



AIH DENTAL STATISTICS
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The Child Dental Health Survey South Australia January - December 1989

by

The AIH Dental Statistics
and Research Unit

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The Dental Statistics and Research Unit (DSRU) is an external unit of the Australian Institute of Health and was established in 1988 at The University of Adelaide. The DSRU was funded to improve the range and quality of dental statistics and research on the dental workforce, dental health status, dental practices and use of dental services.

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THE CHILD DENTAL HEALTH SURVEY - SOUTH AUSTRALIA 1989

Purpose of this report

This report provides descriptive findings from the South Australian component of the Child Dental Health Survey. Information listed in the tables includes: the age and sex of children in the sample, their deciduous and permanent caries experience and children's history of school dental service examinations. These data were collected between January and December 1989 by a sampling procedure which randomly selected one in five children. This was achieved by systematically selecting every fifth child examined in the School Dental Service. The following sections briefly describe each table.

Table 1: Demographic composition of the sample

The age composition of the sample is closely related to the main target groups of children served by the School Dental Service in South Australia during 1989 and covers aged 4 to 16 years. However 16 year old children are less well represented in the sample resulting in less reliability of several computed statistics in subsequent tables. Consequently some statistics have been suppressed where the relative standard error is greater than 25 per cent. It is also possible that the children who are aged at the margins of the main target groups may differ on other key characteristics and statistics relating to children aged 4 years or 16 years may be less representative of the South Australia population.

Table 3: Deciduous teeth: age-specific prevalence

The dmft prevalence in children aged 4 to 9 increases quite consistently across ages ranging between 1.34 and 2.42. There is less variation in the mean number of teeth (from 0.47 to 0.89) between these ages, although this level of untreated decay is highest in the younger age groups. The decline in dmft over the age of 9 should clearly be interpreted as an effect due to exfoliation of deciduous teeth as children grow older. Also apparent from this table is the magnitude of the d/dmf percentage, particularly in the youngest children aged 4 and 5 years where more than fifty per cent of the dmft index is due to decayed teeth.

The convention for recording caries experience in South Australia during 1989 resulted in the inclusion in the decayed component of those teeth which were filled and non-carious but in need of restoration. For example, otherwise sound teeth with fractured fillings were coded as decayed and included in the decayed and decayed, missing and filled indices. This convention applied to both the deciduous and permanent dentitions. Consequently, there was a small over-enumeration of decayed teeth, although this has introduced only a small bias of less than four per cent in the deciduous dentition, and less than two per cent in the permanent dentition.

Table 4: Permanent teeth: age specific prevalence

Compared with the deciduous dentition, there is a smaller mean number of decayed teeth in the permanent dentition for all ages up to 11 years. Children aged 11 years and over have more permanent teeth than deciduous teeth affected by untreated decay. The mean DMFT increases fairly consistently across age groups to a level of 1.52 among 12 year olds.

This table also demonstrates that a relatively high percentage of the DMFT index is attributable to untreated decay in younger children as reflected in the D/DMFT percentage. However in children aged 9 years and over, less than 40 per cent of the DMFT

index is due to untreated decay. In most ages, the D/DMFT percentage is higher than the corresponding percentage in the deciduous dentition.

Table 5: All teeth: age specific prevalence

The information in this table indicates firstly that 25 per cent or more of children aged 4 to 11 have at least one actively decayed tooth in the permanent or deciduous dentition. There is a tendency for younger children to be more likely to have decay in the mixed dentition teeth, and this is a consequence of the relatively higher prevalence of untreated deciduous decay in these ages (as described for table 3). Younger children are also more likely to be extensively affected with decay, as indicated by the range from 5.3 per cent to 8.6 per cent of 4 to 7 year olds with four or more decayed teeth in the combined deciduous and permanent dentition. It is encouraging to observe that older children are more likely to have no active decay, and that fewer than 2 per cent of children aged 12 and over have four or more teeth affected by active decay.

The vast majority of children (97 per cent or more) in all ages have no teeth missing due to caries. In contrast, more than one half of children aged 8 and over have at least one filled tooth in the combined deciduous and permanent dentition. In parallel with this statistic is the percentage of children with no caries experience (combined dmft+DMFT=0), where fewer than one half of children aged six and over are caries free. There is a clear age-associated pattern with both of these statistics, which can be expected in view of the irreversible nature of the dmft and DMFT indices.

Table 8: School Dental Service examinations

This table divides into a left and right portion. The percentage of all children who have had a previous School Dental Service examination is shown in columns 3 to 4. More than one half of four year old children had not been previously examined, indicating that they received their first School Dental Service examination during 1989. There is a sharp age-associated decrease in the percentage of children receiving their first examination for those aged 4 to 7, and less than eight per cent of children in older ages received an initial examination in 1989.

In columns 5 and 6, the group of children with a known previous examination in the School Dental Service are described with regard to the time since their last examination. Fewer than 1 per cent of children in all age groups had been previously examined within 12 months.

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TABLE 1: DEMOGRAPHIC COMPOSITION OF THE SAMPLE

Data for the Child Dental Health Survey are collected from a stratified random sample of children in all Australian States and Territories. In South Australia the sampling is 1:5. This ratio is achieved by systematically selecting every fifth child examined in the School Dental Service. The following table describes the number of records processed from children in South Australia.

State/Territory SOUTH AUSTRALIA

Sampling Ratio: 1:5

Data for period January-December 1989

Date of Report: October 9, 1990

NUMBER OF RECORDS PROCESSED

<u>Age (years)</u>	<u>Males</u>	<u>Females</u>	<u>Persons</u>
4	1005	987	1992
5	1127	1126	2253
6	832	846	1678
7	677	699	1376
8	710	704	1414
9	632	645	1277
10	639	641	1280
11	638	683	1321
12	702	673	1375
13	688	678	1366
14	614	611	1225
15	580	570	1150
16	255	241	496
Total	9099	9104	18203

TABLE 2: COUNTRY OF BIRTH (INCLUDING ABORIGINALITY)

These data were not collected in South Australia during
the period January-December, 1989

TABLE 3: DECIDUOUS TEETH: AGE-SPECIFIC PREVALENCE¹

This table uses Statewide data to describe the dmft index and its components for individual (year of birth) ages. Indices are calculated from data collected over a 12 month period. Where children received more than one examination during this period, the information derived from examinations other than the first is excluded. Age-specific indices denoted with an asterisk (*) are those in which the relative standard error exceeds 25 per cent, and population estimates of these indices are statistically unreliable.

State/Territory SOUTH AUSTRALIA

Sampling Ratio: 1:5

Data for period January-December 1989

Date of Report: October 9, 1990

Age (years)	Number of Children in Sample	decayed ²		dmft		d/dmft	Children with dmft=0
		mean	sd	mean	sd	%	%
4	1992	0.89	2.02	1.34	2.69	72.0	66.4
5	2253	0.82	1.76	1.68	2.87	55.4	57.5
6	1678	0.81	1.60	2.21	3.10	41.7	48.0
7	1376	0.66	1.34	2.22	2.98	33.2	45.3
8	1414	0.50	1.05	2.29	2.83	24.9	43.0
9	1277	0.47	0.93	2.42	2.74	23.3	38.7
10	1280	0.39	0.85	2.12	2.50	20.1	41.3
11	1321	0.20	0.55	1.25	1.99	17.5	59.7
12	1375	0.10	0.42	0.63	1.48	16.4	76.3

¹ Legend: d - decayed deciduous teeth
dmft - decayed, missing or filled deciduous teeth
sd - standard deviation

² Filled but otherwise sound teeth which needed a replacement filling were included in the decayed index resulting in a very small over-estimation of the decayed and dmft indices of four per cent or less

TABLE 4: PERMANENT TEETH: AGE-SPECIFIC PREVALENCE¹

This table uses Statewide data to describe the DMFT index and its components for individual (year of birth) ages. Indices are calculated from data collected over a 12 month period. Where children received more than one examination during this period, the information derived from examinations other than the first is excluded. Age-specific indices denoted with an asterisk (*) are those in which the relative standard error exceeds 25 per cent, and population estimates of these indices are statistically unreliable.

State/Territory SOUTH AUSTRALIA

Sampling Ratio: 1:5

Data for period January-December 1989

Date of Report: October 9, 1990

Age (years)	Number of Children in Sample	DECAYED ²		DMFT		D/DMFT	Children with DMFT=0
		mean	sd	mean	sd	%	%
5	2253	*	*	*	*	61.5	99.4
6	1678	0.05	0.28	0.07	0.33	85.2	95.3
7	1376	0.17	0.62	0.24	0.75	71.6	85.4
8	1414	0.19	0.55	0.41	0.88	50.8	77.2
9	1277	0.20	0.55	0.56	1.01	38.9	69.1
10	1280	0.22	0.59	0.82	1.24	28.4	59.5
11	1321	0.21	0.58	1.14	1.50	19.8	50.0
12	1375	0.27	0.70	1.52	1.92	17.4	44.4
13	1366	0.35	0.90	1.89	2.19	18.0	37.2
14	1225	0.40	0.93	2.46	2.43	16.0	27.4
15	1150	0.37	0.79	2.82	2.74	14.1	25.9
16	496	0.36	0.77	3.20	2.88	11.4	22.2

¹ Legend: D - decayed permanent teeth
DMFT - decayed, missing or filled permanent teeth
sd - standard deviation

² Filled but otherwise sound teeth which needed a replacement filling were included in the decayed index resulting in a very small over-estimation of the decayed and DMF indices of two per cent or less

TABLE 5: ALL TEETH: AGE-SPECIFIC PREVALENCE¹

This table uses Statewide data to describe the combined dmft and DMFT indices and their components for individual (year of birth) ages. Indices are calculated from data collected over a 12 month period. Where children received more than one examination during this period, the information derived from examinations other than the first is excluded. Age-specific indices denoted with an asterisk (*) are those in which the relative standard error exceeds 25 per cent, and population estimates of these indices are statistically unreliable.

State/Territory SOUTH AUSTRALIA

Sampling Ratio: 1:5

Data for period January-December 1989

Date of Report: October 9, 1990

Age (years)	Number of Children in Sample	% of Children with d+D=					% of Children with		
		0	1	2	3	4+	m+M=0	f+F=0	dmft+DMFT=0
4	1992	72.0	9.3	6.6	3.4	8.6	98.4	87.6	66.4
5	2253	68.7	12.6	7.1	3.7	7.9	97.8	75.1	57.4
6	1678	63.4	15.5	9.9	4.2	7.0	97.5	60.3	46.7
7	1376	62.1	17.7	10.4	4.6	5.3	98.3	54.4	42.1
8	1414	64.4	18.3	9.7	4.2	3.4	97.9	47.0	37.9
9	1277	62.7	20.6	9.9	3.3	3.4	98.2	40.5	32.3
10	1280	66.6	18.1	8.4	4.1	2.7	98.9	36.5	30.2
11	1321	73.7	17.1	5.8	2.1	1.4	98.9	39.3	33.5
12	1375	76.9	14.8	4.9	2.0	1.4	99.6	39.6	35.3
13	1366	76.8	14.2	5.4	2.0	1.5	99.6	38.6	33.8
14	1225	75.2	15.1	6.4	1.4	2.0	99.5	30.6	26.1
15	1150	75.3	16.8	5.2	1.2	1.5	99.9	29.8	25.5
16	496	75.4	16.7	5.2	*	*	99.6	24.8	21.8

¹ Legend: d - decayed deciduous teeth
D - decayed permanent teeth
f - deciduous teeth restored due to caries
F - permanent teeth restored due to caries
dmft - decayed, missing or filled deciduous teeth
DMFT - decayed, missing or filled permanent teeth

TABLE 6: FISSURE SEALANTS: AGE-SPECIFIC PREVALENCE

These data were not collected in South Australia during
the period January-December, 1989

TABLE 7: IMMEDIATE TREATMENT NEEDS: AGE-SPECIFIC DISTRIBUTION

These data were not collected in South Australia during
the period January-December, 1989

**TABLE 8: SCHOOL DENTAL SERVICE EXAMINATIONS:
AGE-SPECIFIC DISTRIBUTION**

This table describes the percentage distribution of children who have received initial and subsequent dental examinations in the School Dental Service. Data from all examinations of children who were examined during the report period are included in this table; percentage estimates denoted with an asterisk (*) are those in which the relative standard error exceeds 25 per cent, and population estimates of these percentages are statistically unreliable.

State/Territory SOUTH AUSTRALIA

Sampling Ratio: 1:5

Data for period January-December 1989

Date of Report: October 9, 1990

Age (years)	Number of Children Examined	PREVIOUS EXAMINATION IN SCHOOL DENTAL SERVICE		CHILDREN WITH PREVIOUS EXAMINATION	
		% of children Previously examined	First examination	Months since last examination ¹ (%)	
				0-12	13+
4	1992	44.5	55.5	0.5	99.5
5	2253	61.3	38.7	0.3	99.7
6	1678	87.9	12.1	0.5	99.5
7	1376	92.2	7.8	0.2	99.8
8	1414	92.2	7.8	0.8	99.2
9	1277	94.0	6.0	0.6	99.4
10	1280	93.9	6.1	0.6	99.4
11	1321	94.2	5.8	0.7	99.3
12	1375	94.3	5.7	0.4	99.6
13	1366	97.1	2.9	0.2	99.8
14	1225	95.3	4.7	0.4	99.6
15	1150	97.3	2.7	0.2	99.8
16	496	96.4	3.6	0.2	99.8

¹ Excludes those with no previous examination and where the date of previous examination is unknown.