Socioeconomic status and rates of breastfeeding in Australia: evidence from three recent national health surveys

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ABSTRACT

Objective: To investigate whether the relationship between socioeconomic status and breastfeeding initiation and duration changed in Australia between 1995 and 2004.

Design and setting: Secondary analysis of data from national health surveys (NHSs) conducted by the Australian Bureau of Statistics in 1995, 2001 and 2004–05. The Socio-Economic Indexes for Areas (SEIFA) classification was used as a measure of socioeconomic status.

Main outcome measures: Rates of initiation of breastfeeding; rates of breastfeeding at 3, 6 and 12 months.

Results: Between the 1995 and 2004–05 NHSs, there was little change in overall rates of breastfeeding initiation and duration. In 2004–05, breastfeeding initiation was 87.8%, and the proportions of infants breastfeeding at 3, 6 and 12 months were 64.4%, 50.4% and 23.3%, respectively. In 1995, the odds ratio (OR) of breastfeeding at 6 months increased by an average of 13% (OR, 1.13 [95% CI, 1.07–1.19]) for each increase in SEIFA quintile; in 2001, the comparative increase was 21% (OR, 1.21 [95% CI, 1.12–1.30]); while in 2004–05, the comparative increase was 26% (OR, 1.26 [95% CI, 1.17–1.36]). Breastfeeding at 3 months and 1 year showed similar changes in ORs. There was little change in the ORs for breastfeeding initiation.

Conclusion: Although overall duration of breastfeeding remained fairly constant in Australia between 1995 and 2004–05, the gap between the most disadvantaged and least disadvantaged families has widened considerably over this period.

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Many epidemiological studies of breastfeeding in developed countries have found a relationship between socioeconomic status and duration of breastfeeding.[1-5]

In a previous study, using data from the 1995 Australian National Health Survey (NHS),[6] we demonstrated that a considerable socioeconomic gradient existed in Australia, both for initiation of breastfeeding and for rates of breastfeeding at 6 months.[7] At 6 months, 37.4% (95% CI, 32.5%–42.3%) of infants in the most disadvantaged socioeconomic quintile were breastfed, compared with 52.7% (95% CI, 47.8%–57.6%) in the least disadvantaged quintile.

In the past few years, three other national surveys in Australia have included questions about breastfeeding — the 2001[8] and 2004–05[9] NHSs and the Longitudinal Study of Australian Children.[10]

The aim of our study was to establish from national surveys whether the relationship between socioeconomic status and breastfeeding initiation and duration changed in Australia between 1995 and 2004. We did not include the Longitudinal Study of Australian Children in our analysis, as its methodology differed from that of the NHSs.

METHODS

Outcome variables

Outcome variables in our analysis were the proportion of infants who initiated breastfeeding and the proportion who were being breastfed at 3 months, 6 months and 12 months. The predictor variable was socioeconomic status.

Data source

NHSs were conducted by the Australian Bureau of Statistics in 1995, 2001 and 2004–05. We conducted a secondary data analysis of the NHS results using data from the confidentialised unit record file for infants and children. Sample sizes were 3218, 1882 and 1508 for initiation of breastfeeding in the 1995, 2001 and 2004–05 surveys, respectively; and 2859, 1497, 1299 for breastfeeding at 12 months. Based on weights provided in the confidentialised unit record file, we derived population estimates of the proportions of children breastfed at each timepoint in each socioeconomic category.

Socioeconomic status

The measure of socioeconomic status used in our analysis was the Index of Relative Socio-economic Disadvantage (IRSD), based on the area of residence of the child. The IRSD, which includes measures of income, education and occupational status, is part of the Socio-Economic Indexes for Areas (SEIFA) classification.[11] Subjects were allocated to one of five SEIFA categories, from the lowest quintile (areas having the lowest incomes and highest proportion of unskilled workers) to the highest quintile (areas having the highest incomes and highest proportion of professional/skilled workers). The IRSD is a summary measure of general socioeconomic conditions in a census collection district, based on data from the latest available census. IRSD scores are standardised by the Australian Bureau of Statistics to have a mean of 1000 and a standard deviation of 100 across all collection districts in Australia. The distribution of index scores is generally similar across the states, except that the Northern Territory has a higher proportion of disadvantaged areas and the Australian Capital Territory has a lower proportion of disadvantaged areas than Australia as a whole.[12] The SEIFA classification was the only measure of socioeconomic status that could be validly compared across the three NHSs.

Statistical analysis

For each time period, we used logistic regression analysis to estimate the average increase in the odds of breastfeeding in any SEIFA quintile compared with the next lowest SEIFA quintile. A life-table approach was used to generate data for the figures. Stata software, version 10 (StataCorp, College Station, Tex, USA) was used.

RESULTS

There was little change in the initiation and duration of breastfeeding between the 1995 and 2004–05 NHSs in Australia (Box 1).

1 Weighted estimates of proportions of infants breastfeeding in the 1995, 2001 and 2004–05 Australian National Health Surveys (NHSs), by SEIFA quintile

Year	SEIFA quintile*	Proportion (% [95% CI]) of infants			
		Initiated breastfeeding	Breastfeeding at 3 months†	Breastfeeding at 6 months†	Breastfeeding at 12 months†
1995 NHS	Total	86.0 (84.5–87.5)	63.1 (61.0–65.2)	46.6 (44.4–48.8)	21.3 (19.4–23.2)
	Quintile 1 (lowest)	77.8 (73.6–82.0)	53.9 (48.8–59.0)	37.7 (32.7–42.8)	15.3 (11.6–19.1)
	Quintile 2	86.6 (83.1–90.1)	62.4 (57.5–67.3)	43.8 (38.6–49.0)	21.1 (16.5–25.7)
	Quintile 3	88.0 (84.9–91.2)	63.9 (59.2–68.7)	45.5 (40.5–50.5)	19.1 (15.0–23.3)
	Quintile 4	88.4 (85.4–91.3)	66.9 (62.7–71.1)	51.9 (47.3–56.5)	25.5 (21.1–30.0)
	Quintile 5 (highest)	88.7 (85.8–91.7)	67.7 (63.2–72.1)	53.1 (48.2–58.0)	24.7 (20.2–29.2)
2001 NHS	Total	87.4 (85.7–89.0)	64.3 (61.7–66.9)	48.9 (46.2–51.7)	24.8 (22.1–27.5)
	Quintile 1	80.4 (75.9–85.0)	55.9 (49.6–62.1)	39.0 (32.6–45.3)	17.0 (11.8–22.3)
	Quintile 2	84.9 (81.0–88.9)	58.6 (52.6–64.6)	43.5 (37.3–49.8)	24.1 (18.1–30.1)
	Quintile 3	91.1 (87.9–94.3)	66.7 (60.9–72.5)	50.2 (43.9–56.5)	29.3 (22.8–35.9)
	Quintile 4	88.4 (85.1–91.7)	63.1 (57.8–68.5)	49.9 (44.3–55.6)	20.7 (15.7–25.8)
	Quintile 5	91.9 (88.8–94.9)	77.3 (72.3–82.4)	61.6 (55.5–67.6)	34.2 (27.5–40.9)
2004–05 NHS	Total	87.8 (86.0–89.7)	64.4 (61.3–67.5)	50.4 (47.1–53.8)	23.3 (20.0–26.7)
	Quintile 1	80.7 (75.4–86.0)	52.7 (46.5–59.0)	37.1 (28.1–46.0)	20.3 (12.2–28.4)
	Quintile 2	88.3 (83.7–93.0)	64.8 (56.5–73.1)	49.1 (41.9–56.4)	18.0 (12.0–24.0)
	Quintile 3	87.6 (83.4–93.0)	63.2 (56.1–70.5)	49.5 (41.7–57.2)	24.2 (16.7–31.7)
	Quintile 4	91.9 (88.4–95.4)	66.5 (59.0–74.0)	52.5 (44.1–60.4)	22.4 (14.7–30.2)
	Quintile 5	91.4 (87.3–95.5)	75.9 (70.0–81.8)	66.0 (59.3–72.7)	32.4 (24.4–40.3)

SEIFA = Socio-Economic Indexes for Areas.[11] * Lowest quintile has lowest incomes and highest proportion of unskilled workers. † For 2001 and 2004–05, the timepoints available in the confidentialised unit record file (CURF) were 13 weeks (3 months), 26 weeks (6 months) and 52 weeks (12 months). For 1995, the closest corresponding timepoints available in the CURF were 13–16 weeks, 25–28 weeks and 49–52 weeks, respectively. ◆

The overall breastfeeding initiation rate was 86.0% in 1995 compared with 87.8% in 2004–05. In 1995, the overall proportions of infants breastfeeding at 3, 6 and 12 months were 63.1%, 46.6% and 21.3%, respectively, compared with 64.4%, 50.4% and 23.3% in 2004–05.

However, differences could be seen when the results were broken down into SEIFA categories. For example, in the 1995 NHS, the proportion of infants being breastfed at 6 months was 37.7% in the lowest quintile compared with 53.1% in the highest quintile, whereas in the 2004–05 NHS, the breastfeeding rate at 6 months was 37.1% in the lowest quintile compared with 66.0% in the highest quintile.

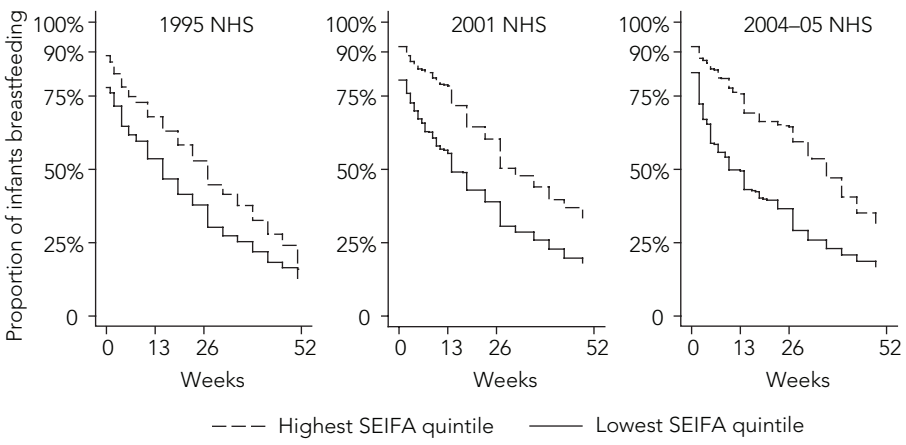
In 1995, for each increase in SEIFA quintile, the odds of breastfeeding at 6 months increased by 13% (odds ratio [OR], 1.13 [95% CI, 1.07–1.19]), whereas in 2001, the comparative odds increased by 21% (OR, 1.21 [95% CI, 1.12–1.30]), and in 2004–05, the comparative odds increased by 26% (OR, 1.26 [95% CI, 1.17–1.36]). Similar gradients were observed for breastfeeding at 3 months and 12 months. The widening difference in breastfeeding rates according to SEIFA category between 1995 and 2004–05 is presented graphically in Box 2.

DISCUSSION

NHSs over a 10-year period indicate that, although overall rates of breastfeeding have remained unchanged between 1995 and 2004–05, the broad figures mask an increasing divide between the highest and lowest socioeconomic groups. Infants in higher socioeconomic groups are more likely to be breastfed than in previous years, but little change has occurred in lower socioeconomic groups.

In general, people with higher incomes are more likely to adopt healthy behaviour such as exercising, eating a healthy diet and

2 Breastfeeding duration: weighted estimates of proportions of infants breastfeeding at 0–52 weeks in the 1995, 2001 and 2004–05 National Health Surveys (NHSs) in the lowest and highest SEIFA quintiles*



SEIFA = Socio-Economic Indexes for Areas.[11] * Lowest quintile has lowest incomes and highest proportion of unskilled workers. ◆

quitting smoking.[13-15] Lower-income families have less capacity to make such changes. Women from lower-income families are less likely to breastfeed for a number of reasons, including less family support for breastfeeding, less ability to seek help with breastfeeding problems, less flexibility with working arrangements, and concerns about breastfeeding in public.[16-19] Moreover, women in lower SEIFA quintiles are more likely to interact socially with women who are less inclined to breastfeed, such as those who are younger, less educated, overweight/obese or smokers.[20-22] As formula-fed infants are more likely to become ill and be admitted to hospital, these findings indicate increasing health inequalities in Australian children.[23]

Policymakers need to act on increasing health inequalities.[14] Breastfeeding support and promotion in Australia need to focus on groups with low rates of breastfeeding. Peer support programs have been effective in other countries[24,25] and should be trialled in Australia. Peer support involves women who are similar to the women they are supporting — for example, teenage women supporting teenage women. The Australian Breastfeeding Association provides mother-to-mother support, but as the counsellors tend to be middle-class and are trained to provide breastfeeding advice, they are not peer supporters as generally defined.

The previous federal government proposed a "community education campaign on the benefits of breastfeeding".[26] However, the health benefits of breastfeeding are widely known and we believe it would be more useful to conduct a public education campaign aimed at the wider community — not just new parents — which includes promotion of breastfeeding in public in an acceptable way to groups that are currently uncomfortable with this issue.[17,27] New mothers need support from their families, communities and workplaces in order to breastfeed. They need Baby Friendly accredited maternity hospitals,[28] increased breastfeeding help in the community and paid maternity leave — not simply another government campaign extolling the virtues of breastfeeding.

COMPETING INTERESTS

None identified.

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