

- Languages other than English
- Animal studies; ecological studies, *in vitro* studies, human studies on experimental caries, case studies
- Studies in countries with no widespread fluoride exposure
- Reviews, letters, or editorials
- Reports published before 1980
- Studies with no measure of sugar intake
- Studies with no measure of caries experience
- Sugar consumption given, but not statistically related to caries experience
- Studies with caries experience but no diagnostic criteria listed
- Studies with secondary analysis of previously-analyzed data
- Studies of the effect of single foods (e.g., sugared medications, breakfast cereals, soft drinks, sports drinks).
- Clinical trials for chewing gums that contain sugar substitutes

**Table 1: Exclusion criteria for reports on sugars and caries.**

	<i>MEDLINE</i>	<i>EMBASE</i>	<i>TOTAL</i>
Initial Search	485	324	809
After Title and Abstract Assessment	123	11	134
After Reading	66	3	69

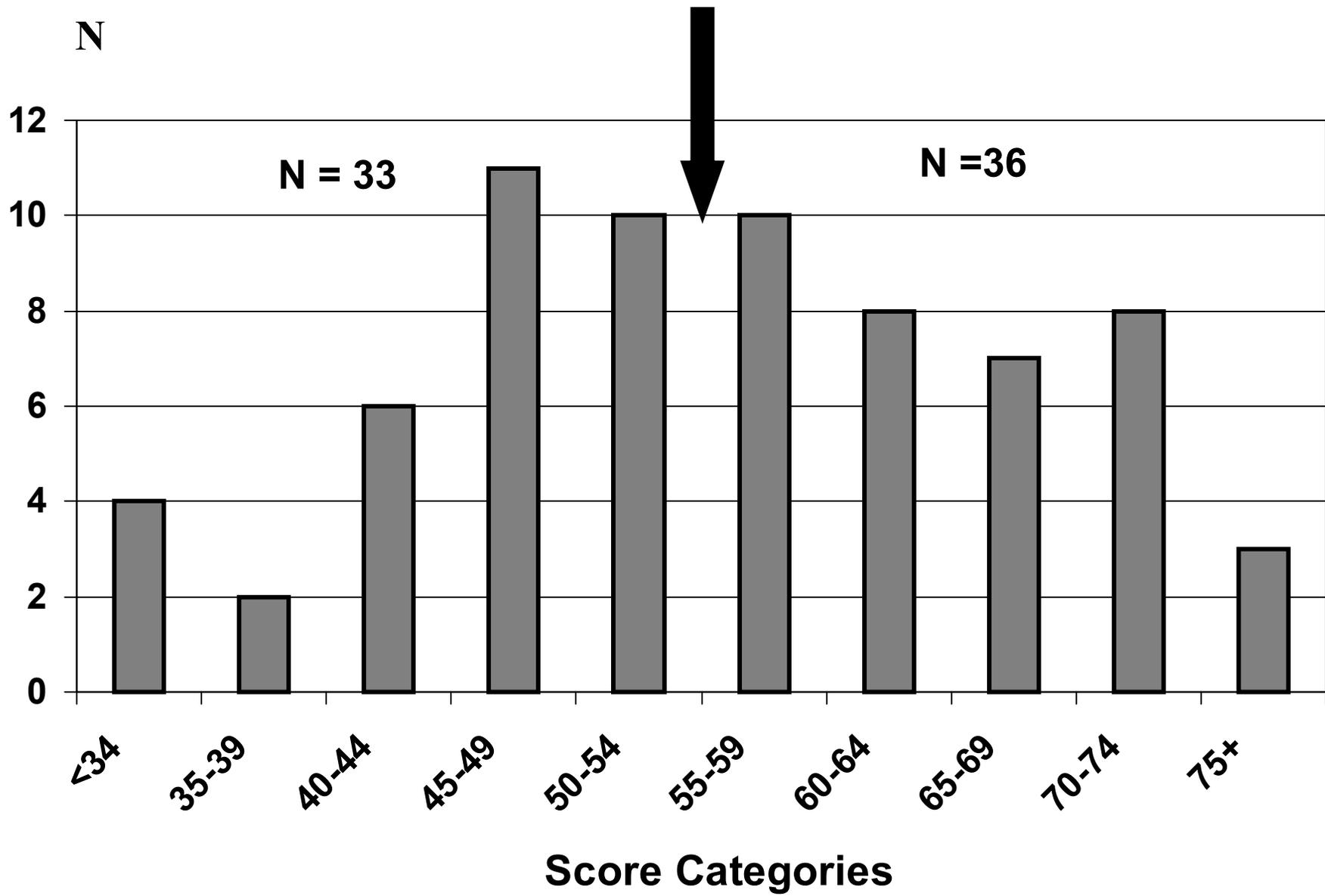
**Table 2: Progression of literature search for sugars/caries reports**

Clearly-stated research aims	<b>12</b>
Number of participants	<b>8</b>
Response rate	<b>7</b>
Stated inclusion/exclusion criteria for participants	<b>6</b>
Type of comparison group	<b>7</b>
Method for quantifying sugars intake	<b>8</b>
Level of caries diagnosed (cavitated, noncavitated)	<b>6</b>
Nature of caries diagnosis (clinical, x-ray, FOTi etc.)	<b>7</b>
Examiner reliability quantified	<b>7</b>
Confounders accounted for?	<b>12</b>
Measure of risk stated?	<b>8</b>
Internally valid conclusions?	<b>12</b>
Total:	<b>100</b>

**Table 3: Scoring categories for quality of studies in sugars/caries reports. (Categories for cross-sectional studies used for illustration).**

<u>Paper</u>	<u>Reader 1</u>	<u>Reader 2</u>
Grytten et al 1988	46	49
Bergendal and Hamp 1985	42	39
Larsson et al 1992	45	49
Papas et al 1995	59	61
Stecksen-Blicks and Gustaffson 1986	46	54
Mean	47.6	50.4
SD	6.58	8.05
Pearson's r	0.87	
p-value: Student t-test; two-tailed, unequal variances	0.56	

**Table 5: Inter-reader comparability over five randomly-chosen reports on sugars/caries.**



	<b>Strong</b>	<b>Moderate</b>	<b>Weak</b>	<b>TOTALS</b>
<b>Cohort studies</b>	<b>1</b>	<b>6</b>	<b>5</b>	<b>12</b>
<b>Case-control studies</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>
<b>Cross-sectional studies</b>	<b>1</b>	<b>9</b>	<b>13</b>	<b>23</b>
<b>TOTALS</b>	<b>2</b>	<b>16</b>	<b>18</b>	<b>36</b>

**Table 7: Distribution of 36 papers showing strong, moderate, and weak relations between sugars intake and dental caries, by type of study design.**

<b><i>STUDY DESIGN and DENTITION</i></b>					<b><i>N</i></b>
Cohort; primary dentition					14
Cohort; permanent dentition					11
Cohort; root caries					1
Case-control; primary dentition					3
Case-control; permanent dentition					0
Case-control; root caries					1
Cross-sectional; primary dentition					12
Cross-sectional; permanent dentition					26
Cross-sectional; root caries					1
Total					69

**Table 8: Distribution of the 69 sugars/caries papers graded, by study design and dentition studied.**