

A Novel Double Electric Breast Pump with a Positive Impact on Milk Output and Pumping Duration in a Home Use Trial



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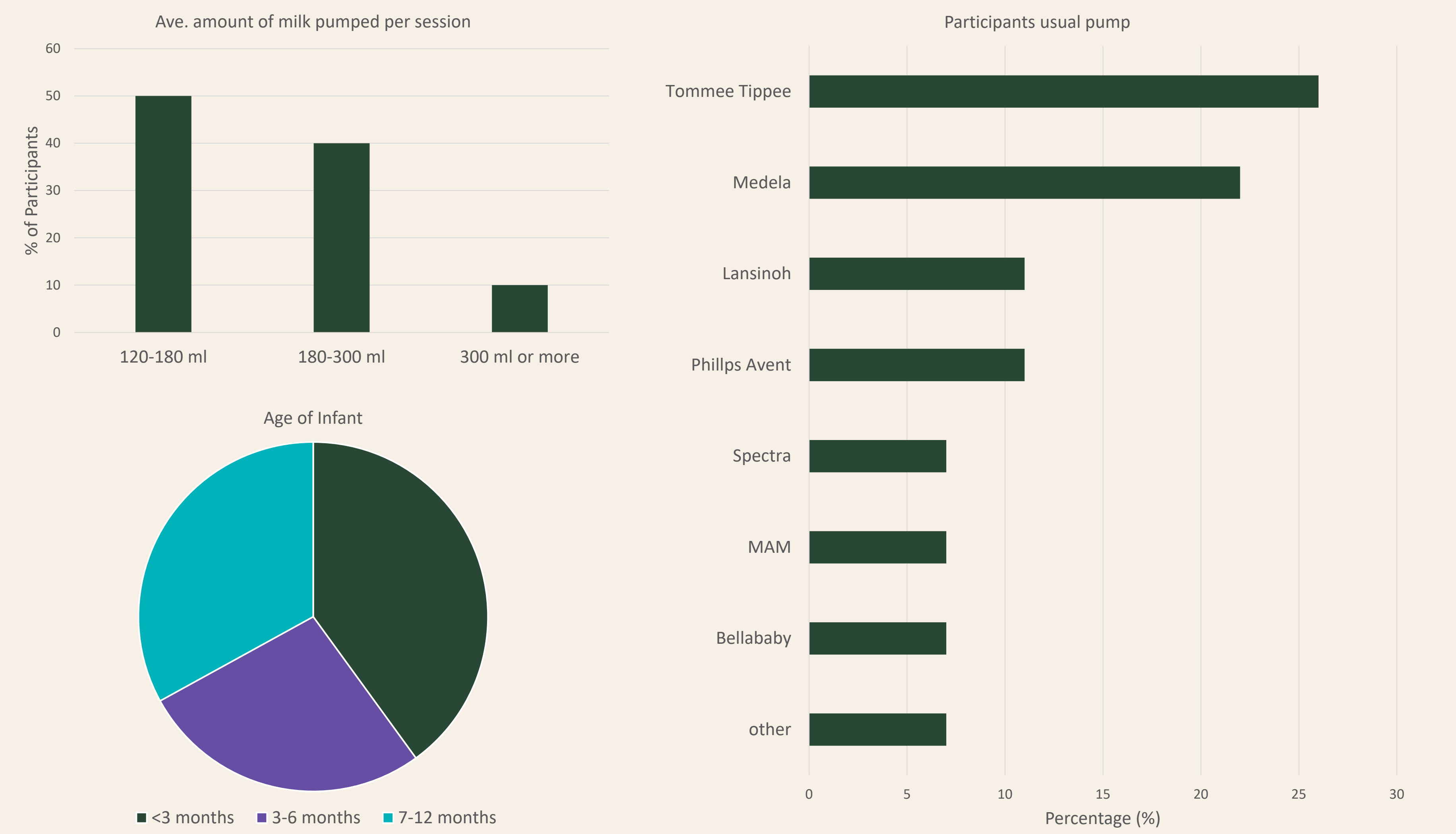
Background

Electric breast pumps are a useful tool to allow continued feeding of expressed breastmilk when the mother is apart from her child, as well as other instances where the baby cannot feed directly from the breast. A breast pump should meet a variety of efficacy and performance metrics in order to provide the optimum experience for a pumping mother. The objective of this study was to trial a novel electric breast pump to determine its performance and perceived efficacy in a home use environment.

Methods

Study Design: Thirty UK-based lactating women trialled a new double electric breast pump (DEBP)* in a home use study, allowing data to be captured on pump acceptability and performance under normal use conditions. All participants had established milk supply and were already using a DEBP ≥2x per day. Participants used their existing breast pump for 3 days, before switching to the trial DEBP for 3 days. Amount of milk expressed per day was recorded. Data was also collected on various attributes, including perceived pump efficacy and performance. 27/30 participants completed the study.

Participant Demographics



Results:

Pump Performance

Use of the trial DEBP* resulted in expression of an average of 9 % more milk (157 ml v 144 ml, in 5 % less time (19.1 v 20.1 mins),when comparing the average of ~290 sessions using current and trial pump. The trial DEBP was 14 % more efficient (Volume/Time – 8.2 ml/min v 7.2 ml/min) than the participants current pumps over these same sessions. For each session triallists were also asked whether they felt like they had produced more milk than normal in that session and the data confirmed that they felt subjectively that they had produced more with the trial pump.

Total (27)	no. of sessions	Average Time	Average Volume expressed	Average pumping rate
Participants using Current Pump	292	20.1 mins	144 ml	7.2 ml/min
Participants using Trial Pump	290	19.1 mins	157 ml	8.2 ml/min
Difference		5% quicker	9% increase	14% increase

89% felt the trial pump helped them fully empty the breast

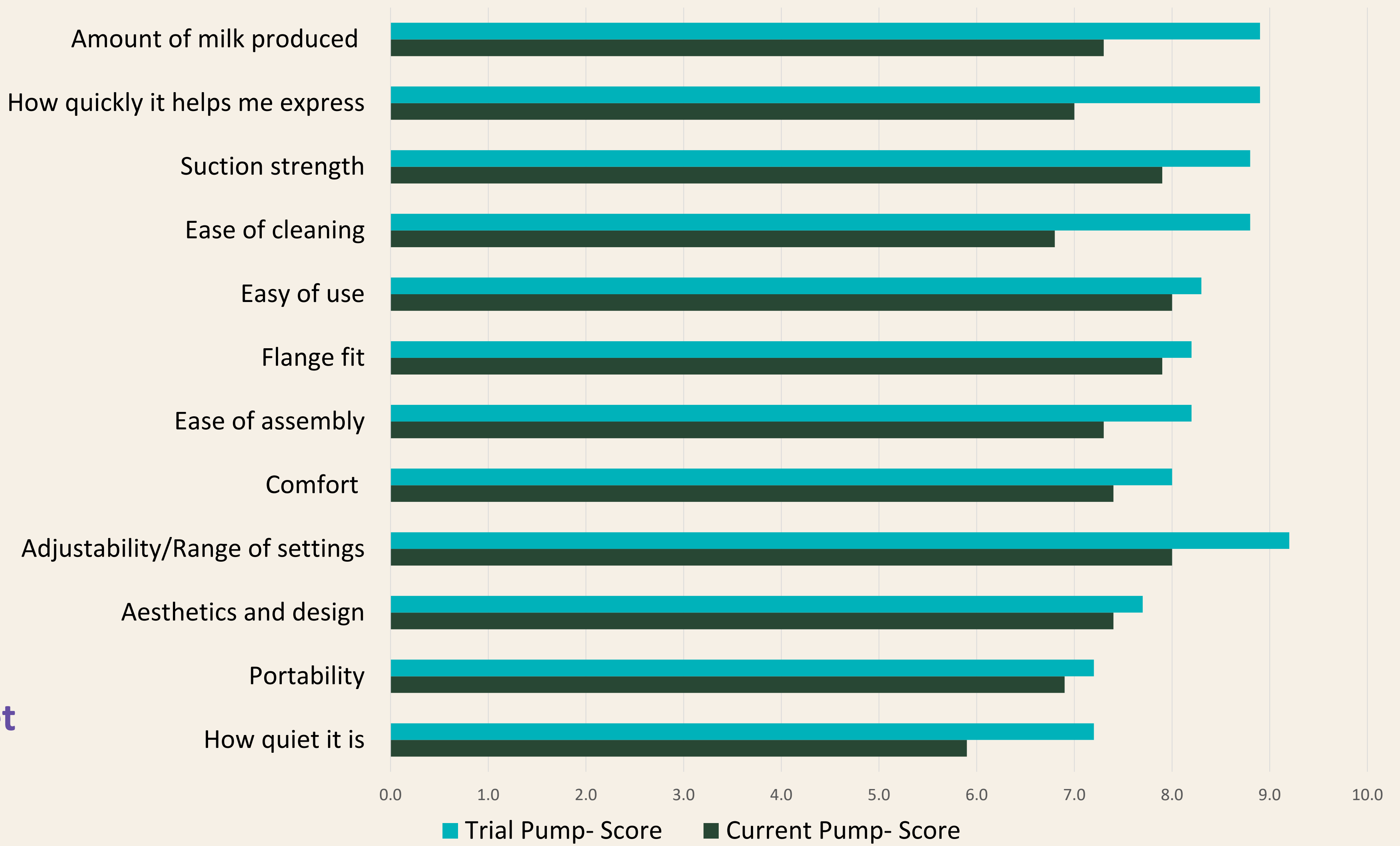
100% Felt the trial pump would help them meet their Breastfeeding Goals

CONCLUSIONS

The data from this small pilot study suggests this novel DEBP* offers an effective solution for expression of breastmilk. Feedback on all key pump attributes evaluated was positive and exceeded the performance of the participant's current pump. Speed and amount of milk extraction were particularly favourable, which was supported by the quantitative data collected, where it was noted that a switch to the trial DEBP led to a significant increase in milk production. The pump also scored highly on a number of pump functionality parameters such as suction strength, ease of assembly and settings. The significantly increased rate of milk extraction was particularly interesting given the small sample size. The authors will look to further validate this observation in a larger controlled clinical study, to validate the data collected in this pilot study.

User Experience

Participants were asked to rate a number of key attributes for each pump following use, using a 10 point scale. Overall, the trial pump was rated better by participants than their current pump on all attributes. 93% of participants stated they would recommend the pump to others and 100% of participants felt it would help them meet their breastfeeding goals.



*DEBP- Lansinoh Smartpump 3.0