Balakrishna, J.H. Prasad, S. Abraham, & A. Joseph. 2000. "The reality of unsafe abortion in a rural community in South India." *Reprod Health Matters*. January; 8(16):83–91.

Vasudeva, A., R.G. Bhat, A. Ramachandran, & P. Kumar. 2013. "Infection and acute respiratory distress syndrome during pregnancy: A case series of preventable maternal deaths from southern India." *J Infect Public Health*. February; 6(1):55–7.

Vellakkal, S., A. Gupta, Z. Khan, D. Stuckler, A. Reeves, S. Ebrahim, et al. 2017. "Has India's national rural health mission reduced inequities in maternal health services? A pre-post repeated cross-sectional study." *Health Policy Plan*. February 32(1):79–90.

Vellakkal, S., H. Reddy, A. Gupta, A. Chandran, J. Fledderjohann, & D. Stuckler. 2017. "A qualitative study of factors impacting accessing of institutional delivery care in the context of India's cash incentive program." *Soc Sci Med* . 2017 Apr;178:55–65.

Vidler, M., U. Ramadurg, U. Charantimath, G. Katageri, C. Karadiguddi, et al. 2016. "Utilisation of maternal health care services and their determinants in Karnataka State, India." *Reprod Health.* June;13(S1):37.

Vijayageetha, M., A.M.V. Kumar, J. Ramakrishnan, S. Sarkar, D. Papa, K. Mehta, et al. 2019. "Tuberculosis screening among pregnant women attending a tertiary care hospital in Puducherry, South India: Is it worth the effort?" *Global Health Action* [Internet]12(1). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85062091866&doi=10.1080%2f16549716.2018.1564488&partnerID=40&md5=6e71aa3c0ccc45c1661b8a2189a0747c

Williams, P.A., J. Poehlman, K. Moran, M. Siddiqui, I. Kataria, A.M. Rego, et al. 2020. "Strategies to address anaemia among pregnant and lactating women in India: a formative research study," *Public Health Nutrition*. Apr 23(5):795–805.

World Economic Forum, Gender Gap 2024. https://www.weforum.org/publications/global-gender-gap-report-2024/digest/

Yadav, A.K., P.K. Jena, B. Sahni, D. Mukhopadhyay. 2021. "Comparative study on maternal healthcare services utilisation in selected Empowered Action Group states of India." *Health Soc Care Community*. Nov;29(6):1948–59.

Yadav, A.K., B. Sahni, P.K. Jena, D. Kumar, & K. Bala. 2020. "Trends, Differentials, and Social Determinants of Maternal Health Care Services Utilization in Rural India: An Analysis from Pooled Data." *Womens Health Rep.* Jun 23;1(1):179–89.

Yadav, V., J.B. Sharma, G. Kachhawa, V. Kulshrestha, R. Mahey, R. Kumari R, et al. 2019. "Obstetrical and perinatal outcome in pregnant women with extrapulmonary tuberculosis." *Indian J Tuberc*. 66(1):158–62.

Yokoe, R., R. Rowe, S.S. Choudhury, A. Rani A, F. Zahir, & M. Nair. 2019. "Unsafe abortion and abortion-related death among 1.8 million women in India." *BMJ Glob Health* [Internet];4(3). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85065287859&doi=10.1136%2fbmjgh-2019-001491&partnerID=40&md5=62c7f9ed7424edb487fc5f04c91f018d

Zavier, A.J.F., S. Jejeebhoy, & S. Kalyanwala. 2012. "Factors associated with second-trimester abortion in rural Maharashtra and Rajasthan, India." *Glob Public Health*. Sep;7(8):897–908.

About ARROW

Asian-Pacific Resource and Research Centre for Women -ARROW is a regional and non-profit women's NGO based in Kuala Lumpur, Malaysia, and has consultative status with the Economic and Social Council of the United Nations. Since it was established in 1993, it has been working to advance women's health, affirmative sexuality and rights, and to empower women through information and knowledge, evidence generation, advocacy, capacity building, partnership building and organisational development.

About CommonHealth

CommonHealth - Coalition for Reproductive Health and Safe Abortion, constituted in 2006, is a rights-based, multi-state coalition of organisations and individuals that advocates for increased access to sexual and reproductive health care and services to improve health conditions of women and marginalized communities in India. Within sexual and reproductive health and rights, CommonHealth concentrates its efforts largely on maternal health and safe abortion. The coalition draws its membership from diverse disciplines, thematic areas and geographies within the country.

CommonHealth

arrow
asian-pacific resource & research centre for women