Attachment in Breastfeeding Versus Formula Feeding

Karlee Kent  
*Carroll College, Helena, MT, kkent@carroll.edu*

Grace Wilkins  
*Carroll College, Helena, MT, gwilkins@carroll.edu*

Hailey Peterson  
*Carroll College, Helena, MT, hbpeterson@carroll.edu*

Follow this and additional works at: [https://scholars.carroll.edu/surf](https://scholars.carroll.edu/surf)

Part of the *Maternal, Child Health and Neonatal Nursing Commons*

Kent, Karlee; Wilkins, Grace; and Peterson, Hailey, "Attachment in Breastfeeding Versus Formula Feeding" (2018). *Carroll College Student Undergraduate Research Festival*. 23.  
[https://scholars.carroll.edu/surf/2018/all/23](https://scholars.carroll.edu/surf/2018/all/23)
Attachment in Breastfeeding Versus Formula Feeding  
By: Karlee Kent, Hailey Peterson, & Grace Wilkins  
Carroll College Nursing Department

**QUESTION:** In infants, how does exclusive breastfeeding compared to formula feeding affect overall maternal-infant bonding within the first year of life?

**BACKGROUND:**
- Attachment: “the emotional bond between infant and caregiver, who is typically the mother” (Bowlby, 2008, as cited in Amani, 2016, p. 506).
- Mother-infant bonding: corresponds with maternal sensitivity, which is “[r]esponding appropriately and punctually to the infant’s needs [to aid] in the development of trust and attachment” (Johnson, 2013, p. 18).
- This bonding can occur in various ways; however, the method in which a mother chooses to feed her baby can contribute to or inhibit successful maternal-infant bonding.
- Breastfeeding provides skin-to-skin contact that contributes to a unique bond between mother and infant; whereas, formula feeding may lack physical skin-to-skin contact.

<table>
<thead>
<tr>
<th>Study</th>
<th>Description</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longitudinal Associations Between Breastfeeding and Observed Mother-Child Interaction Qualities in Early Childhood (2014)</td>
<td>Secondary analysis of a follow-up longitudinal study that aimed to “examine associations between trajectories of breastfeeding and observed parent-child interaction qualities of maternal sensitivity, child positivity, and child negativity from 6 months to 3 years of age” (Papp, 2014, p. 740).</td>
<td>The author concluded that “breastfeeding was associated with increases in maternal sensitivity over time, but the data was inconclusive in determining whether breastfeeding is associated with changes in the child’s behavior during “mother-child interaction”” (Papp, 2014, p. 744).</td>
</tr>
<tr>
<td>Breastfeeding Duration Predicts Greater Maternal Sensitivity Over the Next Decade (2018)</td>
<td>Secondary analysis of a follow-up longitudinal study “examine whether infant attachment security at 24 months would mediate longitudinal relations between breastfeeding duration and changes in maternal sensitivity over time” (Weaver, Thomas, &amp; Papp, 2018, p. 220).</td>
<td>According to the results, “the link from breastfeeding duration to attachment security was additive” and there was no evidence “that attachment security subsequently predicted increases in maternal sensitivity” (Weaver, Thomas, &amp; Papp, 2018, p. 220).</td>
</tr>
<tr>
<td>Breastfeeding, Brain Activation to Own Infant Cry, and Maternal Sensitivity (2011)</td>
<td>Level IV Cohort Study that examines the relationship between breastfeeding, formula feeding, and maternal sensitivity by utilizing brain activation studies to own infant’s cry and rated video interactions between mother and infant (Pilyoung et al., 2011, p. 2).</td>
<td>The study found that multiple areas of the brain associated with caregiving were “more active among breastfeeding mothers” (Pilyoung et al., 2011, p.6). Also, mothers who breastfed “exhibited a trend toward high maternal sensitivity” (Pilyoung et al., 2011, p.7).</td>
</tr>
<tr>
<td>The Breastfeeding Experience in Recent Mothers View: Contributions for Nursing (2015)</td>
<td>Level VI Single Qualitative Study that seeks to gain information on the lived experience of breastfeeding mothers. The study interviewed ten postpartum mothers about their breastfeeding experiences (Pissolato, Neumaier, Prates, Wilhelm, &amp; Ressel, 2015, p. 8772).</td>
<td>The study found that participants believed one of the benefits of breastfeeding is “creation of bond between mother and child” (Pissolato et al., 2015, p. 8875). One participant stated, “I think it strengthens the mother’s bond with the baby”” (Pissolato et al., 2015, p. 8773).</td>
</tr>
<tr>
<td>First time mother’s experiences of breastfeeding their newborn (2014)</td>
<td>Level VI, qualitative study, used to analyze data from 108 Danish first time mothers who answered open-ended questions 6 months after birth regarding breast feeding.</td>
<td>The conclusion states “supporting new breastfeeding mothers should learn to read baby’s cues, developing a sense of attachment, while building up the mother’s confidence and capability to care for her baby” (Kronborg, 2014).</td>
</tr>
<tr>
<td>Breastfeeding and Active Bonding Protects against Children’s Internalizing Behavior Problems (2014)</td>
<td>Level IV, cohort study, examining a community of 1,656 Chinese pre-school children. Feeding methods were analyzed in relation to a child’s behavior later in life.</td>
<td>The author’s concluded that “children who were exclusively breastfed had significantly lower scores for total internalizing behaviors due to their active bond formed with their caregiver” (Liu et al., 2014, p. 80).</td>
</tr>
</tbody>
</table>

**RESULTS:**
- The research was inconclusive because most of the articles did not apply directly to the PICOT question.
- Studies suggest that breastfeeding increases maternal sensitivity.
- Mothers report feelings of bonding when breastfeeding.

**APPLICATION:**
- Because more research is needed, nurse researchers can use this current research in order to design new studies based on the gap in literature.
- A nurse can use this research to educate expecting mothers on feeding methods and their effects on maternal-infant bonding.
- Baby-friendly hospitals can use this research to promote breastfeeding, skin-to-skin contact, and maternal-infant bonding.