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Dental status and measures of deprivation in Clermont-Ferrand, France

Celine Enjary[1], Stephanie Tubert-Jeannin[1], Rachelle Manevy[1], Valerie Roger-Leroi[2] and Paul J. Riordan[1]

Departments of [1]Dental Public Health, and [2]Oral Biology, Laboratory EA 3847, Faculty of Dental Surgery, Université d'Auvergne, Clermont-Ferrand, France

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Abstract – *Background:* Many background variables, such as socioeconomic status (SES), may be measured at the level of the individual or using some ecological indicators. *Objectives:* This study aimed to examine, in 5- and 10-year-olds in Clermont-Ferrand, the relationship between household SES indicators, SES measured as an area-based ecological variable and dental status. *Methods:* All 5- and 10-year-olds attending public schools in deprived and semi-deprived zones ($n = 15$) and six other randomly selected schools in Clermont-Ferrand were invited to participate. All children were examined clinically. On a questionnaire, parents provided sociodemographic information. *Results:* Of the children invited, 84% (880 children) were examined. Mean dft of 5-year-olds was 0.93 (SD 2.27); 26.5% had at least one tooth affected. The caries experience (DMFT) of 10-year-olds was 0.85 (SD 1.14) and 37.2% had permanent tooth caries experience. Caries experience varied significantly with school deprivation status: the greater the deprivation score, the more likely was poor dental health. Country of birth, parents' employment status, family size and health insurance type were significantly related to dental status. Logistic analyses estimated the importance of SES and ecological variables; deprivation influenced dental status in 5-year-olds even when household SES indicators were considered. In 10-year-olds, caries experience was influenced by household SES, immigrant background, father's employment and family size. *Conclusion:* The use of school deprivation as an ecological measure status was useful for identyfing population subgroups with different levels of oral health, particularly in young children. This indicator of social deprivation could be used for targeting preventive programmes to high caries risk communities defined geographically.

Key words: children; dental caries; ecological; inequalities; socioeconomic status

Stéphanie Tubert-Jeannin, Faculté de Chirurgie Dentaire, 11 Boulevard Charles de Gaulle, 63000 Clermont-Ferrand, France
Tel: 33 4 73 17 73 26
Fax: 33 4 73 17 73 09
e-mail: stephanie.tubert@u-clermont1.fr

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The occurrence of dental disease in children in industrialized countries has decreased significantly during recent decades (1). The main reason proposed for this decrease is the widespread use of fluoride toothpastes, possibly connected with a modification in the oral flora and improved oral cleanliness (2). Caries levels in permanent and primary teeth of children are low compared with earlier generations but improved dental health in children is not evenly distributed in populations. Untreated dental caries is concentrated in groups characterized by a low socioeconomic status (SES) (3). These are consequently often regarded as high-risk groups.

Socioeconomic status is usually measured by indicators such as income or occupational status. In children from low SES backgrounds, the prevalence of caries is higher, there is more untreated disease and they make fewer dental visits (4–7). Several factors, such as ethnic and immigrant status, occupation of the head of the household and low maternal educational level, have been found to be significantly and consistently related to the occurrence of primary teeth caries in children

age ≤6 years (8). For children below the age of 12 years, there is also a consistently significant relationship between caries occurrence and SES. This relationship remains significant when the effects of other variables are controlled (9). These inequalities persist even in countries where all children can avail basic dental services free of charge (10). Moreover, it appears that there is a social gradient in children's oral health status, so that the lower the SES, the greater the impact of caries (11). Both self-rated general health and oral health have been associated with individual socio-economic characteristics and race or ethnicity (12).

Conventional measures of SES have a number of weaknesses and ecological measures of deprivation have been proposed as alternatives (13). Such variables obviate the need to collect information at the individual level, thus reducing the work involved and eliminating the need to collect sensitive personal information. An ecological variable for SES would categorize all the inhabitants of an area as having the same SES and could thus be looked on as an indicator of caries risk (14). Such measures of SES have been used frequently in dental health services research in recent years, mostly in Great Britain and in the US (15–20). The use of ecological measures risks misclassification error: for example, people with low SES may live in nondeprived areas. The relationship between SES measured as an ecological variable and a health outcome variable can thus be weakened (21). The utility of ecological and household-based SES measures remains a matter of some debate (22). There is a need to assess whether ecological measures of deprivation perform as well as household indicators of SES and can lead to identification of population subgroups with different levels of oral health (23, 24). It is necessary to identify which of these indicators are the most important and most practical for an administrator to use in predicting geographic areas of high dental caries risk (25).

In France, there is no organized public dental care system for schoolchildren. Dental services are provided by private dental practitioners and, while the cost of operative interventions is reimbursed by insurance funds, it has been shown that children who need the most care avail of it the least (26). Moreover, preventive dentistry is poorly developed among French dentists who have been shown to have a preference for operative interventions, partly because of the system of financing dental care (27). Fluoridated salt has been available since 1987, and fluoride toothpastes dominate the market, but the extent to which they are used by schoolchildren is unknown and their effects have never been evaluated (28). Perhaps because of the absence of school dental services, collection of dental health data is difficult and hitherto has been sporadic (29, 30). Thus, the basic requirements for targeting and evaluating preventive programmes for children are not available.

The aim of this study was to examine the interrelation between household indicators of SES, an ecological measure of deprivation and dental status in a sample of schoolchildren in the city of Clermont-Ferrand. We studied how an ecological indicator such as social deprivation can be used to identify areas with high dental needs in order to implement geographically targeted public health dental programmes.

Population and methods

Study population

Clermont-Ferrand (population 150 000) is an industrial and administrative city situated in central France. There are 35 public schools in the town. Schools in areas with low SES, a high proportion of pupils receiving state financial support or who have educational difficulties are characterised by the Department of National Education as 'Zone d'Education Prioritaire' (ZEP) schools and they receive additional educational resources (staff and funds). A different, locally determined classification is 'Municipal Support' school; these are in deprived areas of the city which receive assistance in the form of improved public transport and municipal assistance with residential building and other amenities. Of the 35 schools in Clermont-Ferrand, 15 were ZEP schools or in 'Municipal Support' areas. For the purposes of the present study, all the ZEP schools (these were all situated in Municipal Support areas) were defined as 'deprived' and all schools situated in 'Municipal Support' areas which were not ZEP as 'semi-deprived'. The survey was conducted in all the deprived and semi-deprived schools ($n = 15$) and in six other schools randomly selected from the 20 nondeprived schools called 'standard'. Two age groups were selected; 5-year-old children (born in 1998) to represent the oldest children attending kindergarten (schools for children aged 3–5 years) and 10-year-old children, the oldest children attending primary school (children aged from 6 to 11 years). All the children aged 5 and 10 years

attending the 21 selected schools were invited to participate in the survey.

The study protocol was approved by the local primary education and health authorities. Each school was approached through the municipal school nurse system. Consent forms and explanatory letters were sent to parents. Only those children whose parents returned the consent form were included in the study.

Data collection

Parents were asked to complete a questionnaire concerning the family and child demographic background; family status (single, couple), place of birth of the child (France or other country), number of children in the family, place of the child in the family (oldest, middle, youngest), activity of the parents (work or do not work), country where the parents were born (France/elsewhere), extent of family health insurance [70% basic health coverage, basic health coverage + private complementary insurance, 100% health coverage for economically deprived people (CMU)]. Information about income and level of education was not collected, to avoid discouraging parental participation and in accordance with a condition imposed by the local authorities.

Examiner calibration exercises were carried out during two half-day sessions. Dental examinations were conducted at school by a dentist using World Health Organization procedures and diagnostic criteria without radiographs (31) and a standardized light source. Dental caries was recorded at the dentine (D3) threshold. Caries diagnosis was thus based on the presence of a distinct cavity. Lesions were not probed but debris was removed if necessary, using an explorer. Caries experience was recorded as DMFT and dft in permanent and primary teeth. Different cut-points were used to identify children with different levels of caries experience (DMFT or dft >0, ≥2, ≥4) or untreated carious teeth (DT or dt >0, ≥2, ≥4). In addition to caries, the presence of sealants was recorded. Intra-examiner variability was measured by re-examining 49 children. Calculation of the different scores yielded a kappa value >0.9, which indicated a high intra-examiner agreement.

Statistical analysis

As the mean DMFT or dft were not normally distributed, nonparametric tests were used to study the association between dental status and social variables (Mann–Whitney or Kruskal–Wallis tests). Mantel–Haenszel and chi-squared tests were used to study the relationship between the social variables and caries prevalence for qualitative data. The level of significance was arbitrarily set at 0.05. Logistic regression analyses were conducted to determine the relative importance of the SES and ecological variables on dental status. Dental status was the dependent variable for different thresholds. The independent variables included in the models were the ecological measure and, the SES variables found to be significantly related to dental status in univariate analyses.

Results

Of the children initially selected, 84% participated in the survey; 880 children were thus examined. The mean dft of 5-year-old children was 0.93 (SD 2.27) with 26.5% of the children having at least one tooth affected (dft > 0). The DMFT of 10-year-olds was 0.85 (SD 1.14) and 62.8% had caries-free permanent teeth.

Caries experience varied significantly in both age groups with the deprivation status of the school (Table 1). This was true, whatever the threshold used. For 5-year-olds, the mean dft in the deprived schools was five times higher than that in the standard schools. Half the 105 children with dt > 0 (23% of the sample) were attending a 'deprived' school. Among the 37 children with dt > 4 (8% of the sample), 5% were attending a 'standard' school. For 10-year-old children, one child in 10 had two or more untreated carious lesions. Most of these children (84%) went to school in the deprived or semi-deprived sector. No difference was found in the proportion of children with sealants in different types of school.

The relationship between household SES variables and dental health is presented in Table 2. At least one parent was born in a foreign country in 46% of the families. The parents' immigrant status was significantly related to the dental status in 5- and 10-year-old children for all the thresholds tested; children had poorer dental status in families with an immigrant background. Half of all mothers were active in the workforce. Children whose mothers worked experienced significantly better oral health. This was true in both age groups and for all the thresholds but the trend was more pronounced for 5-year-olds ($P < 0.0001$). In the sample, 20% of fathers were unemployed. There was no relationship between the activity of the

Table 1. Relationship between the ecological measure of deprivation and children's dental status

	Whole population	Standard schools	Semi-deprived schools	Deprived schools	*P* value
5-year-olds					
Mean dft	0.93 (2.27)	0.26 (0.94)	0.97 (2.09)	1.42 (2.88)	0.015
dft >0	120 (26.5%)	20 (13.7%)	37 (32.2%)	63 (32.9%)	0.0001
dt >0	105 (23.2%)	16 (10.9%)	33 (28.7%)	56 (29.2%)	0.0001
dt ≥2	70 (15.5%)	5 (3.4%)	19 (16.5%)	46 (23.9%)	0.0001
dt ≥4	37 (8.2%)	2 (1.4%)	9 (7.8%)	26 (13.5%)	0.0001
n	453	146	115	192	
10-year-olds					
Mean dft	0.85 (1.41)	0.56 (1.07)	0.76 (1.48)	1.19 (1.58)	0.0001
DMFT >0	159 (37.2%)	43 (27.2%)	34 (33.0%)	82 (49.4%)	0.0001
DT >0	105 (24.6%)	26 (16.5%)	15 (14.6%)	64 (38.6%)	0.0001
DT ≥2	49 (11.5%)	8 (5.1%)	5 (4.9%)	36 (21.7%)	0.0001
DT ≥4	12 (2.8%)	0 (0%)	2 (1.9%)	10 (6.0%)	0.004
with sealants	65 (15.2%)	24 (15.2%)	19 (18.4%)	22 (13.2%)	NS
n	427	158	103	166	

Kruskal–Wallis, chi-squared test.
Because of occasional missing data, the total is <427 (10-year-olds).

Table 2. Relationship between household socioeconomic status (SES) variables and children's dental status

	10-year-olds[a]		5-year-olds[a]	
	n	DMFT	*n*	dft
Parents' place of birth				
France	200	0.44 (0.96)***	246	0.58 (1.65)**
Other country	192	1.17 (1.56)	185	1.40 (2.78)
Total	392		431	
Mother's employment				
No job	185	1.14 (1.59)**	212	1.39 (2.65)***
Job	211	0.60 (1.07)	225	0.49 (1.63)
Total	396		437	
Father's employment				
No job	77	1.33 (1.50)***	64	0.87 (2.14)
Job	295	0.68 (1.27)	351	1.20 (2.60)
Total	372		415	
Basic dental insurance				
+Private	275	0.66 (1.22)**	328	0.67 (1.84)**
With state aid	126	1.19 (1.56)	111	1.65 (2.99)
Total	401		439	
Family size				
One child	66	0.72 (1.27)***	67	0.67 (2.11)*
Two children	156	0.47 (0.95)	199	0.64 (1.72)
Three children	107	0.88 (1.32)	119	0.95 (1.85)
4+ children	78	1.54 (1.80)	56	2.16 (3.77)
Total	407		441	

***$P < 0.0001$; **$P < 0.001$; *$P < 0.01$; $^{+}P < 0.05$.
[a]Not all participants answered all questions.
Not significant: family status (single, couple), child's sex, place of birth of the child (France or other country), place of the child in the family (oldest, middle, youngest).

father and dental status in 5-year-old children. The activity of the father was related to the mean DMFT and to the prevalence of untreated dental caries (DT > 0) among the 10-year-olds ($P < 0.01$). Five per cent of the families of the 5-year-olds did not have private complementary dental insurance and 21% benefited from 100% dental insurance coverage dedicated to economically disadvantaged families; those children experienced poorer oral health whatever the caries threshold tested. The dental status (DMFT, DT > 0) of 10-year-old children with private complementary dental insurance (69% of the sample) was significantly better when compared with that of other children. In families with more than four children, the dental status of the children was poorer in each age group

Table 3. Proportion of 5-and 10-year-old children by SES ecologic measure and sample characteristics

	10-year-olds				5-year-olds			
	n	Standard (%)	Semideprived (%)	Deprived (%)	*n*	Standard (%)	Semideprived (%)	Deprived (%)
Parents' place of birth – other country	392	28.77	48.35	68.15	431	17.77	40.00	62.90
Mother's employment – no job	396	30.55	41.05	64.15	437	28.47	51.78	61.17
Father's employment – no job	372	10.00	25.55	27.77	415	6.87	18.52	19.88
Basic dental insurance – +state aid	401	22.67	32.65	45.16	439	10.79	27.43	34.76
Family size – 4+ children	407	6.71	14.43	33.74	441	5.04	11.61	18.95

Not all participants answered all questions.

and for all the thresholds. The SES variables differed between the two age groups: the proportion of parents with an immigrant background was lower in children born in 1998 ($P < 0.001$) and 5-year-olds were more likely to live in families with fewer children ($P < 0.05$) compared with 10-year-olds.

The relationship between age, SES household measures and the SES situation of the school is presented in Table 3. Parents living in deprived areas were more frequently unemployed, often had an immigrant background, were mostly covered by the CMU insurance system and had larger families. Nevertheless, many families with high SES characteristics lived in deprived areas and, similarly, there were low SES families living in the standard sector. As examples, 35% of the families living in deprived zones did not have an immigrant background and one mother in three in the standard sector did not have a professional activity.

Mantel–Haenszel chi-squared analysis revealed some statistically significant associations, in both age groups, between the number of children in the family, the mother's employment status and dental health. In 5-year-olds, similar associations existed between dental health, type of health insurance and category of school. In multivariate analysis, the numbers involved were too small to allow further analysis of these interactions.

Logistic regression analyses were performed for the age groups separately, to determine the relative importance of the SES and ecological variables for

Table 4. Odds ratios (95% CI) derived from logistic regression with various caries thresholds as dependent variables and different SES measures as independent variables

	Dependent variables				
	5-year-olds		10-year-olds		
Independent variables	dft > 2	dt ≥ 2	DT > 0	DMFT > 2	DT > 2
School					
Deprived versus standard[a]	**3.99 (1.54–10.3)**	**7.01 (2.01–24.47)**	1.79 (0.93–3.44)	1.59 (0.79–3.18)	**2.83 (1.08–7.42)**
Semideprived versus standard	**3.42 (1.28–9.18)**	**5.37 (1.47–19.52)**	**0.41 (0.17–1.09)**	0.90 (0.40–1.99)	0.57 (0.14–2.37)
Basic insurance+					
State aid versus private	**2.01 (1.06–3.83)**	1.86 (0.95–3.66)	0.68 (0.34–1.34)	0.64 (0.32–1.29)	0.57 (0.24–1.39)
Mother's employment					
Job versus no job[a]	0.60 (0.32–1.13)	0.56 (0.28–1.10)	0.81 (0.43–1.51)	1.08 (0.57–2.04)	1.02 (0.43–2.45)
Father's employment					
Job versus no job[a]	1.31 (0.62–2.78)	1.28 (0.58–2.83)	0.45 (0.23–0.89)	0.49 (0.25–0.97)	0.92 (0.37–2.33)
Parent's place of birth					
Other country versus France[a]	1.65 (0.90–3.05)	1.79 (0.93–3.48)	**2.18 (1.17–4.05)**	**3.15 (1.66–5.98)**	2.21 (0.92–5.30)
Family size					
Four or more children versus two or fewer[a]	1.73 (0.81–3.70)	1.59 (0.72–3.54)	1.81 (0.82–3.97)	**2.29 (1.05–5.00)**	**3.72 (1.25–11.11)**
Three children versus two or fewer[a]	1.26 (0.66–2.39)	1.16 (0.58–2.32)	1.63 (0.84–3.19)	1.22 (0.60–2.46)	2.46 (0.92–6.62)
r^2-value	0.131	0.154	0.135	0.117	0.157

[a]For each variable, the reference value is marked.
Odds ratios in bold indicate results statistically significantly different from 1.

dental status (Table 4). The dependent variables were dental status for different thresholds; dft, dt >0, >2 and DMFT, DT >0, >2. The thresholds dft, dt, DMFT and DT >4 have not be studied because of the small number of subjects in those categories. The independent variables were the school's classification (zone) and the SES variables found to be significantly related to dental health. We judged that colinearity was not a problem, as the regression coefficients were relatively stable with different models and the standard errors were within expected limits. The models for which the r^2-value was very low (<0.10) have not been considered. In Table 4, odds ratios (95% CI) are given for each independent variable included in the models. In 5-year-olds, the main explanatory variable was the level of deprivation of the school. Children in deprived and semi-deprived schools were 7 and 5.4 times likely to have more than two untreated carious teeth, respectively, compared with children in standard areas. The type of complementary insurance also had a significant influence on the dental status of 5-year-olds. Children not covered by private insurance suffered from more disease. The trend was different in 10-year-old children in whom the ecological variable (school's classification) did not seem to influence oral health except for the threshold DT >2. In this age group, having an unemployed father, living in a family with four children and having one parent born in a foreign country were important factors associated with the level of diseases.

Discussion

It has long been known that having access to dental services does not mean that they are used, even when the economic costs are covered by insurance (26). This study shows that children who attend deprived schools in Clermont-Ferrand are likely to have received less dental care and to have poorer dental health, than those attending schools in parts of the city not defined as deprived. All these children had access to insurance schemes which would cover the cost of provision of the basic restorative care many of them required, but not the cost of preventive care. The dental health differences between the two groups are substantial and because of the irreversible nature of dental disease in children, the children with poor dental health are already doomed to be dental patients for most of their lives.

In the present study, the distribution of dental caries in a sample of French children was assessed. Caries prevalence of 5-year-old children in Clermont-Ferrand was lower than that observed for 6-year-old children in the last French national survey conducted in 1991 (29), probably explained by the ongoing improvement in children's dental health and by the slightly younger age of the children in the present study. It was comparable with the prevalence observed recently in a study on the general and dental health of the 30 000 5–6-year-old French children attending kindergarten in 2000; 9.5% of those children had at least two untreated carious teeth (6–17.1% depending on the regions) (32). The 5-year-olds in the present had a low level of caries compared with those from other European countries (33–36). For the 10-year-olds, comparisons are difficult because most studies relate to 12-year-olds. Nevertheless, it would appear that the dental status of 10-year-olds in the present sample was favourable when compared with the caries experience of 12-year-olds in the 1998 national survey (mean DMFT was 1.9, caries prevalence 39.2%) (30).

The interrelationships among household indicators of SES, the school ZEP status (an ecological measure of deprivation) and the distribution of caries experience were examined. The dental status of the children was associated with household and demographic variables such as place of birth, employment status of parents, type of dental insurance and number of children in the family. Previous French surveys have reported similarly and father's occupation and immigrant background have also been found to be related to caries experience (26, 37). In both age groups, mean caries experience varied with the deprivation status of the school. In this study, no attempt was made to acquire personal economic details from participants. In France many people are reluctant to provide personal information to authorities. Had income and other personal information been requested from the parents, it is probable that participation would have been lower. The educational and other governmental authorities who assess areas to classify them by SES status have access to this information from fiscal and other sources, and this is the basis of the ZEP classification. So we decided that we would not jeopardize participation by requesting this information.

Ecological measures of deprivation seek to classify residential neighbourhoods by their material circumstances and thus, to identify population

subgroups that may be homogenous with respect to the predictor variable of interest. Such indicators vary in the number and types of component variables (13). The relationship between indicators of deprivation and oral health has been tested in North America and there is a consistently inequitable distribution of oral health with respect to deprivation status; the greater the level of deprivation, the poorer the oral health (12, 17, 19, 38). In Britain, children's oral health has been shown to vary between deprived and affluent areas, classified using the Townsend or Jarman indices (15, 16, 18) and it has further been shown that the relative benefit of preventive programmes (water fluoridation, provision of free toothpaste) for young children is greater in deprived areas (39, 40). Our results confirm that children attending ZEP schools are more likely to have untreated dental caries and also are more likely to have other adverse health outcomes such as being overweight (32). The ZEP classification could thus be used as a proxy indicator of deprivation of children under 6 years old. School characteristics such as school performance or the proportion of children receiving free meals have been shown to be good indicators of school mean DFMT in 5-year-old English children (18) and the use of such indicators would be an effective way of targeting dental care, fulfilling a social commitment to a comprehensive dental care system for children.

In 5-year-olds, deprivation explained some variance even when household SES indicators were included in the analysis. In 10-year-olds, oral health was to a greater extent associated with household demographic and SES indicators. Several authors have studied the performance of different ecological indicators in predicting dental caries in children (15, 18, 20), but the relative importance of ecological measures of deprivation and conventional SES indicators in identifying high caries risk children has rarely been evaluated. Thomson & Mackay (41) revealed that caries occurrence in 9-year-old children varied with SES irrespective of the type of measure (household or area based). In the USA, Borrell et al. (12) showed that neighbourhood SES and household income appeared to be important in evaluating racial/ethnic differences in adults' self-rated oral health. Locker & Ford (38) also demonstrated that household income and an area-based measure identifying homogenous neighbourhoods performed similarly in predicting the edentulous status of Canadians aged ≥50 years and over. These findings thus suggest that ecological measures should be considered to be supplementary to household-based measures rather than an alternative. This is particularly true in the present survey given that the importance of each type of measure varied according the age group considered.

The use of ecological measures of SES offers many advantages. Such indicators are simple to use compared with household SES indicators and chances of nonresponse are negligible.As far as such indicators can function as proxy dental health indicators, they are compatible with directed population strategies that target high disease risk groups (38). The problem comes from the important risk of misclassification of individuals of high SES who live in low SES areas or low SES individuals in high SES areas. A similar situation arose some years ago, when an apparently high incidence of hip factures among the elderly seemed to be explained by the fluoridation status of their water supply; the latter variable was assessed from the postal code of their residence, and was thus ecological in nature (42). Subsequently, doubt has been cast on the discrepancies between ecological variables and individuals' exposure to risk factors (43, 44). Such misclassification was also apparent in the present results: ZEP resident children differed from other children in their SES measures but at an individual level, many families were incorrectly classified by the ecological measure.

Ultimately, dental care services aim to identify children in need of care so that clinical and preventive care may be provided. One implication of such a targeted approach is that high-risk individuals who attend low-risk schools would be missed if the offer of care is limited to apparent high caries risk groups. The level of misclassification of individuals in the population should determine the viability of this approach, which should be considered only where there is no likelihood of a comprehensive service being offered. The present results showed that 75% of the 49 children (5% of the sample) with very high dental needs and 57% of the 210 children (24% of the sample) with moderate needs attended a ZEP school and in Clermont-Ferrand a whole-population approach would be a more appropriate strategy to achieve a significant impact on overall disease levels (45). A recent law (n.2004-806-9/082004) has defined several objectives for oral health in France, but without an organized dental public health system such ideas are likely to be but empty words. Although this study reports low mean caries levels in

children in Clermont-Ferrand, the disease burden is clearly unevenly and unfairly distributed. To reduce the disease differential between the underprivileged and the privileged in society should be a public health goal. This could be effectively achieved by social changes to eliminate deprivation and in turn, influence children dental health (46) but such a political solution seems difficult to implement. Thus, in the context of limited resources for dental public health programmes, geographic targeting could be an interesting approach (25).

This survey demonstrated large inequalities in children's dental status in Clermont-Ferrand. Using the ecological measure of schools' deprivation status we were able to identify, in young children, population subgroups with different levels of oral health. While at an individual level, there was a significant risk of misclassification (suggesting that ecological measures should be used cautiously) the actual risk involved would entail that misclassified children would be those incorrectly assessed as needing care and they would be immediately identified if care were to be offered. In a context of restricted resources for dental public health programmes, this indicator could be used to target programmes to geographically defined deprived areas with high dental needs. It remains, however, to persuade political and dental professional authorities of the unacceptability of SES-based inequalities in dental health in France.

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