Comprehensive Validation of the LiquidGoldConcept Lactation Simulation Models by Breastfeeding Medicine Experts

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Background & Objectives

Traditional breast simulators are not realistic and cannot provide comprehensive lactation training.

LiquidGoldConcept (LGC) developed the Lactation Simulation Models (LSMs) to teach health students and providers how to manage common breastfeeding issues.

Until this study, the LSMs have not been systematically validated by breastfeeding medicine experts.

Methods

"Expert" Study Participants: Breastfeeding medicine experts attending Advanced Breastfeeding Medicine Clinical Case Symposium led by the MilkMob in July 2018 in Ottawa, Canada.

LSM Validation Survey:
- Each participant evaluated one Essential and one Advanced LSM.
- Participants received a $100.00 Amazon gift card upon completion.

Part 1. Participant demographics
Part 2. LSM feature identification on breast line-drawing
Part 3. Evaluation of look, feel, and realism (Likert scale, 1-7)

Evaluation of LSM Look, Feel, and Realism of Experience

![Figure 1. Novice and expert ratings of LSM realism of look, feel, and pathologies](image1)

![Figure 2. Novice and expert ratings of the overall utility of the LSM for breastfeeding education](image2)

![Figure 3. Expert rating of performance of breastfeeding skills on LSMs](image3)

What did you like about the LSMs?
- Novices were not able to correctly identify benign or abnormal features such as plugged ducts, lipstick-shaped nipples, freckles, scars (P < .05).
- Experts were able to correctly identify the location of benign or abnormal features—plugged ducts, mastitis, abscess, milk bleb, accessory breast tissue, nipple fissures, Montgomery glands, surgical scars (P > .05).

Limitations
- The LSM prototypes in 2017 (novice study) were different and of lower-fidelity than the 2018 models.
- The LSM validation survey was modified and expanded for expert evaluation for assessment of various lactation-related pathologies.
- Some of the experts had purchased or seen the LSMs previously.
- The novices only had 10 minutes to fill out the survey.
- One of the models had a malfunction of the engorgement system, thus these data were excluded from analysis.

Contact Information & References

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Conflicts of Interest: Anna Sadovnikova is the CEO and majority shareholder of LiquidGoldConcept, Inc., a breastfeeding and lactation education company.