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Maternity Benefit Programs: An Investment in Human Resource

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Abstract

Women, as bearers and rearers of children, form the foundation for bringing about the next generation of human resources for the economy. To breed good human resources, better nutrition for pregnant women & lactating mothers (PW & LM) is essential. It provides a strong economic justification for maternity benefits interventions. There is diversity in maternity benefits under the various programs implemented in different countries in formal and informal economies. Most of the developed, as well as developing countries, have legislation/policies for providing universal health coverage for PW & LM employed in the formal economy. But women employed in the informal economy lack social protection and paid maternity leaves, especially in low- and middle-income countries. The informal sector employs 60 percent of the female workforce and non-contributory cash transfers can be an innovative way to improve mother and neonatal nutritional status. This study presents a state-of-the-art review of the provisions of maternity benefits and their outcome in different nations as well as their implications on maternal and newborn health. An efficiently implemented maternity benefits program with the provision of cash incentives, nutrition supplement package, and paid maternity leave has several outcomes in terms of long duration & frequent exclusive breastfeeding, distribution of resources & disintegration of poverty transfer, reduced financial and gender inequality, quality childcare – which develops self-confidence and improved social & learning skills for better competence and career attainments – reduced MMR and IMR. And it is more of an investment in its human resource rather than a financial burden for a nation. This paper also addresses key issues in the field of maternal health care and can be advantageous for both beneficiaries as well as policymakers.

Keywords

Conditional Cash Transfer, Maternity Benefit, breastfeeding, Unorganized sector, informal economy, India

1. Introduction

In the domain of health, maternal and child health issues continue to be the underpinnings of global and national health policies. Low birth weight has been a global issue, with every 7th newborn having less than 2.5-kilogram weight. Low birth-weight babies are prone to stunting, lower Intelligence Quotient, and death in childhood (UNICEF 2019). An undernourished mother almost inevitably gives birth to a low-weight baby. Furthermore, poor nutrition in utero affects the health of children throughout the life cycle since few of the changes are largely irreversible. Maternal health and malnutrition are decisive factors for a healthy newborn. A good start in life begins in the womb, and to raise a healthy baby the mother needs good nutrition, proper rest, a clean environment, and adequate antenatal and postnatal care (Acharya & Mcnamme et al. 2009). Working mothers have to leave their newborns in non-parental care, and that involves risks which may have wide-ranging consequences for both mother and child. Furthermore, the quality of childcare may have diverse and lifelong effects on children's physical and mental health.

Women work in both formal and informal economies and separate maternity benefit programs can be enacted. Globally, most countries have the provision for employment protection and paid maternity leave, especially for the formal sector (Aitken et al. 2015). The informal economy involves over 60 per-cent of working women globally and maternity benefits need to be extended to them (Horwood et al., 2020). Early returning to work after childbirth is challenging for working women and maternity protection would help female workers to stay home longer to care for themselves and their newborns. Maternity leave allows mothers to spend time with their babies for quality childcare and to overcome their postnatal depression (Heymann et al., 2017). The provision of financial aid can compensate for the wage loss to poverty-stricken female workers during pregnancy as well as after childbirth. Cash incentives become vital for poor families who may be unable to afford antenatal and postnatal health check-ups, and breast milk substitutes (if needed). Paid maternity leave has multiple advantages like a higher rate of breastfeeding initiation, longer duration and periods of breastfeeding (Victora et al. 2016; Mirkovic et al. 2014), recovery time for the physical and mental health of the mother along with financial inclusion (Siregar et al. 2021). Breastfeeding is an effective child health intervention without any need for the health system infrastructure. Suboptimal breastfeeding is a leading risk factor and attributable to child Disability Adjusted Life Years (DALYs). Exclusive and continued breastfeeding can contribute to reducing child mortality (Roberts et al., 2013). Breastfeeding duration is associated with reduced diarrheal illness/constipation and lower rates of overweight/obesity, and fewer acute illnesses (Pattison et al., 2019; WHO, 2018).

The quality of childcare, particularly in the first three years of life, has a lasting effect. Good quality childcare can mitigate many of the ill effects of poverty and maternal depression and enhance child development including self-confidence, improved social skills, higher learning achievements, and sustained improvement in school performance (Charrois et al., 2017; Cote et al., 2013). In contrast, studies have shown that poor quality childcare hurts young children's cognitive, behavioural development, and mental health and leads to poor language skills and lower educational attainment (Burchinal et al. 2000; Black et al. 2017). Interventions for good quality childcare have long-term beneficial outcomes including high competence (Walker et al. 2011) and good wage-earning in adulthood (Gertler et al. 2014). Most maternity benefit programs have provisions (cash incentives, paid

maternity leaves and nutrition supplements) to ensure good quality childcare and effective implementation of these programs can ensure good quality childcare.

Various maternity benefit programs can be subclassed for formal and informal economies. Further classification can be done according to targeted beneficiaries as illustrated in Fig. 1.

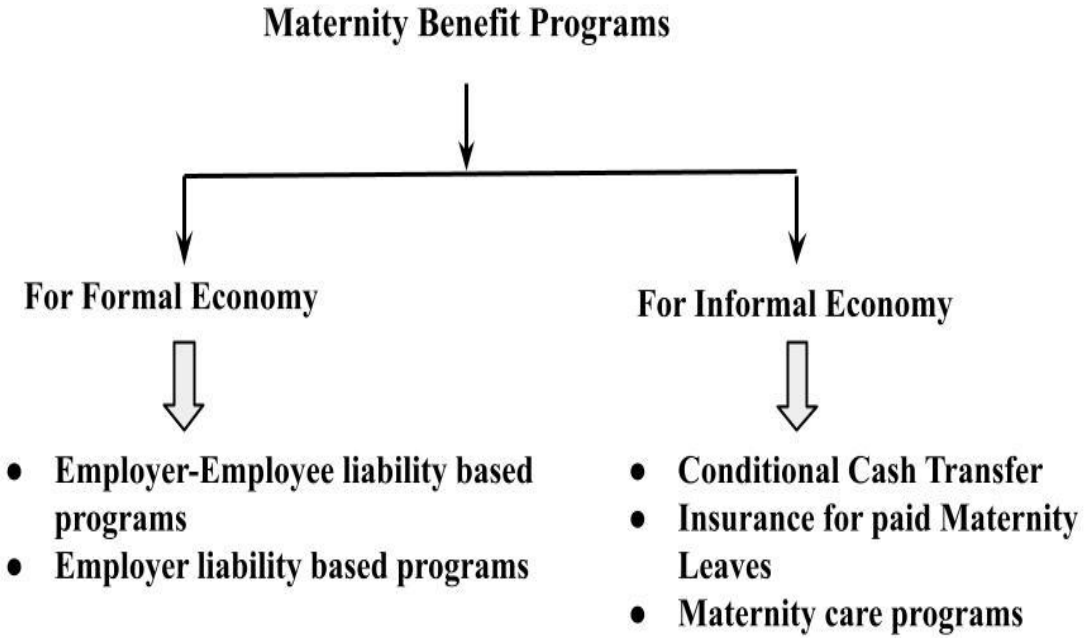

Fig. 1 Classification of Maternity Benefit Programs (Lingam & Yelamanchili 2011)

Maternity benefit programs for the formal economy have provisions of paid maternity leave, and employment protection but the informal workers generally lack such social protection. In employer-employee liability-based programs both employee and employer have to contribute to various maternity benefits while in employer liability-based programs all liability to provide various maternity benefits lies with the employer only (Son et al., 2020).

Previous studies cover the maternity benefit programs implemented in different nations around the world, but no study puts forth straightforward outcomes of different provisions made in distinct maternity benefit programs. The free prenatal and neo-natal health check-ups, job security, paid maternity leaves, and nutrition kits are among the potential maternity benefits of different legislative provisions in maternity benefit programs. Different provisions have their own outcome in terms of longer rest for women before and after the delivery of the child, timely health check-ups for diagnosing and addressing the health issues, better overall health for pregnant women and newborns, personal hygiene of PW & LM, and timely vaccination of newborns to fulfil various conditions for availing maternity benefits. But no study covers the relevance of different provisions, all the benefits and their outcome, and a comparison of different schemes are missing in the literature. The present study compiles all the prominent maternity benefit programs and compares their provisions for outcomes on PW & LM as well as newborns. A separate section is dedicated to India as it has a huge population with 90 percent of the total workforce in the informal economy. An efficient and effective maternity benefits program is essential to grow good quality human resources (ILO 2018).

The paper is structured in five sections: Section 1 describes the present status of maternal and infant health and conceptualizes issues like the need and outcomes of maternity benefits. Section 2 reviews relevant literature on eminent maternity benefit programs implemented across the world and their provisions. Conditional cash transfer is a newer and innovative way of providing maternity benefits only on fulfilling certain nutritional and health care conditions as illustrated in Section 2.2.3. Several nations have paid and unpaid insurance policies to avail of various maternity benefits as elucidated in Section 2.1. Maternity care programs can be considered as supporting schemes for improving institutional delivery, vaccination, and compensating the out-of-pocket expenses during pregnancy as described in Section 2.2.4. Section 3 outlines the methods of analysis and findings. Section 4 possesses various key issues and scope of improvement for the maternity benefit programs. And finally, Section 5 encapsulates the whole paper and gives the main conclusions of the study.

2. Eligibility assessment and study selection

We conducted a scoping review of origination, implementation, utilization, and outcomes in terms of maternal health, exclusive breastfeeding duration, mother mortality rate (MMR), and infant mortality rate (IMR) of maternity benefit programs around the world. The present study is limited to theoretical concepts and comparisons of distinct maternity benefit programs for their essential eligibility conditions, maternity benefit provisions, and the outcome of different provisions. The empirical correlations between various provisions and their outcomes like the relation between paid maternity leave and breastfeeding duration, monetary benefit and nutrition supplement etc. are not covered in this study. A comprehensive search was undertaken using maternity benefit, breastfeeding, maternity leave, and conditional cash transfer (CCT) in combination with formal and informal economy keywords in the Scopus database, Google Scholar, and targeted websites. Table of contents and executive summaries were screened for grey literature documents and titles, abstracts, and keywords were screened for journal articles. The conservative approach was applied at the identification stages and screening of documents or web pages was continued to assess for relevance if the maternity benefits were not explicitly addressed. The final documents were downloaded to be further shortlisted to ensure they addressed objectives. A total of 107 journal articles, documents, and web pages were included in the review. Full-text screening for qualified publication was followed. Number of documents identified from different databases and excluded at screening and eligibility stages are illustrated in Fig.2.

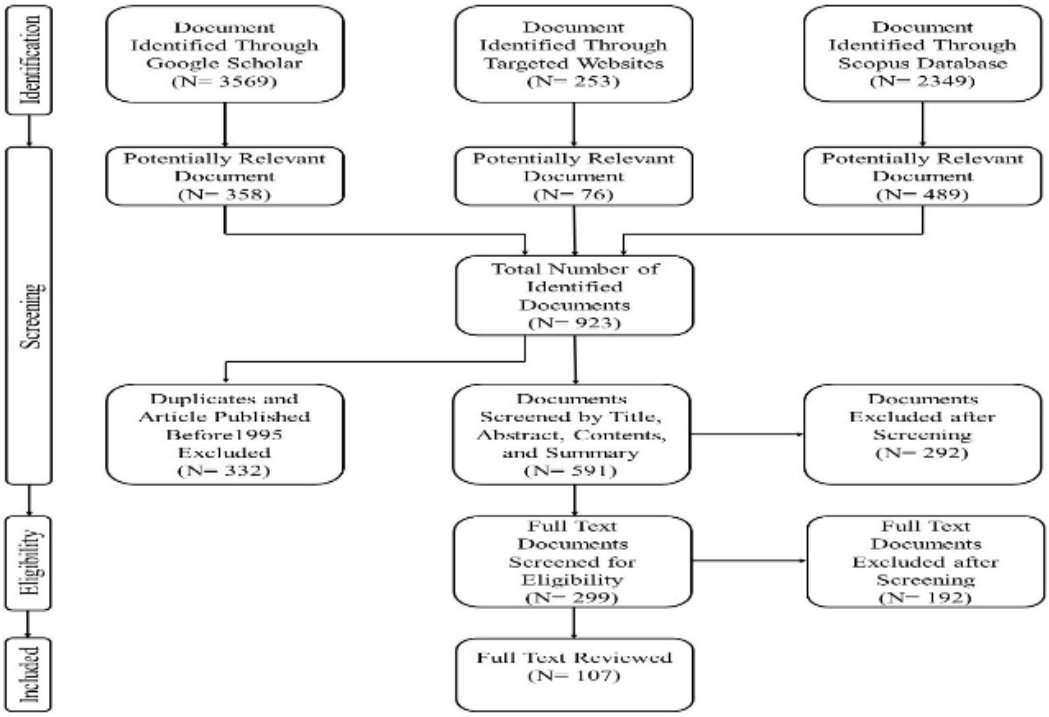

Fig. 2 Flow chart & segregation of documents

Being a founder member of the International Labor Organization (ILO), India has a long history of maternity benefit programs. These programs are very diverse and can be grouped as employer-liability based, employer-employee liability based, state-sponsored, and centre sponsored. For better understanding, a separate section is dedicated to India-specific maternity benefit programs. All eminent programs are described for their need, and provisions in Section 2.1, and Section 2.2 respectively.

2.1 Maternity benefit programs around the world

Women's workforce is a driver, as well as an outcome, of economic growth and development. Their participation in both formal and informal economies has increased in most countries during the past few decades. More than 60 percent of working women globally are in unorganized sectors without employment or maternity protection (Oelz 2014). This made the ILO come out with a set of conventions viz. convention nos. 3 in 1919, 103 in 1952, 183 in 2002, and 189 in 2011 for employment and maternity protection (Poblete 2018). A previous study concluded that financial responsibility makes mothers return to work soon after the delivery of a child. The flexibility of informal work may allow mothers to strike a balance between work and childcare (Horwood et al., 2021). However, social protection and maternity benefits to employed women, especially in the informal sector, vary widely across nations. This section highlights the eminent maternity benefit provision in different countries. The origin of Maternity Benefits can be traced to 1919 when maternity allowance and paid maternity leave were made a part of Germany's National Health Insurance schemes (Buse et al. 2017). Great Britain enacted the National Insurance Act, 1946, and included maternity allowance in 1948, and paid maternity leaves in 1976 (Zabel 2009). Ghana enacted the National Health Insurance Scheme (NHIS) Act in 2003 which comprises the provision of free enrolment, and multiple health check-ups and medical facilities for PW & LM (Dzakpasu et al. 2012). Columbia has an employer-employee liability-based maternity benefit and employment protection law that includes a package of protection for pregnant women comprising multiple benefits as briefed in Table 1 **(**Uribe et al. 2019**)**. China has a Maternity Insurance program as

well as employer-paid maternity benefits like paid leave, reimbursement of expenses for prenatal examinations, delivery, hospital care, and medicine (Jia et al. 2018; Bohong et al. 2009). Nepal introduced multiple maternity care programs, as briefed in Table 1, to cover various aspects of maternal and newborn health care (Bhatta et al. 2020). Bangladesh implemented the demand-side financing-based Maternal Health Vouchers Program in 2006, in which vouchers are distributed to pregnant women for availing various maternal and child care facilities for no cost (Mia et al. 2021). Pakistan introduced Sehat (Health) Voucher Scheme in 2009 offering a booklet containing vouchers for availing a package of health-related services at a marginal cost of US $1.25 to avoid any catastrophic expenditure (Agha 2011; Jehan et al. 2012). Australia also has multiple maternal healthcare programs with different provisions (Wilkens et al. 2015; Bernatt. 2019). Brazil made provision for paid maternity leave in the constitution in 1988 and implemented the Empresa Cidadã Program in 2008 (Machado et al. 2016). Sweden too has a long history of paid parental leave and childcare facilities (Mahon et al. 2016). Canada has demographic variation in the provision of paid maternity or parental leaves (Mayer & Le 2019)**.** Mexico and the Philippines have laws for paid maternity leave for women employed in the formal sector, and CCT for nutrition, health, and education of children, but maternity benefits for women in the informal sector are still pending (Vilar-compte 2019; Ulep et al. 2021). CCT is the most innovative and effective approach in the domain of education and health, especially in developing countries (Schultz 2004), and is improving nutrition and health indicators by alleviating poverty among indigent households. One such famous CCT program that laid the foundation for several schemes to uplift education and health is the "Mexican Progresa Program" (Molyneux, 2006; Maluccio & Flores, 2005). Several Latin American countries introduced CCT schemes modelled after Mexico's PROGRESA program (Nino-Zarazua, 2019; Palacio, 2019). Organization for Economic Co-operation and Development (OECD) nations have the provision of paid maternity leaves to PW & LM (Thevenon, 2011).

2.2 Maternity benefit programs in India

India is the second-largest nation in terms of population and accounts for almost one-third of all maternal deaths globally (WHO 2015). India has a long history of maternal and child care programs, starting from the Bombay Maternity Benefit Act, of 1929 in Maharashtra state followed by other states: Madras, Uttar Pradesh, West Bengal, and Assam (Chhachhi 1998). After independence in 1947, several potent legislations were enacted for maternity protections viz. Employee's State Insurance Act, 1948; Maternity Benefit Act, 1961 (amended in 2017), and Central Civil Services Rules, 1972. Maternity Benefit Programs are pro-poor and promote social equity through financial inclusion and economic empowerment (Hasan & Parveen 2020; Mokta 2014). On the recommendation of the Mudaliar Committee, an integrated program package for PW & LM, infants, and pre-school children is exemplified in integrated child development services (ICDS) (Qadeer 2008). India launched the accredited social health activist (ASHA) program in 2006 to strengthen maternal and child health by introducing ASHA workers into the public health system. This program helped in connecting the marginalized communities to maternity health services, promoting reproductive health services and family planning, and antenatal care during pregnancy (Agarwal et al. 2019). This section portrays various maternity benefit programs including legislation/ policies and CCT schemes. These programs can be categorised as employer liability-based schemes, employer-employee contributory schemes, CCT schemes, and maternity care schemes as described in Section 2.2.1, Section 2.2.2, Section 2.2.3, Section 2.2.4 respectively.

Table 1 Eminent Maternity Benefit Programs and their salient features

Country	Maternity Benefit Program	Year of inception	Description	Reference
Germany	National Health Insurance Scheme	1883	Paid maternity leaves of 6 months and health care facility	(Buse et al. 2017)
Britain	National Insurance Act	1946	Maternity allowance up to 39 weeks on fulfilling employment duration requirements and unconditional maternity leaves of 52 weeks	(Zabel 2009)
China	Maternity Insurance program	1951	Paid maternity leaves of 90-180 days, reimbursement of out-of-pocket expenses for maternal health care facilities	(Jia et al. 2018)
Brazil	Empresa Cidadã Program (Corporate Citizen Program)	1988	Paid maternity leaves of 120 were made mandatory in the constitution in 1988 and the same was, extended to 180 days in Empresa Cidadã Program in 2008	(Machdo et al. 2016)
Canada	Employment Insurance (EI) Program	2001	Provision of a maximum of 15 weeks of paid maternity leave and a maximum of 35 weeks of paid parental leave that can be shared	(Mayer & Le 2019)
Ghana	National Health Insurance Scheme (NHIS) Act	2003	Free enrolment in NHIS, six antenatal visits, and two postnatal visits, childbirth care (including complications), and care of the newborn for up to three months	(Dzakpasuet al. 2012)
Nepal	CCT based Safe Delivery Incentive Program (SDIP), Aama program (Mothers Program), Nyano Jhola	2005	Geographic dependent cash travel allowances for prescribed antenatal and postpartum clinic visits under SDIP, no user fees for deliveries, complications management, and caesarean sections under Aama Program, and a box filled with traditional Nepalese clothes under the Nyano Jhola scheme	(Bhatta et al. 2020)
Bangladesh	Maternal Health Vouchers Program	2007	Free Transportation, Free antenatal, child delivery, and postpartum care; and cash stipends are provided to the beneficiary. Money is paid to health facilities and providers receive for each voucher patient treated.	(Mia et al. 2021)
Pakistan	Sehat (Health) Voucher Program	2009	Vouchers booklet are provided to pregnant women with poor socioeconomic status to avail services like Antenatal and postnatal health check-ups	(Agha 2011; Jehan et al. 2012)
Australia	National Maternity Services Plan (NMSP)	2010	Provision of rebate in user fees of medical facilities	(Barnett 2019)
Columbia	Columbian Labor Law	2017	Paid maternity leaves of 14 weeks, employment protection against dismissal on account of pregnancy, two breaks of 30 minutes each during the first six months for feeding the infant	(Uribe et al. 2019)

2.2.1 Employer liability-based schemes

Under this group of schemes; the employer alone bears the full responsibility of providing maternity benefits to pregnant employees. Early returning to work affects the childcare quality and paid maternity leave allows mothers to spend time with newborns, which is beneficial for the physical and mental health of both (Heymann et al., 2017). Longer maternity leaves are beneficial for a child's health and have played a role in reducing the infant mortality rate (Nandi et al., 2016). Breastfeeding is an analgesic (Gray et al., 2002) and determinant of a healthy newborn, especially in the first three months (Colombo et al., 2018; Victora et al., 2016). Furthermore, Chai et al. surveyed 38 low-income and middle-income countries (LMIC) and concluded that extended legislated paid maternity leave promotes breastfeeding practice (Chai et al., 2018). After independence, the Maternity Benefit Act, 1961, was enacted with the provision of employment protection and 12 weeks of paid maternity leave for women employed in the formal economy (Swaminathan, 2010). The Maternity Benefit Act was amended in the year 2016 and the paid maternity leaves are extended to 26 weeks for the first two surviving children and 12 weeks for third children onwards (Singh 2016). The provision of 12 weeks of paid maternity leave is also made for commissioning mothers and adopting mothers. As a part of the sustainable development mission, the creche facility is also made mandatory for all establishments i.e., government as well as the private sector, with more than 50 employees (Bharathy 2018). Another legislative; Central Civil Services Rules (CCSR), 1972, entitles all government employees to avail 180 days of paid maternity leave for the first two surviving children, and two years of child care leave during the service career was also stipulated in the 6th central pay commission (Vinayan 2011).

2.2.2 Employer-employee contributory schemes

Under this approach, the employees also share some liability toward the employer regarding service and maternity benefits (Wang 2011). Employee State Insurance (ESI) Act, 1948 was enacted to attain the socio-economic justice enshrined in the Directive Principles of State Policy under part IV of the Indian Constitution. The insured women get a package of benefits including maternity benefits which is the cornerstone for the sustainability of the labour-intensive market. It ensures a periodical payment to insured women in case of repression and miscarriage or sickness induced due to pregnancy and outlaws the employer from dismissing and punishing employees during the pregnancy period (Ahuja, 2021). The ESI Act also covers the organized private sectors (Kumar 2018) but the issues of unorganized sectors are addressed to a certain extent through CCT schemes as elucidated in Section 2.2.3.

2.2.3 Conditional cash transfer schemes

Worldwide, over 740 million women, which are over 60 percent of the total female workforce, make their living in the informal economy and lack legislation regarding employment benefits, such as maternity leave, that can improve infant feeding practices. Horwood et al. (2021) explored the balance of requirements of livelihood and safe child care and observed that financial responsibilities make the mother return to work sooner than planned. The flexibility of informal work allowed mothers to adapt their work to care for their children while others were left with no option except to return to work and leave the newborn with carers, as highlighted in Section 2.2.1. A conditional cash transfer (CCT) program is a non-contributory cash transfer (CT) scheme that incentivizes health-promoting behaviours during the critical phase of pregnancy as well as lactation. CCT programs increase human capital investment especially among poor households to break the intergenerational transmission of poverty and provide income security during and after the pregnancy (Attanasio et al., 2005). It helps lactating mothers to delay their return to work and money can be used to purchase breastmilk substitutes. In India, the informal economy dominantly contributes and accounts for 90 percent of the total workforce

and 90 percent of women workers (ILO, 2018). This includes market traders, domestic workers, and home-based workers (ILO 2018). An efficient conditional maternity benefit (CMB) program can provide social assistance to poverty-stricken women working in unorganized sectors through financial and non-financial benefits (Shah 2020). The CMB programs can be traced to the National Maternity Benefit Scheme (NMBS) introduced in 1995 with a provision of ₹300 (approximately US$ 5) cash incentive to poverty-stricken pregnant women of 19 years or above age for the first two live births. The cash incentive was raised to ₹500 (approximately US$ 7) in 1998 (Planning Commission, 2006) and later merged into newly implemented demand-side financial incentive programs namely Janani Suraksha Yojana (JSY); translated as a Mother Protection Scheme in the year 2005 (Dongre & Kapur 2013). JSY was launched to curtail maternal and neonatal mortality by encouraging pregnant women to institutional delivery and it became the world's largest CMB program in terms of the number of beneficiaries in the year 2012 (GOI 2012). The intervention coverage and health outcomes show a significant improvement in antenatal care and in-facility births, consequently, the perinatal, neonatal, and maternal deaths declined significantly. For efficient and effective implementation of the scheme, financial assistance to ASHA & ANMs (Auxiliary Nurse Midwife) (Jeffery et al. 2007), independent monitoring and evaluation system (Lim et al. 2010), faster processing of cash incentive payment (Malik et al. 2013), and need for an increase in cash incentives to compensate for the maternity expenditure are observed (Mukherjee & Singh 2018). In another survey, Sharma et al. (2012) observed that the education and socio-economic status of women affect health care awareness and play a vital role in the number of antenatal care (ANC) visits.

JSY promotes institutional delivery by providing free transportation and small financial support. But it does not address the women's socio-economic compulsions that make pregnant women work right up to the last stage of pregnancy and have to resume work soon after childbirth. In order to alleviate the socio-economic compulsions, an additional, second-generation maternal CCT named Indira Gandhi Matritva Sahyog Yojana (IGMSY; translated as Indira Gandhi Maternity Help Scheme) was recommended in the XIth five-year plan. The scheme was put into action in October 2010 in 53 districts with a cash incentive of ₹4000 (approximately US$ 55) in three instalments of ₹1500, ₹1500 & ₹1000 respectively to mothers of 19 years and older for the first two live births on fulfilling certain conditions of maternal-child health and nutrition. Women enrolled under this CCT scheme are encouraged to avail JSY package through intuitional delivery and vice-versa (GOI 2019). The scheme was specifically designed for female workers of the informal economy and those who have been covered under the employer liability-based schemes. So, both JSY and IGMSY were introduced for females of informal sectors as there were provisions for paid maternity leave and job security for women working in formal sectors. In 2013, the IGMSY was brought under the National Food Security Act, 2013, and the cash incentive was raised to ₹6000 (approximately US$ 85) in two instalments (GOI 2017). The core objectives of the scheme were to improve the nutritional health of pregnant women, increase their weight by incentivizing mothers to participate in infant health-promoting activities, and partially compensate for the wage loss due to pregnancy (Coffey & Hathi 2016). In 2014, the scheme was renamed Matritva Sahyog Yojana (MSY); translated as a motherhood supporting scheme, and on 31 December 2016, the government of India rolled out a revamped and renamed scheme, namely Pradhan Mantri Matru Vandana Yojana (PMMVY), translated as Prime Minister Maternity Benefit Scheme. The rechristened scheme is part of the government of India's initiative to meet the Sustainable Development Goals (SDGs) of the United Nations and is implemented in the entire country (GOI 2017; Vij & Singh 2020). It has outrivalled the country's first-generation maternity benefit scheme Janani Suraksha Yojana (JSY) to become India's largest CCT program ever (Von & Klonner 2021). The scheme is implemented through a centrally deployed web-based MIS software application of the Anganwadi Services scheme. The role and responsibilities of various field functionaries are comprehensively illustrated in PMMVY

Scheme Implementation Guidelines (GOI 2017). The scheme is designed with the same objectives of IGMSY, along with promoting health-seeking behavior amongst the PW & LM through the concept of incentivizing the health-promoting activities during pregnancy as well as after childbirth (GOI 2020; Krishnamurthy et al. 2020; Malik 2020). The scheme is restricted to the only first living child as the first pregnancy of a woman exposes her to new kinds of challenges and stress factors (GOI 2019). Technological advancement promoted direct benefit transfer **(**DBT) to reduce corruption, faster processing the money, and improve transparency (Bhardwaj & Cyphert 2020).

In parallel to the central government-sponsored schemes, various state governments enacted aspiring conditional maternity benefit (CMB) schemes. One such ambitious and pro-poor CMB is the Muthulakshmi Reddy Maternity Benefit Scheme (MRMBS) enacted in Tamil Nadu in 1987 offering financial aid of ₹14000 (approximately US$ 192) along with two nutrition kits costing ₹2000 (approximately US$ 28) each, for the first two children for compensating the wage loss during pregnancy and to provide nutritious supplements and reducing the MMR and IMR (State Government of Tamil Nadu 2018). Women with sound socio-economic status and educational background have a better probability of getting maternity benefits (Balasubramanian & Ravindran 2012; Ganesan & Chitra 2016; Lakshmi & Rajkumar 2019). This scheme shares objectives with PMMVY along with promoting family planning but very few people are aware of this (Chitra & Ganesan 2016). Mamata scheme introduced by Odisha state in 2011 has improved the nutrition status & ANC significantly but poor infrastructure, corruption, social discrimination, and low education level among beneficiaries are hampering the progress (Khera 2015; Raghunathan et al. 2017). Results of awareness and utilization surveys of the centre as well as state government-sponsored maternity benefit schemes are really promising (Acharya & Mcnamme 2009; Manjula 2017).

2.2.4 Maternity care schemes

Merely transferring cash does not necessarily mean that it will be used for its intended purpose. These CMB schemes also have some administrative obstacles in enrolling. To combat the loopholes of CMB schemes and to accelerate the development of health-seeking behavior among PW & LM, India has maternity care schemes with the provision of free health check-ups and nutritional supplements. Janani Shishu Suraksha Karyakaram (JSSK) was launched in 2011, translated as a mother-infant safety program that offers a free transportation facility, free diagnostics, free drugs and consumables, and free food with zero stay charges, and free provision of blood (Grover & Singh 2020). Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) launched in 2016, translated as Prime Minister safe motherhood scheme offers free, comprehensive, and good quality ANC to every pregnant woman in her 2nd or 3rd trimester at a designated Primary Health Centre or District Hospital by a gynaecologist on the 9th day of every month (GOI 2016). Another key intervention, the Universal Immunization Program (UIP) of National Health Policy, 1983 provides vaccination to children against life-threatening diseases (GOI 2014). Female education and proper counselling from health professionals during their pregnancy also encourage the PW & LM to use health care facilities (Baqui et al. 2007).

3. Results and discussion

Most developed nations have provisions for maternity benefits for women's workforce in the formal economy (ILO, 2016). The provisions are varied in terms of the cost of purchasing a vouchers booklet or maternity insurance plans and maternity benefits like paid maternity leaves varies from one month to 26 weeks or even more. It is ubiquitous that women in informal sectors have limited options for childcare, and lack employment protection. It is also observed that India has a huge female workforce, especially involved in the informal economy. The financial assistance under various maternity benefit programs is continuously increasing over time. It is known that female workers in formal sectors have

the upper hand over those working in informal sectors. The formal sectors have legislations of paid maternity leave, insurance schemes with multiple maternity benefits, and job security. The governments of different nations have started working on forming maternity benefit policies for female workers in informal economies. The countries with high-density populations are restricting maternity benefits to the first one or two children to make people aware of family planning and population control. The criterion of maternity benefits is gradually extending to childcare and is being made mandatory in several nations. In a few countries, paid maternity leaves are provisioned for spouses too. The challenges like lack of education, awareness about policies, corruption in the dissemination of maternity benefits, and huge population have been prevailing.

India is a country with a huge population, and persistent efforts are being made by both states as well as the central government. It is known that a huge population has been a challenge to provide maternity benefits to everyone with no restriction on the number of children. So, the government is using maternity benefit programs as a tool to make people aware of family planning and population control. In the last three decades, female workers in informal sectors are being covered, and the coverage is also being extended. The policies of other nations and sustainable development goals are setting the foundation for maternity benefits and childcare policies in India. An overview of various monetary and non-monetary benefit programs sponsored by the centre as well as different state governments is embodied in Table 2. All key objectives, methods of analysis, and findings of the assessments of varied maternity benefit schemes are embodied in Table 3. The outcomes of different provisions show the importance of good quality childcare at an affordable cost in terms of stability to PW & LM, helping newborns thrive.

Simpler and faster processing can improve the efficacy and impact of the schemes (Murray et al. 2014, Mishra & Pradhan 2015). An elucidating comparison of availed maternity benefits and their impact on the health of the mother and newborn could be helpful for analyzing the current provisions. It is observed that an optimum amalgamation of free health check-ups, paid maternity leave, supplementary nutrition kits and monetary benefits will be a big stride in the direction of reducing MMR and IMR. Such a mixture of different maternity benefits will accelerate the movement toward achieving sustainable development goals.

Table 2 Overview of various financial aid programs for PW & LM

National Maternity Benefit programs			
Name of Program	**Inception Year**	**Description**	
1. Conditional Cash Transfer Programs			Reference
NMBS	1995	Started with a payment of ₹300 (approximately US$ 5), and increased to ₹500 (approximately US$ 7) in 1998. Later merged with JSY	Planning Commission 2006
JSY	2005	Financial aid ₹1000 (approximately US$ 14) for promoting institutional delivery	Lim et al. 2010
IGMSY	2010	Introduced with ₹4000 (approximately US$ 55) & aid was increased to ₹6000 (approximately US$ 83) in 2013 for 1st two living children in 53 districts. Revamped in 2017	GOI 2019
PMMVY	2017	The monetary benefit of ₹5000 (approximately US$ 69) for 1st living child on compliance with a set of behavioural requirements.	Kumar et al. 2018
2. Employer-Employee contributory program			
ESI, 1948	1948	Insures women of various maternity benefits.	Ahuja, 2021
3. Employer Liability Programs			
MB Act, 1961	1961	12 weeks paid ML	Hasan & Parveen 2020
MB (Amendment)	2017	26 weeks paid ML for 1st two children and 12 weeks for 3rd child onward	
CCSR,1972	1972	180 days paid ML for 1st two surviving children and two years of CCL	Vinayan 2011
4. Maternity Care Programs			
JSSK	2011	Provides free transport, food, drugs, blood, and consumables for institutional delivery	Grover & Singh 2020
PMSMA	2016	Provides free ANC to pregnant women on the 9th day of every month	GOI 2016
UIP	1985	Vaccination to protect against life-threatening disease	Baqui et al. 2007
State Government sponsored Maternity Benefit Programs			
MRMBS	1987	Initiated with the incentive of ₹300, presently giving aid of ₹18000 for 1st two children in Tamil Nadu	Chitra & Ganesan 2016
Mamata	2011	Enacted by the Odisha government with aid of ₹5000	Raghunathan et al. 2017
Prasuti Aaraike	2008	Karnataka govt. initiative with ₹2000 for ANC and institutional delivery	Manjula et al. 2017
KCR Kit	2017	Started by the Telangana government with ₹12000 and ₹1000 extra for girl children on institutional delivery	Majumder et al., 2022
Kasturba Poshan Sahay Yojana	2012	Gujarat government initiative of financial aid of ₹6000 to PW & LM	Vora et al. 2014

Table 3 Overview of studies on the impact of various maternity schemes

Sr. No.	Name of Program	Target state	Objectives	Method of Analysis	Findings	References
1	Low Birth Weight Estimates	Entire world	Determination of levels and trends of low birthweight	b-Spline and Hierarchical Regression	The mortality rate is declining & improvement in birth weight	UNICEF 2019
2	JSY	Uttarakhand	Difference in the utilization of JSY in rural and urban slums	SPSS software version 10	Higher utilization rate in urban slums	Sharma et al. 2011
		Entire INDIA	Impact of JSY to increase the institutional delivery	Multistage Stratified Sampling, logistic regression	Beneficiaries with good education and better socioeconomic status have better chances of getting the benefit	Lim et al. 2010
		Uttarakhand	Effect of education and socio-economic status	Simple random sampling, Probability Proportion of Size		Sharma et al. 2012
		Low performing States	Performance analysis of JSY in Backward Districts	Two-stage sampling design		Dongre & Kapur 2013
		North India	Effectiveness of utilization of financial assistance	Multistage Random Sampling & SPSS 17.0	Delayed DBT has downgraded the utilization of monetary aid	Malik et al. 2013
		Uttar Pradesh	Effectiveness of assistance for maternity expenditure	Logistic Regression	The cash incentive under JSY is not significant	Mukherjee & Singh 2018
3	PMMVY	Entire INDIA	ANC facility utilization	Multivariable Logistic Regression	Underutilization of ANC facility is observed	Kumar et al. 2018
4	JSY, Prasuti Araike, Madilu Kit, JSSK	Karnataka	Awareness and utilization of MBS	Microsoft Excel & SPSS	An increase in awareness and utilization of MBS is observed	Manjula et al. 2017
5	MRMBS	Tamil Nadu	Socio-economic status of beneficiaries	Systematic random Sampling	The applicants with sound socio-economic status have a better chance of getting benefits.	Ganesan & Chitra 2016
			Characteristics of beneficiaries	Regression Analysis		Balasubramanian et al. 2012
			Adoption of family planning among the beneficiaries	Simple Random Sampling	Beneficiaries are not aware of family planning.	Chitra & Ganesan 2016
			Awareness of antenatal check-ups among women	SPSS version 20 & T-test	Better health education is needed for better awareness.	Lakshmi & Rajkumar2019
6	Mamata Scheme	Odisha	Efficacy and impact of the scheme	Microsoft Excel	Simplification and faster application processing needed	Mishra & Pradhan 2015
			Effect of CCT in improving the nutrition status & ANC visits	Linear Regression Models, Nearest-Neighbour Matching	A significant increase in nutrition status, & ANC visits	Raghunathan et al. 2017
			Status of infrastructure, corruption, education, caste-based discrimination	Random Sampling	Poor infrastructure, corruption, & education level and caste-based discrimination observed	Khera 2015

4. Key issues & recommendations

The intensive analysis of the literature reveals that the positive outcome of varied CMB programs is evident but fragmentary. A surge in nutrition and health indicators is extrapolated by the implementation of CCT programs in the domain of maternity care. There have been several key issues with provisions in presently implemented programs and various recommendations observed by researchers are listed below:

- Most of the maternity benefit programs provide maternity leave only and can be made effective by offering a package of benefits including zero user fee for antenatal and postnatal health check-ups, kits of nutritious food supplements, and clothes for maintaining hygiene.
- Empirical evidence on the effectiveness of various CMB schemes is not magnificent and better implementation is required to cover the neediest. Awareness about CMB schemes is to be increased for coverage of a larger portion of the population.
- The CCTs can be made more effective by improving infrastructure and education levels, and by reducing corruption and social discrimination. Well-trained health-care staff can improve communication between stakeholders for better implementation of existing maternity benefit programs.
- The independent monitoring mechanism can strengthen the implementation of programs. Cash incentives to PW & LM and field functionaries should be given in instalments to ensure their participation throughout the antepartum, intrapartum, and postpartum.
- Uniformity in maternity benefits in line with provisions of universal health coverage for pregnant women that involve exemption of user fees for delivery care, 26 weeks of paid maternity leaves and other health care benefits can help in achieving the sustainable development goals. The financial contributions by donors to maternal health can scale up maternal health, especially in low-income countries (Borghi et al. 2006).

5. Conclusions

The extremely productive years of a woman's life are typically also her reproductive years. So, it becomes imperative for every nation to have a good maternity protection policy along with significant financial assistance to address the undernutrition and wage loss issues. Most of the developed, as well as developing nations, have enacted maternity benefits programs with varied provisions which are available to PW & LM either at zero cost or at marginal cost. Maternity leaves and breastfeeding duration are in close association. Breastfeeding is an analgesic and determinant of a healthy newborn with several other benefits like nutritious food for newborns, and improved bonding between mother and baby. Moreover, breastfeeding does not need any health service infrastructure. An amalgamation of various maternity benefit provisions in distinct programs will lay the foundation for quality childcare, which is vital for the development of self-confidence, good communication and social skills, better performance at the school level, and high competence for good career growth. CCT schemes support the broader objectives like improvement in the utilization of public health facilities (Cross et al. 2016), increased polio, DPT, and BCG vaccinations, and an increase in infant immunization (Von & Klonner 2021). Circumscribing the monetary benefits only for the first one or two children has been used as a tool for promoting family planning and population control, especially in countries with large populations like India. Therefore, an effectively implemented good maternity protection program contributes to the fulfilment of multiple sustainable development goals viz. SDG 1, SDG 3, SDG 5, SDG 8, and SDG 10 (ILO 2016). Consequently, maternity benefit programs are an investment in human resource rather than a financial burden for a nation.

A steady but gradual improvement in maternal and neonatal health is taking place due to various central and state-sponsored maternity benefit schemes. Sharing the cost of providing maternity benefits amongst different agencies through some form of social insurance can reduce the financial burden on the national economy.

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