

Chidiebele P Ojukwu, 2020 Abstract

EMG And Biomechanical Analysis Of Recommended Breastfeeding Positions

Objective

For maternal and infant benefits, cradle, cross-cradle and football hold positions are used during breastfeeding (BF) tasks. The study evaluated the trunk lean angles and **electromyographic (EMG)** activities of the trunk muscles during three BF positions to determine which position poses the less risks to musculoskeletal disorders.

Results

The study concluded that the football BF position may pose less risk of BF-related musculoskeletal disorders in nursing mothers, as compared to the cradle and cross-cradle BF positions

Participants and Researchers

The study included 25 nulliparous females (aged 18 to 35).

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Methods

In the study, 25 nulliparous females carried a six-kg weighing infant, while simulating breastfeeding (BF) tasks in each of the three BF hold positions for five minutes respectively. During each task, forward and lateral trunk lean angles were measured with a single inclinometer. Activities of the right and left erector spinae (ES) and external oblique (EO) muscles were also measured via **surface electromyography (sEMG)**. **EMG** signals were simultaneously recorded from both parts of the ES and EO muscles during each trial and were sent to a **NeuroTrac MyoPlus2** device (Verity Medical) using **NeuroTrac** software (version 5.0.117). The average EMG values were expressed as percentages of the MVC values prior to the statistical analyses.

Cross-cradle position resulted in significantly higher anterior trunk lean and right ES and EO muscle activities. Conversely, cradle position significantly elicited highest activities in the left ES and EO muscles. Left trunk lean angles were highest during the football position.

The full abstract can be found at

https://www.researchgate.net/publication/341421905_Biomechanical_analysis_of_the_three_recommended_breastfeeding_positions