

Care for newborns by primipara mothers in developing countries: scoping review

Ova Jayanti^{1*}, Farida Kartini², Sri Ratnaningsih³

^{1,2,3}Faculty of Health Sciences, 'Aisyiyah University of Yogyakarta,, Indonesia

¹Ovajayanti58@yahoo.com*; ²faridakartini@unisayogya.ac.id; ³ratna_ningsih@unisayogya.ac.id

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Abstract

Almost every parent feels the joy of welcoming their healthy baby. On the other hand, the presence of the baby also raises worry and sadness regarding his care. Scoping Review aims to map the literature on the care of newborns by primiparous mothers in developing countries. Review literature based on the Arksey and O'Malley framework using Pubmed, Scencedirect, Wiley, and Gray Literature. Based on the mapping results from the 7 articles included, 3 themes were obtained, namely sociodemographic characteristics, aspects of newborn care and cultural factors.

Keywords: *newborn care, primiparous mothers, developing countries*

INTRODUCTION

The newborn period is a period of adjustment from intra-uterine life to extra-uterine life. Switch from absolute dependence on mothers to physiological independence (Aydin, 2017), the postpartum period is a critical transition period for mothers, babies, and families physiologically, emotionally, and socially. In both developed and developing countries, the main concern for mothers and babies is mostly during pregnancy and childbirth, while the actual situation is just the opposite because the risk of morbidity and mortality of mothers and newborns is more common during the puerperium (Prawirohardjo, 2016)

According to the World Health Organization (WHO) the world's neonatal mortality rate decreased from 5 million in 1990 to 2.4 million in 2019, where 47% of deaths occurred in children under 5 years of age, one-third died within 24 hours of birth and three-quarters of deaths in the first week of life (Hug *et al.*, 2019). The highest contributor to neonatal deaths occurred in Sub Saharan Africa with 27 deaths per 1,000 live births in 2019, Central and South Asia with 24 deaths per 1,000 live births (Hug *et al.*, 2019). Where a child born in Sub Saharan Africa or South Asia is 10 times more likely to die in the first month of life than a child born in a developed country with high income (Tekelab *et al.*, 2019)

According to the United Nations Children's Fund (UNICEF), in recent decades, mortality in infants aged 0-28 days to children aged five years is still high among low-income developing countries (Tekelab *et al.*, 2019). The risk of newborn death varies between and within countries. Babies born to families with low economic status are twice as likely to die during the newborn period than babies born to families with middle and upper-economic status. Babies born to mothers without education are at almost twice the



risk of dying at birth compared to babies born to mothers with at least secondary education (Goldenberg & McClure, 2015). In other words, infant mortality does not only occur due to medical causes such as prematurity and pneumonia but also to sociodemographic conditions.

The birth of a child poses a fundamental challenge to the established structure of family interactions and the care of the newborn. When a baby is born for the first time, the mother may feel confused about caring for one (Erfina *et al.*, 2019). Even routine and simple tasks such as prevention of heat loss, umbilical cord care, and breastfeeding can make mothers anxious, especially if the mother has never spent her time on things related to baby care before (Herawati, 2015). The main objective of the study is to collect and map the literature on newborn care by primiparous mothers in developing countries.

RESEARCH METHODS

This review uses the methodology for review and classification suggested by (Arksey & O'malley, 2005) and further developed by (Levac *et al.*, 2010) There are five stages, namely: (A) identification of research questions, (B) identification of relevant studies, (C) selection of articles, (D) data charting, (E) presentation of data and results.

Stage 1: Identification of Research Questions

The use of PEOS helps to identify key concepts in the focus of the question, develop appropriate search terms to describe the problem, and define inclusion and exclusion criteria. PEOS is used to identify elements of qualitative research questions so that PEOS is judged appropriate to use.

Arksey & O'malley (2005) suggest starting a broader research question and then narrowing it down to focus on the scope of the literature you want to know. The research question used is how is the care of newborns by primiparous mothers in developing countries?

Stage 2: Identification of Relevant Studies

To be as complete as the search terms, first consulted with an expert, namely a supervisor, then searched using 3 databases (Pubmed, Sciencedirect, Wiley) and gray literature from google scholar and specific websites from WHO and UNICEF. A search combination that is developed literally on keywords, medical terms, and the main subject combined with a bundle of AND or OR operators. To specify the search literature search is limited to journals published in the last 10 years.

Stage 3: Selection of Articles

Inclusion and exclusion criteria are needed to filter the number of articles produced to ensure relevance (Levac *et al.*, 2010) Inclusion criteria include primary research, articles in English and Indonesian, articles that discuss the experiences of primiparous mothers, both from the perspective of fathers and grandmothers in carrying out care for newborns. Exclusion criteria included opinion articles, articles that discussed infants with abnormalities or risks, and articles that discussed mothers with postpartum blues.

A search with 3 databases and gray literature found 363 articles. Then the researchers imported the article into the reference manager and deleted the duplicate articles. Furthermore, the researcher conducted a two-step screening for determining the eligibility of citations based on inclusion and exclusion criteria. First, review the title and abstract, then the researcher will review in full text to determine the feasibility of the articles that have been selected in the first step (Figure 1).

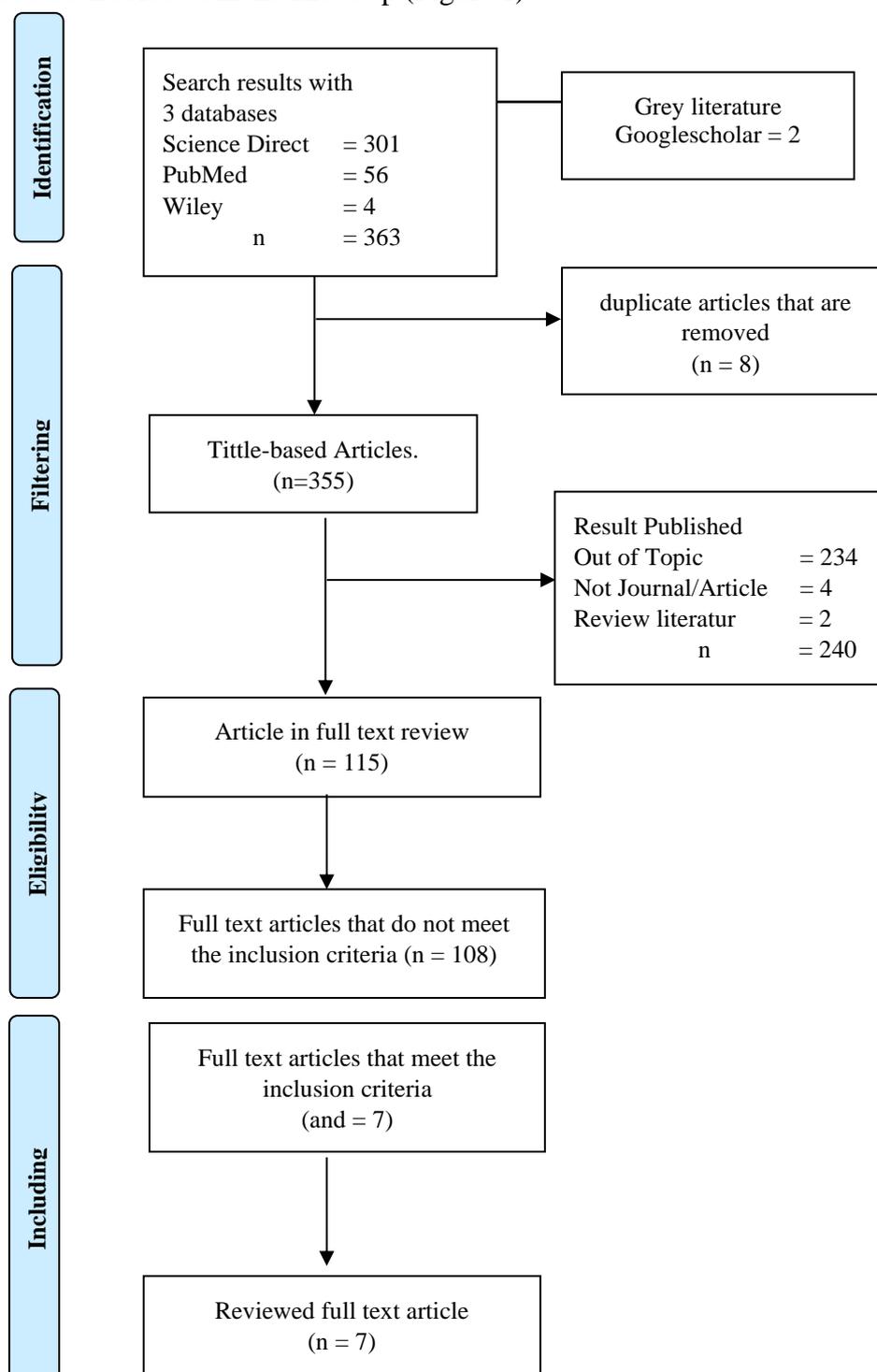


Figure 1. Prisma Flow Chart

Stage 4: Charting Data

Table 1. Charting Data

No	Author/Year/Title	Country	Aim of Study	Method	Result
1	(Al-Sagarat & Al-Kharabsheh, 2017) <i>Traditional Practices Adopted By Jordanian Mothers When Caring For Their Infants In Rural Areas</i>	Jordanian	To find out about the traditional practices adopted by mothers in rural Jordan when caring for their babies	Qualitative study with in-depth interviews. Consisting of 30 postpartum mother participants	Mothers practice traditional baby care which involves bathing the baby by adding salt to the baby's bath water, swaddling the baby, caring for the umbilical cord and jaundice.
2	(Erfina et al., 2019) <i>Indonesian adolescent women's health care needs as they transition to motherhood :A qualitative study</i>	Indonesia	To explore the experiences of primiparous mothers during the puerperium and transition to motherhood.	A qualitative study with in-depth interviews, consisting of 11 participants, 10 married mothers and 1 single person.	The result is four themes that emerge, namely:breastfeeding problems,helplessness in caring for babies, consultation with health workers, health care needs for transition to young mothers.
3	(Shrestha et al., 2015). <i>Nepalese primiparous mothers' knowledge of newborn care</i>	Nepal	to explore the level of newborn care knowledge and investigate the relationship between newborn care knowledge and demographic variables among Primiparous Mothers	Cross-Sectional Study with a questionnaire. Consisting of 276 Primiparous Mother respondents	moderate level of knowledge about newborn care (56%), respondents with the lowest knowledge of breastfeeding (44%) and respondents with high enough knowledge about immunization (78%). Mother's education and socioeconomic status have a significant relationship with knowledge of newborn care.
4	(Kabwijamu et al., 2016) <i>Newborn Care Practices Among Adolescent Mothers In Hoima District, Western Uganda</i>	Western Uganda	Explore newborn care practices and associated factors among young mothers in Western Uganda.	Cross sectional study with a questionnaire. Consists of 410 young mothers.	It is known that the practice of newborn care is quite high in breastfeeding 60.5% and thermal protection 67.2%. Meanwhile, 31% of the umbilical cord care is still not optimal. And for related factors, namely knowledge, history of childbirth and male care in the postnatal period.
5	(Misgna et al., 2016)	Ethiopia	The purpose of this study was to	Community-based cross-	As many as 80.4% of respondents have

			<p><i>Knowledge, practice and associated factors of essential newborn care at home among mothers in Gulomekada District, Eastern Tigray, Ethiopia,</i></p>	<p>assess maternal knowledge, practices and factors related to newborn care at home in Gulomekada Tigray District.</p>	<p>sectional using a questionnaire, consisting of 296 respondents.</p>	<p>good knowledge about essential newborn care and 92.9% have good practice of newborn care. About 60% of mothers apply butter or oil to the baby's umbilical cord stump. Marital status, education, employment and residence are significantly associated with newborn care.</p>
6	<p>(Mersha et al., 2018)</p> <p><i>Essential newborn care practice and its predictors among mother who delivered within the past six months in Chench District, Southern Ethiopia</i></p>	<p>Southern Ethiopia</p>	<p>The aim of this study was to assess newborn care practices and to identify factors influencing newborn care practices in Chench District, Southern Ethiopia.</p>	<p>Mixed method cross sectional study and qualitative study with FGD. 630 participants used a one-stage cluster sampling method and 18 participants in 3 FGDs.</p>	<p>The results of this study found that 38.4% of mothers had good practices in the essential care of newborns. Of these neonates, 52.9% received cord care, 71.0% received optimal thermal care and 74.8% received good neonatal feeding</p>	
7	<p>(Callaghan-koru et al., 2013)</p> <p><i>Newborn Care Practices At Home And In Health Facilities In 4 Regions Of Ethiopia</i></p>	<p>Ethiopia</p>	<p>To assess newborn care practices among women who delivered live babies in the period 1 to 7 months prior to data collection.</p>	<p>Household survey with cluster sampling.</p>	<p>Newborn care was generally exclusive breastfeeding (87.6%), baby wrapping (82.3%), and umbilical cord care (65.2%). Practices that contradict WHO recommendations include bathing babies within the first 24 hours of life (74.7%), buttering the umbilical cord (19.9%), and removing colostrum (44%).</p>	

Stage 5: Presentation of Data and Results

In line with Arksey & O'malley (2005) did, researchers took a three-phase approach, namely compiling, summarizing, and reporting the results. First, a descriptive numerical analysis includes the number of articles, year of publication, and type of study. Second, strengths and weaknesses in the literature are identified through thematic analysis of the studies attached to the report. The final phase is a review of the implications of the findings regarding future research, practice, and policy.

RESULTS AND DISCUSSION

The results of the scoping review, based on the 7 included articles. 2 of them are qualitative research, 3 cross-sectional, 1 mixed method, and 1 household survey. The majority of the research was conducted in Ethiopia. Ethiopia is the country with the highest neonatal mortality rate in the world (Berhe *et al.*, 2017)

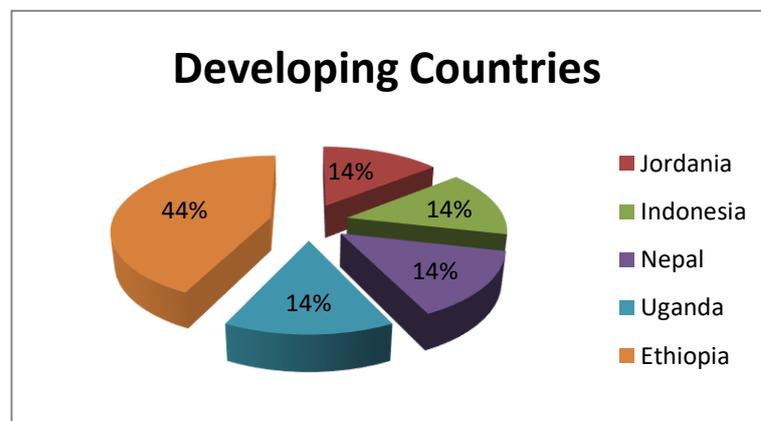


Figure 2. Developing Countries

The mapping results of 7 articles according to the study criteria are believed to have high credibility and reliable results. Researchers set several themes as follows:

Table 2. Mapping Themes

Themes	Articles Number
Sociodemographic characteristics	
Knowledge	5,6,7
Education	5
Economic status	3
Residence	1,5
Helplessness	2
Resources	1,2
Aspects of newborn care	
Umbilical cord care	1,4,5,6
Breastfeeding	2,3,4,6,7
Prevention of hypothermia	1,4,6,7
Immunization	3
Cultural factors	
Traditional practice	1,5,7

1. Sociodemographic Characteristics

Based on the sociodemographic characteristics of primiparous mothers. The majority of mothers live in rural areas (Al-Sagarat & Al-Kharabsheh, 2017; Callaghan-koru *et al.*, 2013; Kabwijamu *et al.*, 2016; Misgna *et al.*, 2016; Shrestha *et al.*, 2015) with a fairly high level of knowledge of newborn care by primiparous mothers (Callaghan-koru *et al.*, 2013; Mersha *et al.*, 2018; Misgna *et al.*, 2016). Higher awareness has a significant relationship with education. The higher the mother's education level, the more knowledge she has. Conversely, the lack of maternal education will hamper the mother's attitude developments towards the newly introduced values for providing care for newborns (Misgna *et al.*, 2016)

Mother's knowledge is also related to economic status. Mothers with high economical-status have a high awareness of newborn care. Meanwhile, mothers with low economic status have less awareness of newborn care as well (Shrestha *et al.*, 2015). To find out the economic status of a family, it can be seen from income. It is known that 12 out of 13 women reported having a low household income per year (Suplee *et al.*, 2014) Low income makes it difficult for mothers to meet their needs, especially for their babies. If this situation continues. It is very vulnerable for primiparous mothers to experience depression during postpartum. As a result, mothers are willing to choose unsafe abortion to suppress family needs if the baby is born (Gbogbo, 2020)

In developing countries, women's autonomy in making decisions is very low (Jahan *et al.*, 2015). In addition to the high knowledge of primiparous mothers. Primiparous mothers must also be given space to express themselves. Primiparous mothers should be given the opportunity. Instinctively, women have maternal instincts, naturally growing and developing in every mother. Sometimes what you want is different from what you get. Young mothers feel helpless because they are not given the opportunity to be involved and participate in caring for their babies (Erfina *et al.*, 2019). On the other hand, mothers also have dualistic responsibilities between cultural expectations and the health system (Buser *et al.*, 2020). Mothers are interested in engaging in traditional care rituals. Meanwhile, at the same time mothers are encouraged to make visits to health facilities (Buser *et al.*, 2020)

Based on sources of information on newborn care, mothers get information from maternal and child health (KIA) books (Erfina *et al.*, 2019), health workers (Callaghan-koru *et al.*, 2013), parents, grandmothers and grandfathers (Al-Sagarat & Al-Kharabsheh, 2017). Mothers consider whatever their parents and senior siblings tell and teach is the right and right action.

2. Aspects of Newborn Care

The aspects of essential newborn care are umbilical cord care, prevention of hypothermia, breastfeeding, and immunization. Of these five aspects, there are four aspects of care that need to be reviewed by researchers, namely umbilical cord care, prevention of hypothermia, and breastfeeding. When viewed from the knowledge of newborn care in developing countries is quite good. However, in its implementation, it needs to be highlighted again because there are still many traditional newborn treatments that are not suitable evidence-based.

3. Traditional Factors

Some of the wrong traditional practices can be a cause of morbidity and mortality for newborns, especially in developing countries. In Jordan traditional practices are generally present in society, especially those related to the care of newborns, the grandparents in Jordan bathe their newborn grandchildren in saltwater, they believe that bathing with salt water aims to prevent babies from diaper rash (Al-Sagarat & Al-Kharabsheh, 2017)

In umbilical cord care, a common practice of primiparous mothers is the use of neomycin powder, mothers believe that neomycin powder will accelerate umbilical healing (Al-Sagarat & Al-Kharabsheh, 2017). Traditional umbilical cord care is also performed by young mothers in West Uganda. It is known that more than 50% of mothers give neomycin powder, herbal medicine, and the most commonly used salty water. Only a few mothers perform clean and dry cord care (Kabwijamu et al., 2016)

Traditional practices that contradict WHO recommendations are also found in Ethiopia, where 296 post-partum mothers, about 60% of mothers still apply butter or oil to the umbilical cord (Misgna et al., 2016). Mothers bathed their babies in the first 24 hours of life quite high (74.7%) and removed colostrum (44%). In some traditional societies, colostrum is considered damaged milk and is not good for babies because it is yellowish.

CONCLUSION

This scoping review presents a synthesis of studies describing the care of newborns by primiparous mothers in developing countries. Based on sociodemographic characteristics, the majority of primipara mothers have a high enough knowledge, upper secondary education level, have incomes below the national wage, live in rural areas, and have a minority role because they are considered incapable of caring for babies. In addition, the care of newborns in developing countries is also influenced by cultural factors.

In some countries the cultural influence is still very high especially in terms of matters related to the care of newborns. Cultural influences lead to a gap between knowledge and practice. Some articles mention that the knowledge of primipara mothers is quite high but has low newborn care practices. Like a grandmother in Ethiopia mixing salt in a baby's bath water, mothers in jordania give spices to the umbilical cord. Cultural influences are inevitable in life. Therefore, cultural perception must be seen from two sides, first the culture can be seen as giving a positive effect and culture can also be seen as giving a negative effect. It is not a culture that has to adapt to health sciences, but health sciences that adapt to people's culture. Health workers should be able to provide understanding to the public about the care of newborns in accordance with evidence based.

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