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## Predictors of Successful Early Breast-Milk Expression among Mothers of Preterm Infants Receiving Pasteurised Donor Human Milk at the Shariah Compliant Human Milk Bank in Tertiary Hospital

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### ABSTRACT

**Introduction:** Breast milk is the optimal source of nutrition for preterm infants, providing immunological protection and improved clinical outcomes. When mother's own milk is insufficient, pasteurised donor human milk (PDHM) is used as a bridge. However, early initiation of maternal breast milk expression is crucial for establishing long-term lactation. Limited local data exist on factors influencing successful expression in mothers of preterm infants. **Methods:** We conducted a retrospective observational study at the Shariah compliant human milk bank in tertiary hospital between October 2021 and August 2025. Mothers of preterm infants (<37 weeks gestation) admitted to the neonatal intensive care unit and receiving PDHM were included. Data collected included sociodemographic characteristics, obstetric history, delivery mode, expression timing and frequency, breastfeeding support practices, and infant clinical factors. Successful early expression was defined as initiation within 24 hours postpartum. Logistic regression identified independent predictors. **Results:** Among 85 mothers, 64.7% achieved early expression, a rate higher than in some comparable neonatal settings. Independent predictors were iatrogenic preterm birth (aOR 13.4,  $p=0.003$ ) and lactation counselling within 24 hours (aOR 47.9,  $p=0.025$ ). Hypertensive disorders of pregnancy and the presence of Baby Friendly Hospital Initiative (BFHI) practices were also associated with early initiation. Early expression was linked to improved feeding outcomes,

with significantly higher exclusive maternal milk feeding at discharge (74.6% vs 25.4%,  $p=0.012$ ).

**Conclusion:** Early breast milk expression was strongly influenced by type of preterm birth and timely lactation counselling. Early initiation improved exclusive maternal milk feeding at discharge. Hence, strengthening structured counselling and consistent BFHI practices should be prioritised to optimise breastfeeding outcomes in preterm infants.

**Keywords:** Breast milk expression; breastfeeding outcomes; lactation counselling; pasteurised donor human milk (PDHM); preterm infants