

## The Recorded Interaction Task: A Validation Study of a New Observational Tool to Assess Mother-Infant Bonding

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**Abstract :** Mother-infant bonding is a term which refers to the early emotional connectedness between a mother and her infant. Strong mother-infant bonding promotes higher quality mother and infant interactions including prolonged breastfeeding, secure attachment and increased sensitive parenting and maternal responsiveness. Strengthening of all such interactions leads to improved social behavior, and emotional and cognitive development throughout childhood, adolescence and adulthood. The positive outcomes observed following strong mother-infant bonding emphasize the need to screen new mothers for disrupted mother-infant bonding, and in turn the need for a robust, valid tool to assess mother-infant bonding. A recent scoping review conducted by the research team identified four tools to assess mother-infant bonding, all of which employed self-rating scales. Thus, whilst these tools demonstrated both adequate validity and reliability, they rely on self-reported information from the mother. As such this may reflect a mother's perception of bonding with their infant, rather than their actual behavior. Therefore, a new tool to assess mother-infant bonding has been developed. The Recorded Interaction Task (RIT) addresses shortcomings of previous tools by employing observational methods to assess bonding. The RIT focusses on the common interaction between mother and infant of changing a nappy, at the target age of 2-6 months, which is visually recorded and then later assessed. Thirteen maternal and seven infant behaviors are scored on the RIT Observation Scoring Sheet, and a final combined score of mother-infant bonding is determined. The aim of the current study was to assess the content validity and inter-rater reliability of the RIT. A panel of six experts with specialized expertise in bonding and infant behavior were consulted. Experts were provided with the RIT Observation Scoring Sheet, a visual recording of a nappy change interaction, and a feedback form. Experts scored the mother and infant interaction on the RIT Observation Scoring Sheet and completed the feedback form which collected their opinions on the validity of each item on the RIT Observation Scoring Sheet and the RIT as a whole. Twelve of the 20 items on the RIT Observation Scoring Sheet were scored 'Valid' by all (n=6) or most (n=5) experts. Two items received a 'Not valid' score from one expert. The remainder of the items received a mixture of 'Valid' and 'Potentially Valid' scores. Few changes were made to the RIT Observation Scoring Sheet following expert feedback, including rewording of items for clarity and the exclusion of an item focusing on behavior deemed not relevant for the target infant age. The overall ICC for single rater absolute agreement was 0.48 (95% CI 0.28 - 0.71). Experts (n=6) ratings were less consistent for infant behavior (ICC 0.27 (-0.01 - 0.82)) compared to mother behavior (ICC 0.55 (0.28 - 0.80)). Whilst previous tools employ self-report methods to assess mother-infant bonding, the RIT utilizes observational methods. The current study highlights adequate content validity and moderate inter-rater reliability of the RIT, supporting its use in future research. A convergent validity study comparing the RIT against an existing tool is currently being undertaken to confirm these results.

**Keywords :** content validity, inter-rater reliability, mother-infant bonding, observational tool, recorded interaction task

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