

# Introduction of breastmilk substitutes prior to discharge after delivery of newborns in health facilities in African and Asian cities

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## INTRODUCTION

Prelacteal feeding soon after birth is associated with delayed initiation of breastfeeding, and in-hospital breastmilk substitute (BMS) supplementation negatively impacts subsequent duration and exclusivity of breastfeeding. Breastfeeding support from health professionals improves infant feeding outcomes, while BMS marketing within the health care system undermines mothers' confidence in breastfeeding. Immediate skin-to-skin contact and initiation of breastfeeding within 1 hour of birth are key interventions for supporting optimal breastfeeding through infancy and may lead to more successful breastfeeding outcomes among mothers who deliver through Caesarean section. Despite the recognized health impacts, only 45% of infants globally begin breastfeeding within an hour of birth.

## OBJECTIVES

1. Measure the prevalence of maternal exposure to infant feeding messages and promotional practices for commercial infant foods both within and outside the health care systems of each city.
2. Determine the rates of prelacteal feeding of BMS before discharge from health facilities among mothers of newborns in Phnom Penh, Cambodia; Kathmandu Valley, Nepal; Dakar Department, Senegal; and Dar es Salaam, Tanzania.

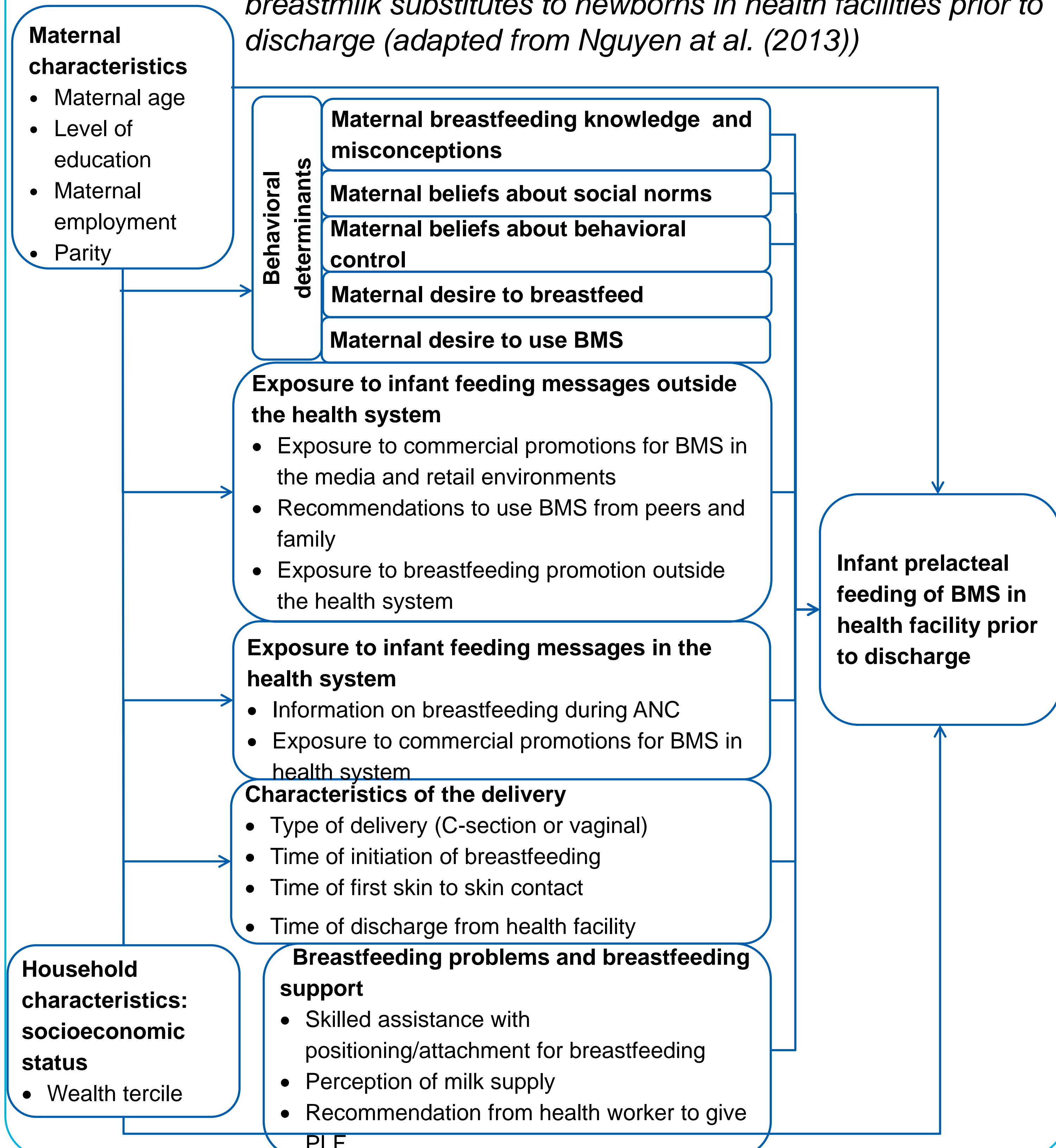
## METHODS

A cross-sectional survey among mothers being discharged from health facilities after delivery of a newborn at a representative sample of facilities in each city (288 mothers in Dakar, 295 in Dar es Salaam, 304 in Kathmandu, and 306 in Phnom Penh). Data were gathered through structured interviews on delivery experiences, early breastfeeding practices, as well as exposure to infant feeding messages and commercial promotions for infant foods.

A sample size was calculated to detect a 10% prevalence rate of exposure to BMS promotions within delivery facilities, with a measurement error of  $\pm 5$ , standard of error of 0.0255 and assuming a design effect of 2.

Unadjusted odds ratios were generated using bivariate logistic regression. For variables where these were significant at  $p < 0.05$ , chi-square tests were conducted for proportions.

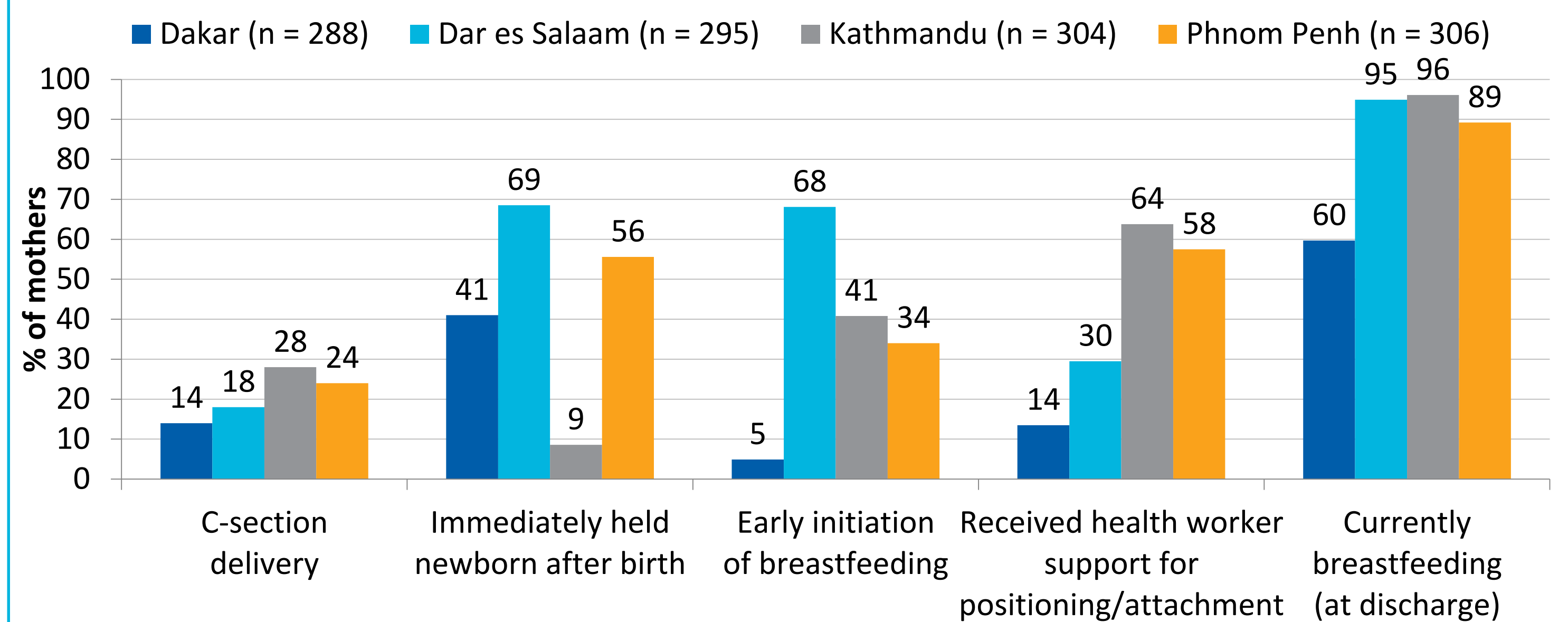
**Figure 1: Conceptual framework for determinants of prelacteal feeding of breastmilk substitutes to newborns in health facilities prior to discharge (adapted from Nguyen et al. (2013))**



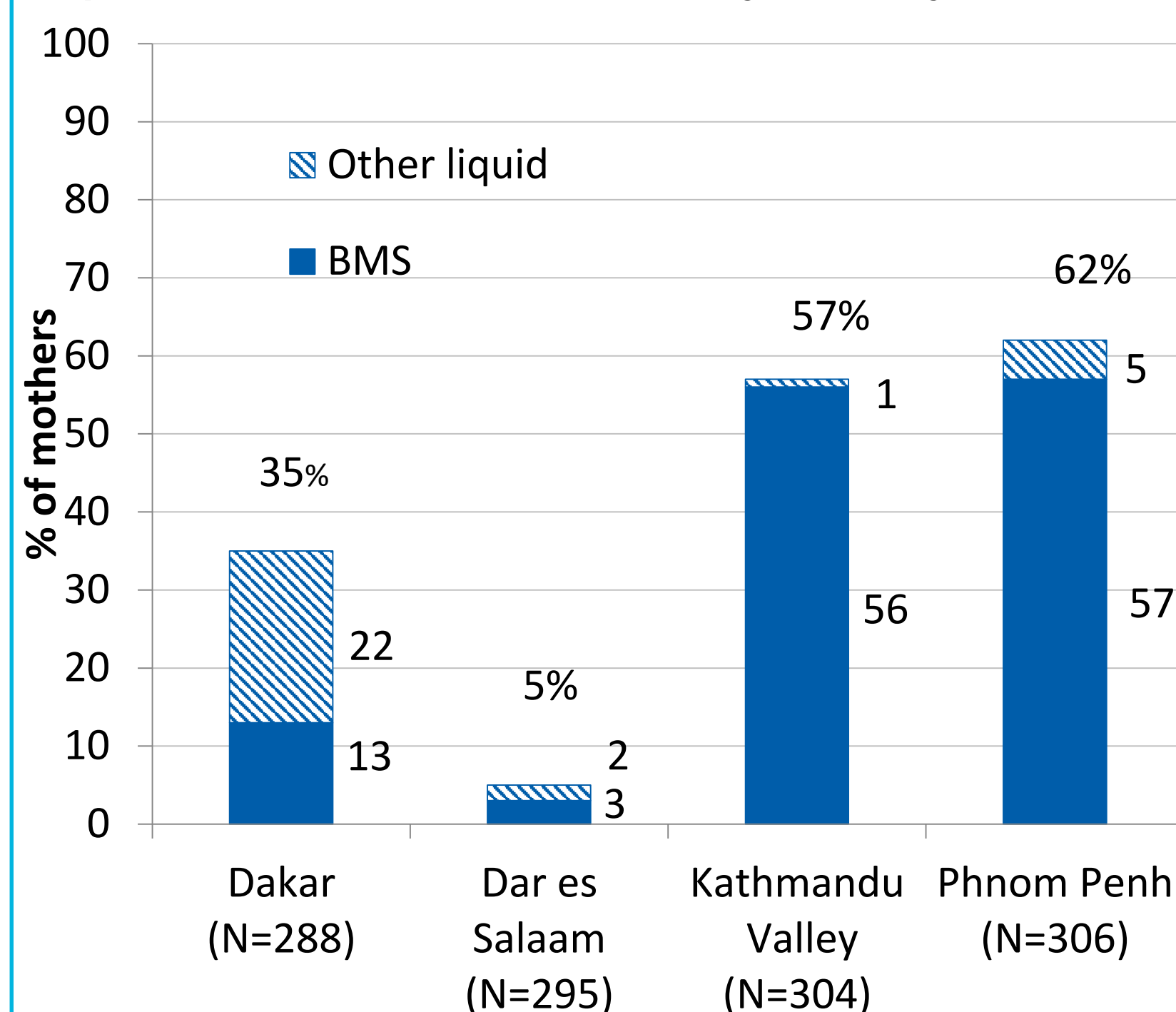
## RESULTS

Mothers in all four cities reported observing commercial promotions for BMS inside health facilities: 38.2% of those interviewed in Phnom Penh, 18.1% in Dakar, 7.9% in Kathmandu and 6.1% in Dar es Salaam.

**Figure 2: Delivery and early breastfeeding experiences reported by mothers discharged after delivery**



**Figure 3: Proportion of mothers who provided a prelacteal feed in delivery facility**



Delivery by C-section was associated with introduction of BMS prior to discharge in Phnom Penh, Kathmandu Valley, and Dakar ( $p < 0.001$ ). In Kathmandu Valley and Dakar, receiving a health professional's recommendation to use BMS was associated with prelacteal feeding ( $p < 0.001$ ). Associations with education and socioeconomic status were also found (Figure 4).

**Figure 4: Unadjusted associations with prelacteal feeding of BMS in health facilities prior to discharge**

	DAKAR (n=288)		KATHMANDU (n=304)		PHNOM PENH (n=306)	
	P-value	OR (95% CI)	P-value	OR (95% CI)	P-value	OR (95% CI)
Educational attainment						
• None/primary only	0.002	0.31 (0.15 – 0.65)	0.009	0.52 (0.31 – 0.85)	0.004	0.50 (0.31 – 0.81)
• Tertiary	0.009	3.17 (1.34 – 7.51)	<0.001	3.77 (1.91 – 7.47)	0.049	1.79 (1.00 – 3.19)
Wealth tercile						
• Low (compared to mid/high)	0.017	0.17 (0.04 – 0.72)	0.009	0.53 (0.33 – 0.85)	<0.001	0.32 (0.18 – 0.55)
• High (compared to low/mid)	0.006	2.74 (1.33 – 5.63)	<0.001	2.49 (1.50 – 4.13)	0.001	2.38 (1.42 – 3.99)
BMS recommendation from health professional	<0.001	175.0 (37.47 – 817.24)	<0.001	20.33 (10.99 – 37.60)	0.026	2.29 (1.10 – 4.76)
Caesarean delivery	<0.001	100.26 (35.44 – 283.60)	<0.001	12.35 (5.89 – 25.89)	<0.001	3.13 (1.71 – 5.70)

Mothers were interviewed upon health facility discharge. Results do not present a comprehensive view of feeding practices in the first three days of life for mothers discharged early.

## CONCLUSIONS

Exposure to BMS promotion was reported by mothers in all four sites. Many mothers delivering in health facilities in Phnom Penh, Kathmandu and Dakar are not optimally breastfeeding their newborns, and are at greater risk of introducing BMS if their newborn is delivered by caesarian section or if a health professional recommends prelacteal feeds. These mothers may need additional support to initiate and continue breastfeeding before discharge from health facilities after delivery. More research into the reasons for recommending prelacteal feeds is needed.