The Impact of Family Participation in Hospital Care on Neonatal Health Outcomes in Low- and Middle-Income Countries: A Systematic Review

Julie De Meulemeester[1*a], Anna Reiter[1*b], Matthew O. Wiens[2], Jessica Duby[3]

1. Faculty of Medicine, McGill University, 2. Cent. Int. Child Health, BC Children's, 3. Dept. of Pediatrics, MUHC

**Denotes equal contribution*

Funding: a) McGill Global Health Scholars Program, b) McGill Faculty of Medicine Summer Research Bursary

Background and Aim

The neonatal mortality rate in low- and middle-income countries (LMICs) remains high. The shortage of healthcare workers has been recognized as a contributing factor. In LMICs, parents are vital partners in improving neonatal outcomes. Parental involvement may be especially important for those sick & small neonates who require hospitalization after birth. We performed a systematic review to evaluate the impact of family participation in the care of hospitalized neonates in LMICs.

Methods

Six databases were searched from inception to June 2020. Randomized & non-randomized trials were eligible if parents performed ≥1 roles traditionally done by healthcare staff. The primary outcome was hospital length-of-stay. Two reviewers performed study selection, data extraction, & bias assessment.

Figure 1: PRISMA Flow Diagram

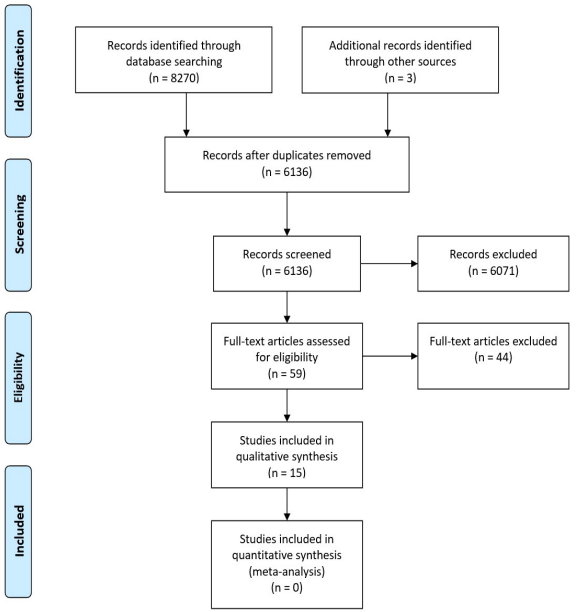
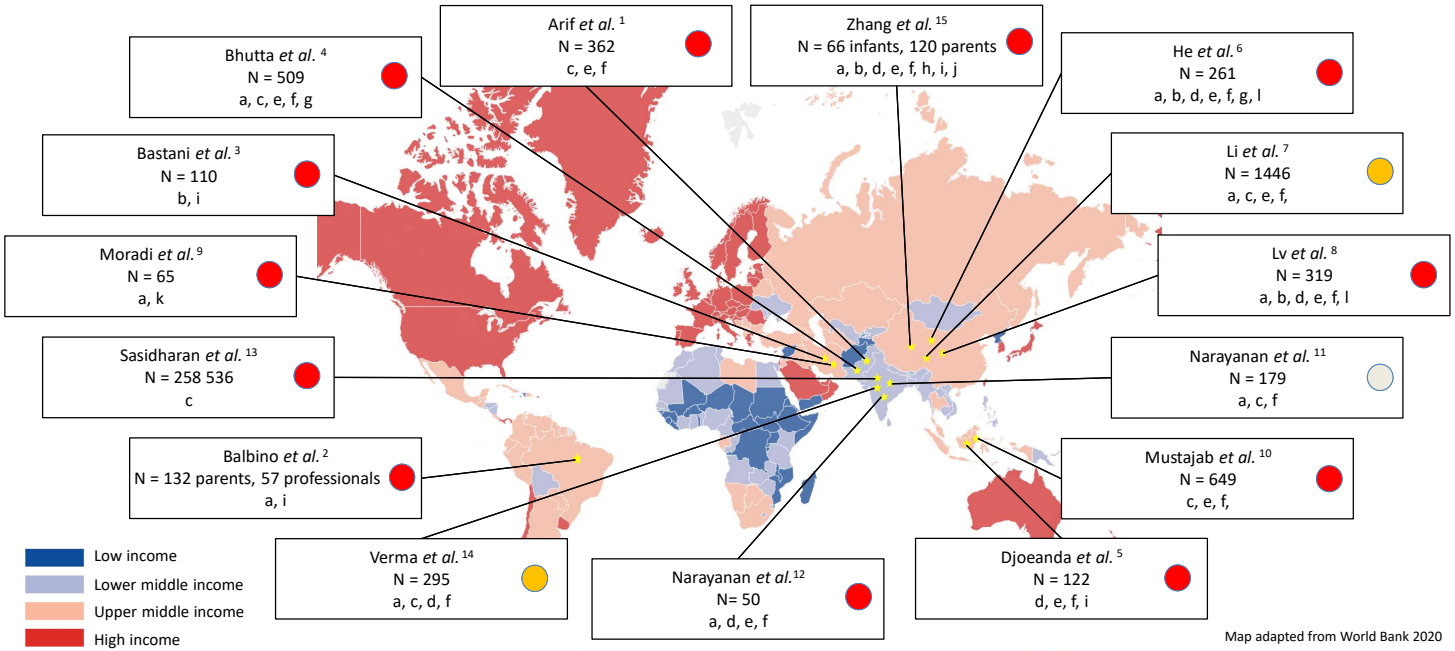


Figure 2: Characteristics of Studies



Map adapted from World Bank 2020

Results

Fifteen studies (6 randomized, 9 non-randomized) from 2 lower-middle and 4 upper-middle income countries were included (Fig. 1 & 2). Trials were heterogeneous in terms of study design, type of family participation and outcomes. Most trials (n=13) had a high risk of bias (Fig. 2). Families participated in a range of activities, including checking for danger signs, monitoring intake and output, and bathing. Family participation did not consistently reduce hospital length-of-stay (n=10) but did improve neonatal mortality (n=7), growth (n=9) and parental well-being (n=5). No significant adverse effects were reported.

Risk of Bias

- Low (RoB 2 or ROBINS I)
- Some concerns (RoB 2), moderate (ROBINS I)
- High (RoB 2), serious or critical (ROBINS I)
- No information

Outcomes Measured

a. Length of stay
b. Readmission
c. Mortality
d. Breastfeeding
e. Growth
f. Morbidities
g. Respiratory support
h. Neurodevelopment
i. Satisfaction
j. Family coping
k. Discharge preparedness
l. Cost of care

Conclusions

Family participation did not consistently improve length-of-stay but had positive effects on other outcomes. The overall quality of evidence is low. No studies were performed in low-income countries. The evidence is insufficient to recommend a specific type of family involvement.

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