

Harmful Postpartum Beliefs and Practices of Mothers in India: Rapid Evidence Synthesis

This document is a supplement to the rapid policy brief on the issue.

Sandeep Moola, Jyoti Tyagi, Priyanka Shah, Devaki Nambiar, Soumyadeep Bhaumik

Contributions of authors

Conceptualisation, methodology, searching, study selection, formal analyses, writing (original draft preparation) - Sandeep Moola

Draft review - Jyoti Tyagi, Soumyadeep Bhaumik

Stakeholder engagement, Draft review - Priyanka Shah, Devaki Nambiar

Competing interests

The authors do not have any relevant competing interests.

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Email for correspondence

res@georgeinstitute.org.in

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List of abbreviations

ASHAs	<i>Accredited Social Health Activists</i>
CHWs	<i>Community Health Workers</i>
FGDs	<i>Focus Group Discussions</i>
IDIs	<i>In-Depth Interviews</i>
PPP	<i>PostPartum Practices</i>
LHWs	<i>Lay Health Workers</i>
WHO	<i>World Health Organization</i>

Executive Summary

In different cultures and regions in India, the postpartum period is generally considered a time for women to take on the role of mother and to recover. This period is viewed as critical and specific traditional beliefs and practices are observed to ensure recovery and avoid ill health in later years. However, some of these beliefs and practices may prove to be harmful and may impact negatively on the maternal and newborn health outcomes. This review identified and summarised some of the commonalities in harmful postpartum cultural practices across different regions and settings in India.

Overall, the prevailing cultural beliefs and practices across different regions in general show that the restoration of maternal health and appropriate infant care are the underlying themes. Postpartum practices are usually undertaken in the belief that these practices have a protective effect for both the mother and the infant. However, there may be some practices that may be considered harmful.

The common harmful postpartum practices identified from the review studies included: giving prelacteal feeds, delayed initiation of breastfeeding, discarding colostrum, restriction of certain hot and cold foods that may be nutritious, unhygienic practices related to cord care and personal hygiene.

It is important that healthcare providers, including health professionals and other health workers explore with their patients individually regarding their beliefs and practices. This understanding of traditional harmful postpartum practices can help inform the provision of culturally appropriate postnatal care and services.

Background

The World Health Organization (WHO) states that the postpartum period begins immediately after childbirth and lasts for around six weeks (approximately 42 days). (1) Dr. Sakeena K., District Medical Officer (DMO), Malappuram, Kerala, along with an action group of obstetricians (OB's), expressed concern over certain undesirable practices being encouraged by these lay health workers/attendants focussing on issues such as nutrition and breastfeeding. The DMO proposes to change the harmful behaviours and practices through the design of training modules for mothers and LHWs/attendants. The primary outcomes of interest relate to breastfeeding, diet and nutrition and some newborn care practices.

Some of the harmful postpartum practices reported in the literature include delayed initiation of breastfeeding, unhygienic cord care practices, giving prelacteal feeds, restriction on certain foods, and unsafe practices related to personal hygiene.

The DMO requested the rapid evidence synthesis team the George Institute for Global Health (TGI) India to conduct a rapid review of evidence on common harmful postpartum practices across India. Rapid Evidence Synthesis (RES) is an emergent research approach undertaken to provide synthesised information in shorter timeframes for decision making.

The objective of this RES was to identify and summarise the harmful practices followed by mothers and to a certain extent encouraged by lay health workers in different regions and settings across India. It is important to explore and understand the prevalent harmful practices across India to provide a comprehensive picture of the commonalities in relatively similar settings. Tailored strategies to discourage harmful practices in one setting or region in India may be transferable to other regions.

1. Methods

This section describes the methods used in the development of the policy brief.

Inclusion Criteria (PICO)

We included studies, which met the following criteria.

Population

Mothers aged above 18 years, and LHWs/attendants in the postpartum period (up to 40 days/6-8 weeks post-childbirth).

Concept

Undesirable and/or harmful postpartum practices (for e.g. withholding protein-rich foods or supplementation).

Context

Studies conducted only in India were considered for inclusion to identify common harmful practices in sufficiently similar settings. Studies conducted in other countries were excluded.

Study designs

Systematic reviews, both quantitative and qualitative. Primary studies such as cross-sectional surveys and qualitative studies were also considered.

Search methods

A comprehensive search was conducted in four major databases, i.e. PubMed, Cochrane Library, EMBASE and Health Systems Evidence. Unpublished literature sources including relevant organisation websites and Google Scholar were searched for identifying literature on common harmful postpartum practices in different regions and settings in India. The sources may include websites of relevant organisations such as the WHO (WHO Library Database (WHOLIS), HINARI); and other relevant Networks. The search was restricted to studies published in English language and no date limits were applied. Search strategies for each database are provided in Appendix 1.

Data collection and analysis

Selection of studies

The titles and abstracts of studies for inclusion were screened, which then enabled retrieval of full texts of eligible studies for examination and selection.

Assessment of risk of bias in included studies

Assessment of risk of bias was planned but not conducted.

Data extraction

A pre-designed data extraction form was developed based on the variables of interest, including study objective, study characteristics, and participant characteristics, and the key harmful beliefs and practices as reported in the study.

Data Synthesis

A narrative summary aided by tables wherever possible is presented to address the review question/s and document relevant findings.

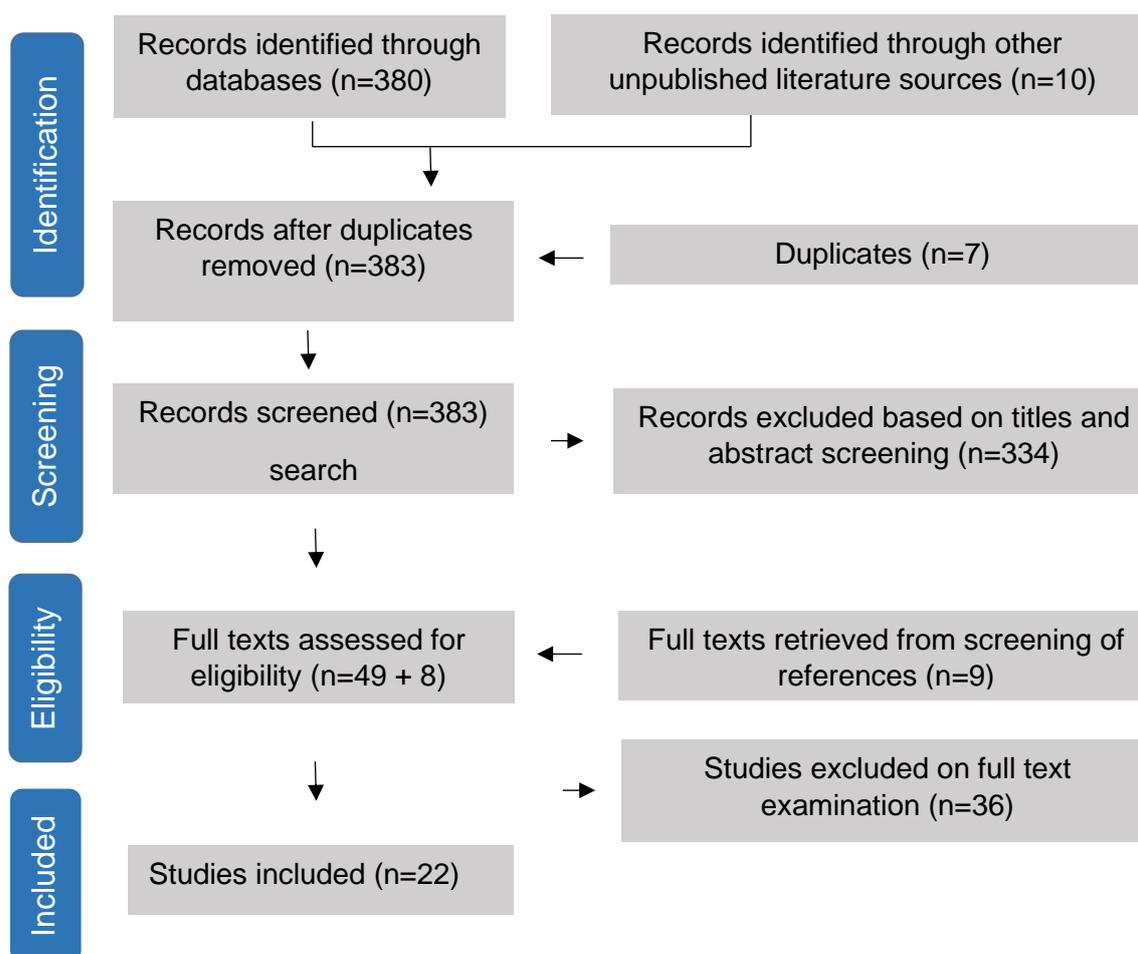
2. Results

Description of studies

Search Results and Study Selection

The searches resulted in the retrieval of 380 studies from electronic databases. Search from unpublished literature sources resulted in an additional 10 studies. Following removal of seven duplicates, the titles and abstracts of 383 studies were screened based on the pre-defined inclusion and exclusion criteria. Following the 1st phase of screening, 49 studies were considered potentially eligible for inclusion and full texts were retrieved for these studies. The reference lists of potentially relevant studies were screened (2nd phase) and reviewed for relevance. A further, eight studies were retrieved from screening of the relevant full texts. On full text examination, 36 studies were excluded due to various reasons: most common being the setting/country, and non-description of harmful practices. Majority of the excluded studies described traditional postpartum beliefs and practices but did not provide details of the harmful practices, particularly in relation to the outcomes of interest. Data were extracted and organised by common harmful postpartum practices for all relevant studies that met the inclusion criteria.

Figure 1 PRISMA Study Selection Flow Chart



Summary of evidence from included studies

Overall, 21 studies were included in the report that met the inclusion criteria. A systematic review(2) was identified but the review included one relevant study from India, which was already identified in the searches. Hence, the systematic review was not included. The studies were conducted in nine different states and one Union Territory (UT) in India including: Andhra Pradesh (AP), Delhi, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Odisha, Punjab, and Uttar Pradesh (UP). The majority of studies included cross-sectional surveys with data collected either using questionnaires or semi-structured interviews.(3-14) Some other studies included qualitative methods with in-depth interviews and focus group discussions (FGDs) used for data collection.(14-19) There were other studies that were of mixed-methods research design including surveys and qualitative study design.(20-24) The sample size across cross-sectional studies ranged from 92 to 2230, across qualitative studies from 9 to 36, and across mixed-methods studies from 31 to 320. Majority of the studies included postnatal mothers who recently delivered babies (within 1 month of delivery) as the study sample. Health workers such as TBAs, anganwadi workers, ASHAs, and other community level health workers were included as the study sample. Most of the studies were conducted in rural settings, followed by urban slum settings. A couple of studies were conducted in rural tribal communities.(15, 18)

The results are summarised under key topic areas of interest related to harmful postpartum practices found across various cultures and regions in India: personal care and hygiene; breastfeeding; diet and nutrition; and infant/newborn care.

Personal care and hygiene

In many regions across India, warming practices or specific bathing restrictions exist. Further, personal care and hygiene are ignored, particularly no handwashing before and after handling the baby, improper good bathing practices, use of unsterile cloths or wipes. (7, 15, 18, 24)

Breastfeeding

Sub-themes identified included: prelacteal feeds, colostrum and exclusive breast feeding and expressed breast milk. Overall, studies reported that although mothers had adequate knowledge regarding breastfeeding, feeding malpractices in the form of delayed initiation of breastfeeding, prelacteal feeds, and delayed weaning was widespread.

The practice of pre-lacteal feeds is found to be widely prevalent in India, as reported in almost all the studies. In majority of the studies, prelacteal feeds were given to most of the babies despite repeated awareness campaigns about its ill effects. honey was the most common prelacteal feed, followed by ghutti, sugar water/ajwain water, and religious water.(5, 7-12, 16, 18, 20, 21, 23) Common myth exists that, child imbibes qualities and/or looks similar to the persons who give prelacteal feeds.(7, 8, 17, 19) However, this practice may delay initiation of breastfeeding that may adversely affect establishment of lactation.(3, 7) Further, enteric infections may be introduced if pre-

lacteal feeds are not given in hygienic manner. Studies reported that most mothers did not initiate breast-feeding within one hour of birth.

Another common reason for delay in breastfeeding initiation in most studies is the belief surrounding colostrum.(3, 4, 8, 11, 14, 16-18, 21, 24) Colostrum is perceived to be indigestible and the practice of withholding colostrum is widespread.(3, 4, 8, 11, 14, 16-18, 21, 24) Other reasons for discarding colostrum include that it causes vomiting, and that it is considered old milk.(3)

Diet and Nutrition

Studies revealed that certain foods are prohibited because they are thought to cause illness, either immediately in the short-term or in the future for both the mother and the newborn.(15, 16) Mothers were told to avoid cold foods as they could cause the mother and baby to suffer from cold (e.g. oranges, banana, beans, curd, buttermilk, watermelon, grapes). Mother were also told to avoid hot foods as they could cause excessive body heat (e.g. fish, sambhar, rice, jack fruit, papaya, egg). (7, 13, 15, 16, 19) In several studies, mothers were asked to restrict postpartum water consumption, as it could cause prolonged bleeding and abdominal distension in the mother.(13, 16, 17, 22) The concept of hot and cold foods which may result in withholding nutritious food was also predominantly reported in a few studies.(13, 16, 17, 22) A common theme across many of the studies was the cultural restrictions related to food selectively imposed on women in the initial stages of lactation by mothers-in-law and other elderly female relatives in the family.(12)

Infant/newborn care

The sub-themes of interest identified from the studies included: cord care, and eye care. In some studies, with majority of home deliveries, the newborn was bathed immediately after birth.(7, 17, 19) Several studies reported on some hazardous practices related to cord care. This commonly involved application of oil or ghee or turmeric or other herbal mixtures to the cord.(3, 16, 21) The use of unsterile cloth or even fingers were used in large proportion of cases to wipe the eyes of the newborn in some studies. (7, 17, 19) However, studies reported that these unhygienic practices could be a potential source of infection.

3. Conclusion

Overall, findings from the individual studies suggest that despite greater awareness and knowledge, harmful or unsafe newborn care practices were prevalent and almost similar across different regions in India. Age-old traditions, and community beliefs and practices are considered as important contributors to harmful practices observed in many of the studies. The need to educate mothers and their families, and train health care providers including TBAs and other community level health workers on discouraging harmful postpartum practices becomes all the more important. Relevant community stakeholders including dais and local practitioners should be involved when discussing prevailing unhealthy practices in their communities. Since new mothers receive information and instructions from both the family members and elders, they should be targeted for counselling and behaviour change. This strategy may help tackle age-old beliefs and practices that are followed from generation to generation, irrespective of the setting and the location in India. Studies suggest that with careful tailoring of behaviour change messages to the local context, community level health workers can become effective facilitators of positive change.(7, 16, 18, 19, 21)

Early initiation of breast-feeding may provide protection against the risk of neonatal mortality, and hence pre-lacteal feeds are not recommended, as they delay the initiation.(7) Studies suggest that lactation is more likely to be successfully established if breastfeeding is initiated early because baby is reportedly most active during the first hour of birth.(2, 7, 19, 21) There is evidence to suggest that the time of initiation and adequate duration of breastfeeding is an important milestone in the development of the baby.(1, 25, 26) The chance of exclusive breastfeeding increases when babies are put to mother's breast within the first hour after birth, as the babies are reported to have good sucking reflex.(1, 8, 25, 26)

Pre-lacteal feeding is a widely prevalent nutritional malpractice in developing countries, particularly in India. Pre-lacteal feeding is reported to be a barrier for optimal breastfeeding practice that may increase the risk of neonatal morbidity and mortality.(7, 16, 18, 19, 21) The practice of pre-lacteal feeding is associated with different beliefs, misconceptions, and advice by the elderly family members. Beliefs and practices such as the concept of hot and cold foods should be discouraged. These practices may result in withholding protein rich foods like fish, eggs, sambhar, fruits, vegetables and withholding water, which may result in poor quantity and quality of breastmilk.(7, 16, 18, 19)

In some studies, the newborn was bathed immediately after birth; however, this practice may lead to hypothermia,(7) and should be discouraged. Cord care practices such as applying various home-based mixtures or applications may predispose the newborn to risk of neonatal tetanus.(2, 7, 19) Studies also reported that literate women appeared to be changing their beliefs about some of these practices. These women could therefore be used as change agents towards the elimination of harmful practices in their communities.

4. Policy options

- Health education and promotion programmes to discourage mothers and their family members from resorting to harmful postpartum practices should be based on an understanding of the potentially harmful customs and cultural beliefs.
- A checklist of traditional postpartum practices may be developed for postpartum mothers, their families and for newborn care.
- It is important that community level health workers such as the ANMs, Anganwadi, and ASHAs in rural India are supported to develop locally tailored behaviour change communication strategies.
- Health care workers need to acknowledge that notions of heating and cooling foods have far more value than bio-medically supported nutrition choices.

5. Recommendations for future research

- In future, research should focus on how health workers can be educated and trained to ensure new mothers use beneficial postpartum practices that promote good maternal and baby health.
- Qualitative research methods could be potentially used to identify harmful practices that might be amenable to change.

6. Next steps

- A dissemination event including a stakeholder consultation on the report is planned.

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8. Appendix

Appendix 1: Search Strategies

PubMed

No.	Search terms	No. of hits
#1	"postnatal care"[MeSH] OR "postnatal care"[tw] OR "post-natal care"[tw] OR "postpartum care"[tw] OR "postpartum program"[tw] OR puerperium[tw] OR "postpartum period"[tw] OR "postnatal period"[tw] OR "maternal care"[tw]	47496
#2	"lay health worker"[tw] OR "LHWs"[tw] OR "lady health worker"[tw] OR "traditional birth attendant"[tw] OR "TBAs"[tw] OR "lay midwives"[tw] OR "lay midwife"[tw] OR "community health worker"[tw] OR "CHWs"[tw] OR "traditional midwives"[tw] OR "traditional midwife"[tw] OR "community health agent"[tw]	3230
#3	harmful[tw] OR undesirable[tw] OR hazardous[tw] OR unsafe[tw] OR unhealthy[tw] OR detrimental[tw] OR risky[tw] OR deleterious[tw] OR noxious[tw] OR prejudicial[tw]	277750
#4	"systematic review"[tw] OR "meta-analysis as topic"[MeSH] OR "meta analy"[tw] OR "metaanaly"[tw] OR "systematic overview"[tw] OR "review literature as topic"[MeSH]	189866
#5	"cross-sectional stud"[MeSH] OR "cross-sectional stud"[tw] OR "cross-sectional design"[tw] OR "cross-sectional research"[tw] OR "descriptive stud"[tw] OR survey*[tw]	981428
#6	((("semi-structured"[tw] OR semistructured[tw] OR unstructured[tw] OR informal[tw] OR "in-depth"[tw] OR indepth[tw] OR "face-to-face"[tw] OR structured[tw] OR guide[tw] OR guides[tw]) AND (interview*[tw] OR discussion*[tw] OR questionnaire*[tw])) OR ("focus group"[tw] OR "focus groups"[tw] OR qualitative[tw] OR ethnograph*[tw] OR fieldwork[tw] OR "field work"[tw] OR "key informant"[tw])) OR "interviews as topic"[MeSH] OR "focus groups"[MeSH] OR "narration"[MeSH] OR "qualitative research"[MeSH] OR "personal narratives as topic"[MeSH] OR (theme[tw] OR thematic[tw]) OR "ethnological research"[tw] OR phenomenol*[tw] OR "grounded theory"[tw] OR "grounded study"[tw] OR "grounded studies"[tw] OR "grounded research"[tw] OR "grounded analysis"[tw] OR "grounded analyses"[tw] OR "life story"[tw] OR "life stories"[tw] OR hermeneutics[tw] OR heuristic*[tw] OR semiotic[tw] OR "data saturation"[tw] OR "participant observation"[tw] OR "action research"[tw] OR "cooperative inquiry"[tw] OR "co-operative inquiry"[tw] OR "field study"[tw] OR "field studies"[tw] OR "field research"[tw] OR "theoretical sample"[tw] OR "theoretical sampling"[tw] OR "purposive sampling"[tw] OR "purposive sample"[tw] OR "purposive samples"[tw] OR "lived experience"[tw] OR "lived experiences"[tw] OR "purposive sampling"[tw] OR "content analysis"[tw] OR discourse[tw] OR "narrative analysis"[tw] OR heidegger*[tw] OR colaizzi[tw] OR spiegelberg[tw] OR "van manen"[tw] OR "van kaam"[tw] OR "merleau ponty"[tw] OR husserl*[tw] OR Foucault[tw] OR Corbin[tw] OR Strauss[tw] OR Glaser[tw])	501526
#7	#1 AND #2 AND #3	12
#8	#7 Filters: Humans; English	11
#9	#4 OR #5 OR #6	1551571
#10	#7 AND #9	7
#11	#1 AND #3	678
#12	#11 AND #9 Filters: Humans; English	131

Cochrane Library

No.	Search terms	No. of hits
#1	"postnatal care" OR "post-natal care" OR "postpartum care" OR puerperium OR "postpartum period" OR "postnatal period" OR "maternal care"	4336
#2	"lay health worker*" OR "LHWs" OR "lady health worker*" OR "traditional birth attendant*" OR "lay midwife" OR "lay midwives" OR "TBAs" OR "community health worker*" OR "CHWs" OR "traditional midwives" OR "traditional midwife" OR "community health agent"	1026
#3	harmful OR undesirable OR hazardous OR unsafe OR unhealthy OR detrimental OR risky OR deleterious OR noxious OR prejudicial	20124
#4	#1 AND #2 AND #3	3
#5	#1 AND #3	92
#6	#1 AND #3 Filter: Systematic reviews	37

Embase

No.	Search terms	No. of hits
#1	"postnatal care"/de OR "postnatal care" OR "post-natal care" OR "postpartum care" OR puerperium/de OR puerperium OR "postpartum period" OR "postnatal period" OR "maternal care"	194480
#2	"lay health worker*"/de OR "lay health worker*" OR "LHWs" OR "lady health worker*" OR "traditional birth attendant*" OR "TBAs" OR "lay midwives" OR "lay midwife" OR "community health worker*" OR "CHWs" OR "traditional midwives" OR "traditional midwife" OR "community health agent"	7625
#3	harmful OR undesirable OR hazardous OR unsafe OR unhealthy OR detrimental OR risky OR deleterious OR noxious OR prejudicial	376577
#4	"systematic review"/de OR "systematic review*" OR "meta analy*" OR metaanaly* OR "meta-analysis" OR "systematic overview"	455775
#5	"cross-sectional study"/de OR "cross-sectional stud*" OR "cross-sectional design*" OR "cross-sectional research*" OR "descriptive stud*" OR survey*	1808102
#6	((("semi-structured" OR semistructured OR unstructured OR informal OR "in-depth" OR indepth OR "face-to-face" OR structured OR guide OR guides) AND (interview* OR discussion* OR questionnaire*)) OR ("focus group" OR "focus groups" OR qualitative OR ethnograph* OR fieldwork OR "field work" OR "key informant")) OR interview/de OR interview OR "focus groups" OR "narration" OR "qualitative research"/de OR "qualitative research" OR "personal narratives as topic" OR (theme OR thematic) OR "ethnological research" OR phenomenol* OR "grounded theory" OR "grounded study" OR "grounded studies" OR "grounded research" OR "grounded analysis" OR "grounded analyses" OR "life story" OR "life stories" OR hermeneutics OR heuristic* OR semiotic OR "data saturation" OR "participant observation" OR "action research" OR "cooperative inquiry" OR "co-operative inquiry" OR "field study" OR "field studies" OR "field research" OR "theoretical sample" OR "theoretical sampling" OR "purposive sampling" OR "purposive sample" OR "purposive samples" OR "lived experience" OR "lived experiences" OR "purposive sampling" OR "content analysis" OR discourse OR "narrative analysis" OR heidegger* OR colaizzi OR spiegelberg OR "van manen*" OR "van kaam" OR "merleau ponty" OR husserl* OR Foucault OR Corbin OR Strauss OR Glaser	851768
#7	#1 AND #2 AND #3 AND [embase]/lim NOT [medline]/lim	8
#8	#1 AND #3 [embase]/lim NOT [medline]/lim	1080
#9	#4 OR #5 OR #6 AND [embase]/lim NOT [medline]/lim	957459

#10	#7 AND #9	7
#11	#8 AND #9	210

Health Systems Evidence

No.	Search terms	No. of hits
#1	("postnatal care" OR "post-natal care" OR "postpartum care" OR puerperium OR "postpartum period" OR "postnatal period" OR "maternal care") AND (harmful OR undesirable OR hazardous OR unsafe OR unhealthy OR detrimental OR risky OR deleterious OR noxious OR prejudicial)	2*

**The two studies were already identified from Cochrane Library search (hence not included in the final numbers). The citations cannot be exported into endnote from this database. It has to be done manually*

Total no. of hits from three electronic databases = 131 + 37 + 210 = 378

Number of studies for title/abstract screening = 378 – 7 (duplicates) = 371

Google Scholar

No.	Search terms	No. of hits
#1	("postnatal care" OR "post-natal care" OR "postpartum care" OR puerperium OR "postpartum period" OR "postnatal period" OR "maternal care") AND ("lay health worker*" OR "LHWs" OR "lady health worker*" OR "traditional birth attendant*" OR "TBAs" OR "lay midwives" OR "lay midwife" OR "community health worker*" OR "CHWs" OR "traditional midwives" OR "traditional midwife" OR "community health agent*") AND (harmful OR undesirable OR hazardous OR unsafe OR unhealthy OR detrimental OR risky OR deleterious OR noxious OR prejudicial)	295
#2	On manual screening of Title and Abstract in Google Scholar	2

Additional search from other unpublished/grey literature sources

Search terms used and number of relevant guidelines retrieved from other grey literature sources

No.	Search terms	Number
#1	(postpartum OR postnatal) AND (harmful OR undesirable OR traditional)	10

Appendix 2: List of studies from India that reported on common harmful postpartum practices

Author, Year	Study objective	Study characteristics (study design, setting)	Participant characteristics	Perceived beliefs that may be unhealthy/undesirable/harmful
1. Angolkar 2015(3)	To determine the existing postnatal care practices in rural community	Cross-sectional survey using questionnaires. Rural Belgavi, Karnataka.	All women who delivered a live birth (at least live for one week after delivery) (n=390).	<ul style="list-style-type: none"> • 29% women discarded colostrum. Reasons for discarding colostrum included: causes vomiting, tradition, and old milk. • Only 26% women initiated breastfeeding within 1 hour. • Around 47% of the women applied some traditional home-made mixture on the umbilical cord.
2. Dehury 2018(15)	To study traditional practices related to post-partum care and child care during the post-partum period among tribal mothers in Vikramgad taluka in their socio-cultural context	Qualitative study (focus group discussions and in-depth interviews). Maharashtra, India	Young tribal mothers (from age 15 to 30 years) who have a baby within 1 year of age (n=9). Two community health volunteers	<ul style="list-style-type: none"> • There was a strong belief that fruits like cucumber, custard apple, and water melon should be restricted as these are regarded as cold food. They therefore prevent common cold, cough in the mother as well as the baby. • Women were told to not consume any vegetable or dal during the period after delivery (as they can cause digestive problems to the baby like flatulence and pain in the abdomen) • Illiterate mothers (or mothers who delivered at home) did not know the importance of perineal hygiene.

				<p>They used cloth napkins which were not properly washed.</p> <ul style="list-style-type: none"> • Detergent powder and water were used sometimes for perineal washing. • The mother cannot avoid sex at any time in the post-natal period, if the husband is alcoholic and wants to have sex. Women reportedly have little or no say in sexual matters.
<p>3. Dohare 2015(14)</p>	<p>To study the newborn care practices in a rural population; role of various health functionaries in promoting healthy newborn care practices and factors affecting it</p>	<p>Cross-sectional study but no details provided on the methodology. Rural setting (villages), Gautam Buddha Nagar, UP</p>	<p>Mothers, who delivered live or stillborn, within last two months</p>	<ul style="list-style-type: none"> • Reasons for delayed breastfeeding: mothers were told by others (mainly elders in the family) that breast milk secretion starts on third day. Therefore, they did not put the newborn to the breast. • There was a belief that feeding should be started when stars shine in the sky. • Reason for not giving colostrum: mother in-law/elderly female did not allow mothers.
<p>4. George 2018(16)</p>	<p>To explore cultural beliefs and practices regarding postpartum care of mothers and newborns in rural Karnataka.</p>	<p>Qualitative study (six focus group discussions and in-depth interviews). Rural maternity hospital, Ramnagara district, South Karnataka</p>	<p>Newly delivered mothers and their female caregivers (n= 6-8 in each FGD), and community level health workers (n= 4; Anganwadi teacher, ASHA worker, ANM and hospital nurse).</p>	<ul style="list-style-type: none"> • Family elders mentioned cold foods to be avoided as they could cause the mother and baby to suffer from cold (e.g. oranges, banana, beans, curds, buttermilk, watermelon, grapes). • Mothers were also told to avoid hot foods that could cause excessive body heat (fish, thick sambhar, rice, jack fruit, papaya, egg). • Postpartum water consumption was greatly restricted, as it was thought to cause prolonged

				bleeding and abdominal distension in the mother.
				<ul style="list-style-type: none"> • Caregivers believed that giving sugar water or honey or a mixture of ghee and milk as pre-lacteal feed would give the baby strength to suck. • Home remedies like castor oil and gripe water were suggested by caregivers. • Turmeric or dried cow dung was applied to hasten healing or treat umbilical discharge and castor oil or breast milk to eyes of the newborn to clear any discharge.
5. Gupta 2010(4)	To study the knowledge and practices related to newborn care in urban slums. To identify critical behaviours and barriers that influence the survival of newborns	Descriptive cross-sectional study. Urban slums, Lucknow, UP	All the households having mothers who gave birth to a live born within the last one year (n=524).	<ul style="list-style-type: none"> • Mothers had not given colostrum because they thought that it was harmful for their baby. • Reasons cited: ignorance about advantages of this, and prohibition of elderly female.
6. Iyengar 2008(17)	To explore family, community and provider practices during labour and delivery, focusing especially on practices likely to influence neonatal outcomes	Qualitative study (six focus group discussions and in-depth interviews). Two rural communities of Udaipur district, Rajasthan	Mothers about 1 to 2 months and 3 to 4 months after delivery (n=18), grandmothers and TBAs or dais	<ul style="list-style-type: none"> • No breastfeeding during the 1½ to 2 hours of observation after delivery. • Women in the communities believed that milk does not 'get down' (that is, let down does not occur) until about 3 days after delivery.
7. Kaushal 2005(20)	To evaluate the knowledge of mothers and grandmothers regarding breastfeeding	Mixed methods study – survey & FGDs. Ballabgarh in rural Haryana.	Mothers (n=22) & grandmothers (n=30).	<ul style="list-style-type: none"> • All mothers believed ghutti (laxative – a digestive medicine given to infants) cleanses the intestines and that colostrum is harmful.

	and health-seeking behaviour for neonatal sickness in a rural community			<ul style="list-style-type: none"> • Although some mothers were in favour of initiation of breastfeeds, they indicated their inability to do so because of contradictory opinions of their mothers-in-law. • Feeding malpractices existed in the form of delayed initiation of breastfeeding, supplementing breastmilk with ghutti/water, and delayed weaning was widespread in the community.
8. Kesterton 2009(21)	To explore local newborn care practices in the study area	Mixed methods study – survey & IDIs & FGDs. Rural Karnataka	Recently delivered mothers, elders (grandmothers), and birth attendants. (n=387)	<ul style="list-style-type: none"> • Newborn babies were almost universally given a pre-lacteal feed, regardless of the type of delivery attendant. • Traditionally castor oil is given, believed to clean out the babies' insides by making them pass a stool, followed by another mother's milk. • The colostrum is still usually removed, with little awareness of its protective properties. • Pre-lacteal feeds are frequently given, and breastfeeding delayed, even in institutional deliveries where support is limited. • Other potentially harmful newborn care practices include: unhygienic cord cutting, delayed breastfeeding and early bathing.
9. Khan 2009(5)	To determine the existing perinatal practices in an urban slum and to identify barriers to	Cross-sectional descriptive study. Periurban area of Nabi Nagar, UP	Recently delivered mothers (n=92)	<ul style="list-style-type: none"> • Prelacteal feed such as ghutti was given to 45.7% of the babies. • Hazardous delivery practices and undesirable feeding practices were common.

	utilisation of health services by mothers			<ul style="list-style-type: none"> Although breast feeding is the norm, giving prelacteal feeds is a deep-rooted custom in India and many studies have reported up to 100% of mothers giving prelacteal feeds.
10. Madhu 2009(6)	To describe the breastfeeding and newborn care practices in rural areas and to describe the factors affecting the initiation and duration of breastfeeding	Cross-sectional survey with questionnaires. Rural health care training center in Kengeri, rural Bangalore, Karnataka	Mothers with children who were 9 months old who came to the PHC for measles vaccination (n=100)	<ul style="list-style-type: none"> Mother were not able to initiate breastfeeding due to separation or due to advice from the mother-in-law.
11. Pati 2014(18)	To describe childbirth and newborn care practices in a tribal-dominated district	Qualitative study (IDIs). Tribal block in Nabarangpur district of Odisha.	Mothers who had babies aged <60 days and TBAs (n=55)	<ul style="list-style-type: none"> All the babies were given bath and scraped of vernix immediate after delivery, which was considered to be a cleaning procedure. In home deliveries, colostrum was discarded before giving the mother a bath. A common belief among the TBAs and mothers impurities need to be cleansed through prelacteal feeds.
12. Rahi 2006(7)	To find out the newborn care practices including delivery practices, immediate care given after birth and breast-feeding practices	Cross-sectional survey. Urban slum, Delhi.	Mothers of newborns (n=82)	<ul style="list-style-type: none"> Babies were given prelacteal feeds such as ghutti, honey or jaggery or even top milk. In case breast-feeding initiated later than 4 hours, reasons for this were enquired into. In 29 (63%) home deliveries, finger was used to clear the air passage of the newborn by the birth attendant. This can lead to introduction of infection and injury.

<p>13. Raman 2014(19)</p>	<p>To explore how 'cultural' practices and beliefs influenced women's pregnancy and childbirth experiences, their pregnancy and family planning choices, their self-care including nutrition through the perinatal continuum</p>	<p>Qualitative study (IDIs). Urban setting in Bengaluru, Karnataka.</p>	<p>Women who had recently been through childbirth (n=36).</p>	<ul style="list-style-type: none"> Unsterile cloth or cotton or even fingers were used in large proportion of cases to wipe the eyes of the newborn. Traditional messages including notions of 'hot' and 'cold' foods were found to be stronger than health messages.
<p>14. Randhawa 2019(8)</p>	<p>To study the breastfeeding practices and the influence of literacy and prevailing cultural factors on different aspects of breastfeeding.</p>	<p>Cross-sectional study. Badungar, a semi-urban area in Patiala, Punjab.</p>	<p>Mothers who were lactating (n=370)</p>	<ul style="list-style-type: none"> 24.86% mothers started breastfeeding within an hour after birth while 59.73% started breastfeeding within 1–6 hours of birth. Most common reasons for the delay in initiating breastfeeding were lack of knowledge which was found in 61.87% mothers. Colostrum was given by 42.71% of the lactating mothers to their babies. Most common reason for not giving colostrum: misconception of it being bad among 41.51% of mothers. Prelacteal feeds were given to 50.81% of the babies in the study. Most common prelacteal feed given was honey.
<p>15. Rao 2014(22)</p>	<p>To assess postnatal beliefs and practices with respect to food taboos, personal</p>	<p>Mixed methods study – survey (n=120) & FGDs (n=12). Rural Udupi, Karnataka</p>	<p>Women who had Given birth in the past three months. (n=110)</p>	<ul style="list-style-type: none"> Only 12 (10.9%) of the women drank less than 500 ml of water every day. Reasons for reduced consumption included: elder's

	hygiene, rest and confinement at home			advice and the belief that drinking water would cause distension of abdomen and would predispose them to catch a cold.
16. Reddy 2017(9)	To describe the perinatal care practices in a rural area	Cross-sectional survey using questionnaires. A rural area near Bengaluru, Karnataka.	Mothers who had given birth within 42 days of the date of the home visit by a field ANM. (n=2230)	<ul style="list-style-type: none"> The common pre-lacteal feeds given were animal's milk (12.8%) and honey (8.5%). Other pre-lacteal feeds given were rice water (3.3%), sugar water (3.5%) and formula feeds (1.5%). Almost one third (30.8%) of the mothers had given something other than breast milk after birth. Initiation of breastfeeding was also usually delayed for more than an hour and pre-lacteal feeding was very common.
17. Sankar 2014(10)	To identify the harmful maternal and new-born care practices by traditional delivery care givers and provide remedial teaching to modify them.	Descriptive exploratory research using semi-structured interviews. Selected home nursing agencies in Thiruvananthapuram City Corporation, Kerala.	Traditional delivery care givers (n=200)	<ul style="list-style-type: none"> Most of the subjects (62%) recommend prelacteal feeds for the newborns. Majority of subjects (83.3%) restrict fluid for the postnatal mothers to reduce abdominal distension and bleeding.
18. Singh 2012(23)	To study the role of TBAs in the antenatal and perinatal care in urban poor	Mixed methods study including survey and interviews. Urban slums in Delhi.	TBAs (n=31)	<ul style="list-style-type: none"> Only 15 (55.2%) advised the mother to initiate breastfeeding within 1 hour. A considerable number (21; 72.4%) said that prelacteal feeds should be given to the newborns.

19. Sinha 2014(24)	To estimate the knowledge, attitude and practices among mothers regarding newborn care and determined the factors associated with unsafe neonatal care practices by mothers.	Mixed methods study including survey and interviews. Mewat district, Haryana	Mothers (n=320) who had delivered a child during the previous seven months and ASHAs. (n=61)	<ul style="list-style-type: none"> • Several unsafe practices were reported: eye care, colostrum not being fed, no skin-to-skin contact, no exclusive breastfeeding, no handwashing before handling the baby, not breastfeeding immediately after birth. • A significant increasing trend of unsafe newborn care practices with regards to early bathing and cord care was reported with fewer ASHAs visits.
20. Swetha 2014(11)	To study the breastfeeding practices. To determine the factors affecting the breastfeeding practices.	Cross-sectional study. Urban slum and non-slum areas in Vijayawada, AP.	Mothers of child less than 24 months were included in the study. (n=304)	<ul style="list-style-type: none"> • In the present study higher number of the mothers in slum (37.5%) discarded the colostrum. Most common reasons for discarding colostrum were because of the advice given by the relatives and friends (43.02%). • 177 (58.22%) had received pre lacteal feeds, 93 (52.54%) children in slum areas and 84 (47.46%) children in non-slum areas had received prelacteal feeds. • Sugar water (33.33%) and honey (32.78%) were the most common type of pre lacteal feed given, animal milk, tinned milk and castor oil were other prelacteal feeds given. Significantly higher number of mothers who underwent caesarean section had given prelacteal feeds in slum and non-slum area.

				<ul style="list-style-type: none"> • Only 40.46% of the mothers initiated breast feeding within one hour of the delivery.
21. Subbiah 2012(12)	To assess the socio-cultural beliefs influencing breastfeeding practices among primi postnatal mothers in an urban slum	Descriptive study design. Urban slum in Delhi.	Primi postnatal mothers. (n=405)	<ul style="list-style-type: none"> • Only 8.4% subjects said breastfeeding started within one hour of delivery. 51.9 per cent subjects said that they wait for the sister-in-law to come and clean the breasts with grass soaked in raw cow's milk and assists to initiate the breastfeeding. • 57.5% of subjects said that they give sugar water as first feeding. 23.5% of them gave honey to the baby soon after birth. They used spoon (68.9%) for feeding. The reason said was that something needs to be given to the baby to quench the baby's thirst till the sister-in-law comes and performs the ritual of initiation of breastfeeding.
22. Venkateswarulu 2019	To assess postnatal beliefs and practices with respect to food taboos, personal hygiene, rest and confinement at home	Cross-sectional study with questionnaires. Urban Nandyal, Kurnool, AP.	Post-natal mothers in the urban field practicing area (n=140)	<ul style="list-style-type: none"> • Some practices like reduction in the quantity of food intake and the reduction in the amount of milk and water consumption, advocated by elders. • Many women didn't maintain personal hygiene.

FGDs - Focus group discussions; IDIs – In-depth interviews; UP – Uttar Pradesh; ANMs – Auxiliary nurse midwives; TBAs – Traditional birth attendants; ASHA - Accredited Social Health Activists; AP – Andhra Pradesh