



# Early Skin-To-Skin Contact for Mothers and Their Healthy Newborn Infants

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## REVIEW

<b>Keywords:</b>	Breastfeeding; Maternal Behavior; Mother-Child Relations; Infant, Newborn; Skin-to-Skin Contact.	<b>Received on:</b>	March 02, 2025.
		<b>Revised on:</b>	April 10, 2025.
		<b>Accepted on:</b>	April 22, 2025.
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**Citation:** Bano T. Early skin-to-skin contact for mothers and their healthy newborn infants. Chron Biomed Sci. 2025;2(2):46. Available from: <https://cbosciences.us/index.php/cbs/article/view/46>.

*The problem* of the study looks to be related with the nursing but it is more significant to the change in social norms of the societies and more significant to the social behaviors and their impact on next generation. Purpose of conducting the research was well explained and idea was taken from animal studies which presented innate behaviors of newborns are shown to be dependent on the habitat and compulsory for their survival [1]. Quantitative approach used looks to be appropriate where there were three groups in this randomized control trial and a time frame was chosen and explained for infants in each group for skin-to-skin contact with their mothers.

The research variables were not explained but already existing standard tools were mentioned in the methodology as Matthews infant breast feeding tool [2] was used to observe effective breastfeeding, in breastfeeding rates one of the two options i.e. Labbok 1990 or Thulier 2010 five point scales were used post birth to two weeks and then after 3 months to six months [3][4]. Using either option from two scales for assessment of one variable compromise the outcomes of the study and uniformity must be maintained. Maternal breast temperature and engorgement were the additional variables mentioned and measured separately.

Problem statement was introduced properly and answer to the problem may provide an insight to the nursing practice in advising the mothers more appropriately

about the benefits of contact with their infants. Assumption was to observe the intimate contact inherent as described in neuroscience that evokes neuro-behaviors and ensure to fulfill biological needs of newborns. Intervention in this study was found to be advantageous in breast feeding outcomes like stability in cardio-respiration, reduced infant crying, and absence of short or long term side effects. On the other hand unequal methodologies, differences in implementation of interventions and different outcomes were the limitations of this study.

*Review of literature* of this study is comprehensive logical and very relevant to this problem, further relationship to the purpose was also tried to managed but undue details and results of studies were unnecessarily discussed. As the study was published in 2014 but literature hardly any literature published in past five years was used to describe the background and introduction of the study. Review was adequately paraphrased and too many quotes were avoided. On the other hand review may be used to conduct another research with more comprehension. Characteristics of a good literature review may contain identification of problem domain, critical discussion of work to be presented, identification of gaps in the knowledge and then rationale leading to objectives [5].

*Protection of human rights* has become backbone of modern research as it became the concern after two years

of the German war when 16 physicians were accused torture, sterilization, intentional mutilation, murder and other nefarious crimes [6]. Selection of human subjects without any discrimination is core element in protection of human rights including freedom of participation without any greed [7]. Presently this study was based on review of prior studies therefore informed consent was not necessary but for better presentation permission must be obtained from institutional ethics committee and same may be mentioned in the methodology which was missing.

*Theoretical and conceptual framework* to carry out the work was mentioned but the justification and theory of the framework was not explained but different references are used to explain the framework which is difficult for readers to understand. Though research problem flow naturally and grouped in line and defined concepts are consistent with theory.

*Hypotheses* of present study include implementation of breastfeeding affects positively thermoregulation, physiology, neuro-behavior, metabolic function and cardio-respiration of newborn. These hypotheses naturally flow from theory and research problem. Almost each hypothesis was considered and sufficiently addressed in the questionnaire. Hypotheses were worded clearly as standard, already approved and published tools were used to support the predictions.

*Sampling* in all studies conducted on mature infant gestational ages and normal delivery between 34-37 gestational weeks was included in this study. Sample selection procedures were not clearly defined further types of outcomes were unnecessarily divided into primary, secondary, infant and mother outcomes which are not properly defined. Authors have the choices to select the papers from different journals however, electronic search engines were used by all to find papers. Sequence generation was done to avoid the bias and assessed by dividing low risk, high risk and unclear biases. Similarly concealment in allocation, blinding, data with incomplete outcomes, selective reporting and other sources of biases were defined among low, high and unclear clauses. Overall risk of bias was also measured through Higgins interventions [8] references 1 to 6 and likely impact of findings was considered. As no any number of papers included in the methodology therefore no idea of appropriate sample size could be obtained. Study results could be generalized to mothers and childcare of infants further controls were not used in this study and no any method to minimize the sampling errors was explained.

*Research design* was a systemic review in which all the randomized control trials were used and quasi experimental study designs were excluded from this

study. A systemic review must contain defined characteristics like pre-defined criteria of inclusion eligibility of study, a clear methodology to reproduce, search the papers systematically, validity assessment of findings like bias, an orderly presentation of features, and findings of studies [9], which are not ideally followed but very much closely observed in present review. Study design is appropriate in relation to purpose of research and has potential effects of unwanted variables which were not discussed properly to control these effects. Data of case reports are also of great importance at times [10]. Sufficient information for replication of study is provided and recommended.

*Data Collection* form was designed to collect the information and at least two review authors extracted the data from each study and discrepancies were resolved through discussion where required, further data was entered in a software to maintain accuracy. The rationale of using the instrument was not properly explained further the process of testing and reliability was not well elaborated though bias was discussed at large. On the basis of results instrument looks suitable to be used for study sample further results using instrument are also indicative and sufficient to be used. Fixed effect meta-analysis was used combine data for reasonable assumption of similar underlying effects of selected studies.

*Quantitative Analysis* was done using Review software manager, further heterogeneity of data was also observed with same software. Random effect analysis method was used to present an average treatment effect taking confidence interval as 95%. Subgroup analysis including gestational age at birth and groups of skin to skin contact were also analyzed by using interaction techniques. Sensitivity analysis was also performed to observe the quality of methods used among selected studies though, none of the selected study met defined standard criteria at all alone therefore cautions in the interpretation of results were mentioned. Undue explanations regarding the details of included studies and excluded studies was presented which lose the interest of readers. No tables were presented and only theoretical explanations were used which were also difficult to understand. Correctness of statistics could not be established as overall results are difficult to understand as no any graphical presentation was given.

The study concludes that all maternal and infant outcomes were presented one by one in descriptive manners and confidence intervals and level of significance were also calculated among all groups further average risk ratio of each variable was also presented which were appropriately generalized. Lack of consistency among the conclusions of all studies remains

the major problem to present a defined conclusion. Though, it is pertinent to clear the nursing staff that intervention improved the breastfeeding outcomes. There are other neurological advantages of skin to skin contact of mother to child increased the awareness among nursing staff to guide the parents with evidence. Recommendations are not well supported by the results and need further investigations on the basis of proper sample size.

Authors started with very nice research question and hypotheses but fail to obtain the uniform studies, further used different tools by different authors and fail to present methods and analysis in attractable manners. No figures, tables and arranged results were described. Discussion could not meet the overall average criteria further authors failed to present a comprehensive recommendations and way forward.

### ***Competing interests***

The author declares no competing interests.

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