

The time use of infants

Are the days of breastfed infants different to not-breastfed infants?

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Introduction

Being breastfed during infancy contributes to development, nutrition and health. Expert guidelines for optimal infant feeding recommend that infants be exclusively breastfed for the first six months of life (National Health and Medical Research Council, 2003) and, along with appropriate complementary foods, continue to be breastfed for up to two years and beyond (World Health Assembly, 2001).

The mechanism linking breastfeeding to improved developmental outcomes is not well understood. Breast milk is one factor known to be important to brain development. Observed developmental advantages of children being breastfed may also represent unobserved differences in their early life experiences compared to those who were not breastfed.

Another possible mechanism that has not been explored is that breastfed infants may spend their time differently to infants who are not breastfed. Time use research provides a potentially useful tool for further investigation of this issue.

Details of the full version of this paper are provided below.

Data: Growing Up in Australia: The Longitudinal Study of Australian Children (LSAC), Wave 1 (2004)

Wave 1 of LSAC was conducted in 2004 (subsequent waves were conducted in 2006 and 2008) and included: an infant cohort (aged 3–18 months at interview) and a 4–5 year cohort.

LSAC has many components, including parent interview and self-complete questionnaires, teacher questionnaire, "light" time use diaries and matched administrative data.

The younger cohort are the focus here, restricted to infants aged 3–14 months ($N = 5,045$).

Breastfeeding status was derived from the interview; 43% of infants were breastfeeding at the time of the time use diary.

Time use diary

- Parents completed a diary for one weekday and one weekend (on pre-specified dates) for the infant.
- Diaries were excluded if they had too much missing data, and only those children with 2 valid diaries were included. Final $N = 2,878$.
- Each day was divided into 15-minute intervals, from 4 am to 4 am.
- Parents marked infants' activities and contexts against precoded lists.

Analyses

- Estimates of total weekly duration calculated and analysed using OLS.
- Main variable: whether still breastfeeding. Predicted values calculated.
- Controls also for age, sex of child, mothers' age, Indigenous status, country of birth, whether smoked, education, hours worked, parental income. These variables held at means for predicted values.

Table 1: Infants' activities: Overall

	Did at some time on either day (%)	Average daily duration in minutes (SD)	
		Just those who did activity	All infants
Sleeping, napping	100	821 (107)	821 (107)
Awake in bed/cot	87	55 (54)	48 (53)
Bathe/nappy change, dress, hair care	99	94 (44)	93 (44)
Breastfeeding	41	128 (72)	52 (78)
Other eating, drinking or feeding	98	137 (60)	134 (63)
Held, cuddled, comforted, soothed	96	144 (119)	138 (120)
Crying/upset	82	54 (52)	45 (52)
Destroy things, create mess	40	52 (69)	21 (50)
Crawl, climb, swing arms/legs	80	160 (124)	129 (128)
Read a story, talked/sung to	73	121 (135)	88 (127)
Colour/draw, look at book, puzzles	26	31 (37)	8 (24)
Watch TV, video or DVD	59	61 (61)	36 (56)
Organised activities, playgroup	19	54 (73)	10 (38)
Other play, other activities	91	163 (109)	148 (114)

Table 2: Infants' contexts: Overall

Awake and at some time on either day (%)	Average daily duration in minutes (SD)	
		Just those who spent time in this context	All infants
With mother	96	510 (146)	487 (177)
but not father	93	314 (150)	293 (165)
With father	89	255 (140)	228 (154)
but not mother	56	59 (68)	33 (59)
With grandparents or other adult relatives	55	133 (130)	73 (117)
In child care	13	88 (119)	12 (52)

Results

Activities

Breastfed infants on average spend:

- more time:
 - being held, cuddled or soothed (32 min. more per day) (Figure 1a);
 - crying/upset (5 min. more per day) (Figure 1b); and
 - being read, talked or sung to (27 min. more per day) (Figure 1c).
- less time:
 - other eating, drinking or being fed (54 min. less per day) (Figure 1d);
 - watching TV (9 min. less per day) (Figure 1e); and
 - sleeping or napping (40 min. less per day) (Figure 1f).

No significant differences for personal care activities, "destroy things, create mess", "crawl, climb, swing arms/legs", "colour, draw, looks at book, puzzles", "organised activities/playgroup" or "other play".

Selected other relationships:

- Usually very significant differences by age group of child.
- Almost no differences by sex of child.
- Firstborn children read, talked or sung to more, and spend more time doing various play-type activities.
- Children of older mothers are read, talked or sung to more.
- Children of more highly educated mother are read, talked or sung to more and watch TV less.

Contexts

Breastfed infants:

- spend more time, on average, with their mother (57 min. per day) (Figure 2a); and
- spend more time, on average, with their father (15 min. per day) (Figure 2b).

Time with mother is largely time alone with mother (45 out of the 57 min. extra for breastfed children), while the difference in time with father corresponds more to time that mother and father are together (for 12 out of the 15 min. of extra father time for breastfed children, the mother is there also).

No significant differences were apparent for time spent in child care and time spent with grandparents or other adult relatives.

Figure 1: Infants' activities: predicted minutes per day on selected activities by breastfeeding status

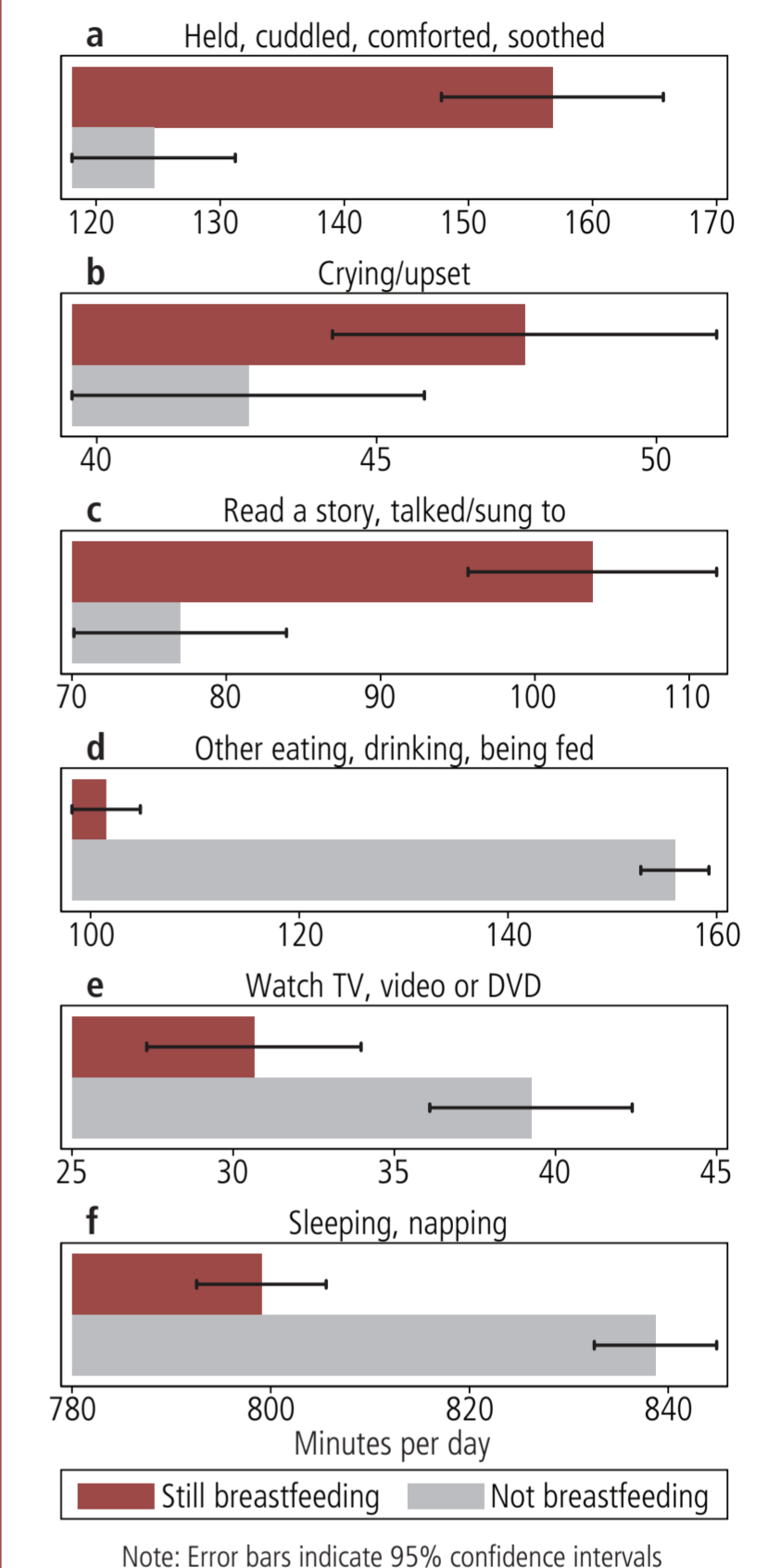
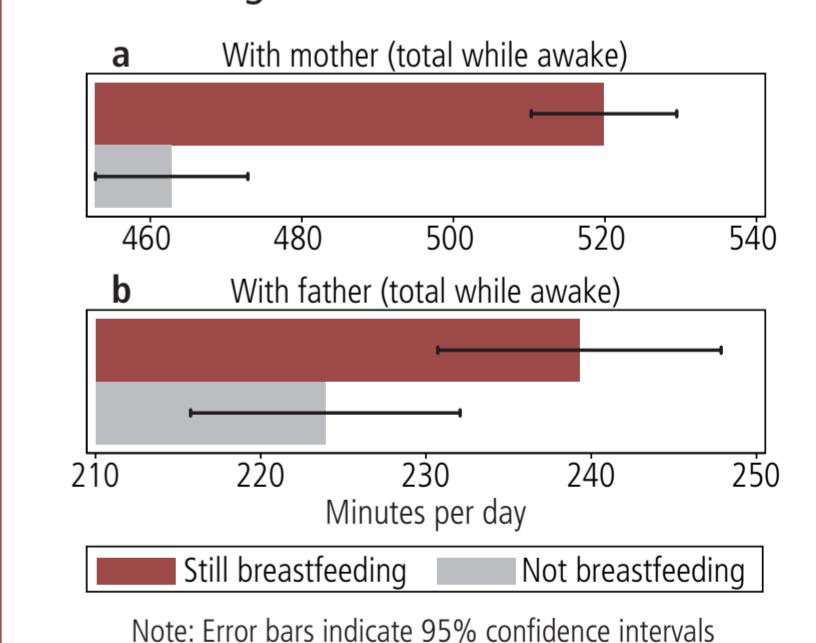


Figure 2: Infants' time with mother and with father: predicted minutes per day by breastfeeding status



Conclusions

The results showed that the time use of breastfeeding infants is different from that of non-breastfed infants of comparable age and other relevant characteristics.

These findings have implications for how children develop.

Time use analysis can provide important information on possible pathways to development for infants and young children.

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- The full version of this paper is available: Baxter, J. & Smith, J. (2009). *Breastfeeding and infants' time use*. (Research Paper No. 43). Melbourne: Australian Institute of Family Studies. <www.aifs.gov.au/institute/pubs/rp43/rp43.html>.



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