Questionnaire surveys: Subjective Perceptions and Behaviours

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Oral Epidemiology Workshop
Key Questions - outline

- Behaviours – the “usual suspects”?
- Dental Anxiety – the (not so) “new kid on the block”...
- Why measure subjective perceptions and (oral) health-related quality of life (OHRQoL)?
- Types of measures – examples
- Which are the necessary properties of composite measures (such as OHRQoL)?
- How have they been applied? The example of the CDHS 2013 (and ADHS 2009)
Health Behaviours

- Always measured (at least some of them)...
- ... but information further than simple descriptions generally remains untouched by the human brain... rarely involved in more complicated analysis - info not relevant for planning and services?

- Key oral health behaviours measured
  - Oral hygiene / tooth brushing (always) and hygiene aids
  - Dental attendance (always – see Ken’s lecture)
  - Smoking (sometimes)
  - Diet / sugar consumption (rarely)
  - Alcohol (almost never!)
CDHS 2013: Diet / Sugar (foods)

These questions are about what you eat and drink. We also ask you if you have ever smoked cigarettes or drunk alcohol.

Your answers will NOT be shown to anyone you know, or to the dentist you are seeing.

Q18 How many times a day do you usually eat...

Tick one box on each row

<table>
<thead>
<tr>
<th></th>
<th>Four or more times a day</th>
<th>Three times a day</th>
<th>Two times a day</th>
<th>Once a day</th>
<th>Less than once a day</th>
<th>Rarely or never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit (fresh, tinned, dried and frozen)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cakes or biscuits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweets (candy or chocolate)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Self-reported frequency of:
- key sugary foods
- Fruits (healthy option)
CDHS 2013: Diet / Sugar (drinks)

Self-reported frequency of:
- key sugary soft drinks
- Separation from non-sugar soft drinks
- Water (healthy option)
CDHS 2013: Smoking

Q20 This question is about smoking. Please read the following sentences carefully and choose the one that best describes you.

Think about times you may have had a puff or two as well as smoking whole cigarettes.  

Tick one answer only

I have never tried smoking cigarettes  
I have smoked cigarettes only once or twice  
I used to smoke cigarettes but I don’t now  
I sometimes smoke cigarettes, but don’t smoke every week  
I smoke cigarettes regularly, once a week or more

Remember that your answers will not be shown to anyone you know, or to the dentist you are about to see.

Self-reported smoking patterns:
• Never (or almost never) vs. Past vs. Current (different intensity grades)

Confidentiality !!!
As for smoking...
Health Behaviours measures: relevant info?

- Sugar consumption
- ... ask for frequency (easier to assess in questionnaires)
- ... but...

✓ unknown information reliability

- WHO guidance is on % energy intake (difficult to assess?)
Health Behaviours: measurement challenges

- Dilemma for surveys: **Inconsistency** across surveys (and maybe more relevant info?) OR **continuity** (and therefore comparability)?

- Questions suited for **international comparisons** (HBSC)?

- Some questions may be “**saturated**” because the “correct” answer is widely known?
  - How often do you brush your teeth?

- Others are **sensitive** (or at least perceived as such by oral health researchers)?
  - Alcohol?
  - No problem for info to be collected in other surveys!!!
  - Data linkage: logical but not straightforward
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- How have they been applied? The example of the CDHS 2013 (and ADHS 2009)
“Dental anxiety is an aversive psychological response to a poorly defined, or not immediately present dental stimulus interpreted as potentially harmful or dangerous, usually within a dental context”.

Dental anxiety is distinct from dental phobia

http://www.st-andrews.ac.uk/dentalanxiety/
Dental Phobia

Dental phobia is characterised essentially as an individual who avoids dental treatment and can be recognised with the following criteria:

- a marked and persistent fear of the specific object or situation that is excessive or unreasonable,
- an immediate anxiety response upon exposure to the feared stimulus, which may take the form of a panic attack, recognition that the fear is excessive or unreasonable, avoidance of the anxiety-producing situation, interferes with normal functioning or causes marked distress.

http://www.st-andrews.ac.uk/dentalanxiety/
Dental Anxiety: why is it important?

- Dental anxiety is related to psychological responses to stressors....
- ...but there are many stressful situations in life...

...and they can affect considerably the daily life of people...
Dental Anxiety: why is it important?

- Some stressors are really important...
- ...and very intense...

...but they never (hopefully) last for long... and there may be a “happy end”
Dental Anxiety: why is it important?

- People that are dentally anxious may postpone dental visits
- May not co-operate fully, resulting in sub-optimal care
- At the extreme, dental phobics will just avoid dental visits and treatments altogether

= disadvantaged population group

Important to target them for:
- appropriate prevention and health promotion
- behavioural interventions to address dental anxiety
Modified Dental Anxiety Scale (MDAS)

1. If you went to your Dentist for TREATMENT TOMORROW, how would you feel?
   - Not Anxious □
   - Slightly Anxious □
   - Fairly Anxious □
   - Very Anxious □
   - Extremely Anxious □

2. If you were sitting in the WAITING ROOM (waiting for treatment), how would you feel?
   - Not Anxious □
   - Slightly Anxious □
   - Fairly Anxious □
   - Very Anxious □
   - Extremely Anxious □

3. If you were about to have a TOOTH DRILLED, how would you feel?
   - Not Anxious □
   - Slightly Anxious □
   - Fairly Anxious □
   - Very Anxious □
   - Extremely Anxious □

4. If you were about to have your TEETH SCALED AND POLISHED, how would you feel?
   - Not Anxious □
   - Slightly Anxious □
   - Fairly Anxious □
   - Very Anxious □
   - Extremely Anxious □

5. If you were about to have a LOCAL ANAESTHETIC INJECTION in your gum, above an upper back tooth, how would you feel?
   - Not Anxious □
   - Slightly Anxious □
   - Fairly Anxious □
   - Very Anxious □
   - Extremely Anxious □

Features of MDAS

✓ Quick to complete
✓ Widely used in surveys
✓ Reliability + Acceptability
✓ Numerous translations in other languages available
✓ Cut-off for extreme dental anxiety (≥19)
✓ NOT NECESSARILY dental phobia
✓ Population norms (for UK)
✓ ...But not equally developed for child populations
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- Why measure subjective perceptions and (oral) health-related quality of life (OHRQoL)?
- Types of measures - examples
- Which are the necessary properties of composite measures (such as OHRQoL)?
- How have they been applied? The example of the CDHS 2013 (and ADHS 2009)
Increasing interest about subjective perceptions of health (and oral health) has led to the development of a plethora of subjective measures of health and quality of life...

Focus on measures for adults and elderly... followed by the development of measures for children

Most of those measures have been validated as well as adapted for use in different settings and cultures

WHY NOW? Which factors have led to this?
Subjective Measures of Oral Health and QoL

1. Single standing questions
   - Self-Rated Oral Health
   - Perceived Dental Treatment Needs

2. Battery of questions
   - Pain (even for young children)
   - Dental Discomfort Questionnaire
   - Chewing Ability (usually for older adults)

3. Oral Health-Related Quality of Life (OHRQoL) indicators
   - Composite – different domains and age groups
     - Generic / Profiles (health status surveys)
     - Disease-specific (clinical trials)
Patient-based outcomes in dentistry: Number of papers published by year
Health Outcomes

✓ Health outcome measurement has traditionally focused on survival periods, toxicity, biochemical indicators and symptom rates, and (more recently) a number of indicators of physical and psychological morbidity and social disadvantage

✓ Incorporate both medical and patient's perspectives

✓ Health status vs. Health-Related Quality of Life

✓ Health status: focus on morbidity

✓ Health-Related Quality of Life: encompassing physical health and functioning, social functioning, psychological and emotional well-being
Different models of Health

A. Biomedical model
✓ Traditional approach - linear thinking (reductionism)
✓ Pathology, tissue damage etc.
✓ “find it and fix it” approach
✓ Emphasis on clinical data (disease-related)

B. Outcomes model
✓ Chronic diseases challenge biomedical model
✓ They have multiple causes, some in common (Common Risk Factor Approach)
✓ Value placed on self-reports (outcome-based)
✓ Emphasis on epidemiological data - broader determinants of health

Kaplan, 2003; Quality of Life Research
Why use HRQoL measures?

✓ Important for assessing impacts of chronic diseases

✓ Physiologic measures often correlate poorly with functional ability and well-being

✓ Two patients with similar clinical status often have dramatically different perceptions about their oral health

Guyatt, Feeney and Patrick, 1993; Annals of Internal Medicine

✓ Intended outcomes of health care are primarily changes in patients’ health status and quality of life

McCallion et al, 1993
Quality of Life Definitions

- Health-related quality of life is the value assigned to duration of life as modified by impairments, functional states, perceptions and social opportunities that are influenced by disease, injury, treatment or policy (Patrick and Erickson, 1993)

- Health-Related Quality of Life: a multifaceted concept that attempts to simultaneously assess (trade-off) how long and how well people live.

- Quality of Life: “An individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their personal goals, expectations, standards and concerns” (WHOQOL Group, 1995)
What are “Oral Health-Related Quality of Life” (OHRQoL) measures?

- Oral health-related quality of life: “The impact of oral diseases and disorders on aspects of everyday life that a patient or person values, that are of sufficient magnitude, in terms of frequency, severity or duration to affect their experience and perception of their life overall” – Linking oral health to quality of life (Locker and Allen, 2007)

- Subjective indicators that provide information on the impact of oral disorders and conditions, and the perceived need for oral health care.

OHRQoL indices are complementary to clinical measures
Adapted World Health Organisation Model
(Locker, 1988)
OHRQoL indicators

For adults ... (examples)

- **General Oral Health Assessment Indicator (GOHAI)**; 12 items (Atchison and Dolan, 1990)

- **Oral Health Impact Profile (OHIP)**; 49 items (Slade and Spencer, 1994); short-form OHIP-14 (Slade, 1997); edentulous population short-form OHIP-19 (Allen and Locker, 2002)

- **Oral Impacts on Daily Performance (OIDP)**; 8 items (Adulyanon and Sheiham, 1997); elderly population version 8- or 10-items (Tsakos et al, 2001)
OHRQoL indicators

For children ...

- Child Oral Health Quality of Life (COHQoL; Jokovic et al., 2002); child perceptions, parental perceptions and family impact. Dimensions: oral symptoms, functional limitations, emotional well-being and social well-being.

- Child-Oral Impacts on Daily Performance (Child-OIDP; Gherunpong et al., 2004); Impact on 8 performances: eating, speaking, cleaning, sleeping, smiling, emotional stability, school work, social contact.

- Early Childhood Oral Health Impact Scale (ECOHIS; Pahel et al, 2007); Parental report - very young children

- Scale of Oral Health Outcomes for 5-year-olds (SOHO-5; Tsakos et al, 2012); self-report and parental reports
## Oral Health-Related Quality of Life indicators

The Geriatric Oral Health Assessment Index (GOHAI)

Atchison and Dolan, 1990
(12 items)

<table>
<thead>
<tr>
<th>Frequency of oral impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating without discomfort</td>
</tr>
<tr>
<td>Limit food from dental problems</td>
</tr>
<tr>
<td>Trouble in biting, chewing</td>
</tr>
<tr>
<td>Trouble in speaking</td>
</tr>
<tr>
<td>Uncomfortable eating with people</td>
</tr>
<tr>
<td>Nervous / self-conscious</td>
</tr>
<tr>
<td>Limit social contacts</td>
</tr>
<tr>
<td>Worry / concern</td>
</tr>
<tr>
<td>Use medication for teeth</td>
</tr>
<tr>
<td>Sensitive teeth or gums</td>
</tr>
<tr>
<td>Pleased with looks</td>
</tr>
<tr>
<td>Swallow comfortably</td>
</tr>
</tbody>
</table>

Atchison and Dolan, 1990 (12 items)
Oral Health-Related Quality of Life indicators

The Oral Health Impact Profile (OHIP)

Slade and Spencer, 1994
(49 items)

- Functional limitation
- Physical pain
- Psychological discomfort
- Physical disability
- Psychological disability
- Social disability
- Handicap

- Short-form (OHIP-14); Slade, 1997
- Edentulous population (OHIP-19); Allen and Locker, 2002

Frequency of oral impacts
Oral Health-Related Quality of Life indicators

The Oral Impacts on Daily Performance (OIDP)

- Adulyanon and Sheiham (1997) - adults
- Tsakos et al, 2001 - older adults
- Gherunpong et al, 2004 - children (Child-OIDP)

- Eating food
- Speaking clearly
- Cleaning teeth or dentures
- (Doing light physical activities)
- Going out
- Sleeping
- Relaxing
- Smiling, laughing, showing teeth without embarrassment
- Mood affected (becoming upset)
- (Work or major role)
- Enjoying contact with other people

Frequency and Severity of oral impacts
OIDP index: Conceptual Framework

- Impairment
  - Pain
  - Discomfort
  - Functional Limitation
  - Dissatisfaction with appearance

Impacts on Daily Performance
- Physical
- Psychological
- Social
The Child-OIDP index

✓ Assesses the impacts of oral conditions in relation to the ability of the person to carry out 8 important daily activities and behaviours.

✓ In addition to the overall score, there is provision for condition-specific scores, whereby oral impacts are related to a specific dental condition, such as malocclusion, by directly asking the respondent.

✓ The Child-OIDP can serve both as a generic and condition-specific instrument.

✓ This condition-specific feature makes the index suitable for needs assessment.
HRQoL Indicators: Overview

Similarities in broader content themes
- physical well-being (physical health status and functioning)
- emotional and psychological well-being (life satisfaction, anxiety)
- social well-being (social functioning)

Differences
- precise aims (and potential applications)
- frequency and/or severity
- generic impacts or “linked” to oral conditions
- specific content (subjective ratings of importance?)
- technical characteristics (no. of items, response choices, subscales, administration method, “weights”)
Key properties of HRQoL measures

8 key attributes and criteria for HRQoL measures...

- Conceptual and measurement model
- Reliability
- Validity
- Responsiveness
- Interpretability
- Respondent and administrative burden
- Alternative forms
- Cultural and language adaptations (translations) (SAC, 2002)
Meaningless OHRQoL means?

✓ P values are not sufficient: size of differences?
✓ Mean change scores are “complex and controversial” ¹
✓ Change can occur in both directions - mean change scores just give average change
✓ Same mean change score - different change profiles
✓ Is the difference (change) meaningful?

➢ “Differences or changes in scores... give the direction of difference, without any notion of scale or (more importantly) intrinsic meaning” ²

Interpretability of aggregate scores

✓ **Interpretability**: “the degree to which one can assign qualitative meaning—that is, clinical or commonly understood connotations— to quantitative scores” ¹

✓ Are changes **clinically significant or meaningful**?

✓ Both cross-sectional and longitudinal studies

➢ **Minimally important difference (MID)**: “smallest difference in score in the domain of interest which patients perceive as beneficial and which would mandate, in the absence of troublesome side-effects and excessive cost, a change in patient’s management” ²

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Perceptions of dental and general health

✓ Global item questions - Overall assessment

✓ Wording:
  • How would you rate your dental health?
  • How would rate your general health?

✓ Answers:
  • Very good .... Very poor
How do children rate their dental and general health?

<table>
<thead>
<tr>
<th>Children aged 12,15</th>
<th>12 years</th>
<th>15 years</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>12 years</td>
</tr>
<tr>
<td>Dental Health</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>60</td>
<td>68</td>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
<td>72</td>
<td>81</td>
<td>Female</td>
</tr>
<tr>
<td>FSM eligible</td>
<td>59</td>
<td>64</td>
<td>FSM eligible</td>
</tr>
<tr>
<td>Not eligible</td>
<td>67</td>
<td>77</td>
<td>Not eligible</td>
</tr>
<tr>
<td>% Total</td>
<td>66</td>
<td>74</td>
<td>% Total</td>
</tr>
<tr>
<td>General Health</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FSM eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appearance of teeth

- Self-reports (aged 12 & 15) and Parental proxy reports (all 4 ages)

- Satisfaction with appearance of teeth
  - 5 point scale: Very satisfied... satisfied... neither satisfied nor dissatisfied... dissatisfied... very dissatisfied

- Perceived need for orthodontic treatment
  - “teeth are all right”... “would prefer them straightened”... “already in treatment”
Children’s self-reports: Dissatisfaction with the appearance of their teeth

About 1 in 6 dissatisfied with the appearance of their teeth
**Are children’s perceptions different from those of their parents?**

<table>
<thead>
<tr>
<th>England, Wales and Northern Ireland 2013</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children aged 12,15 with a parent assessment</td>
<td>12 years</td>
</tr>
<tr>
<td><strong>Self Assessment</strong></td>
<td><strong>Parent Assessment</strong></td>
</tr>
<tr>
<td>My teeth are all right</td>
<td>Their teeth are all right</td>
</tr>
<tr>
<td>Would prefer them straightened</td>
<td></td>
</tr>
<tr>
<td>Child in treatment</td>
<td></td>
</tr>
<tr>
<td>Would prefer them straightened</td>
<td>Their teeth are all right</td>
</tr>
<tr>
<td>Would prefer them straightened</td>
<td></td>
</tr>
<tr>
<td>Child in treatment</td>
<td></td>
</tr>
</tbody>
</table>
Oral problems and Impact

- Self-reported oral problems (children aged 12 and 15)

- Parental proxy reports of children’s oral problems (children aged 5 and 8)

- Impact of oral health on the quality of life of children (aged 12 and 15)

- Impact of child’s oral health on the family life (parental reports – all 4 ages)
Toothache in children in UK (CDHS 2013)

<table>
<thead>
<tr>
<th>Problems</th>
<th>12 years</th>
<th>15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive mouth</td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td>Mouth ulcers</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Bad breath</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td><strong>Toothache</strong></td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>Bleeding or swollen gums</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Broken tooth</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td><strong>Any problem</strong></td>
<td>68</td>
<td>66</td>
</tr>
</tbody>
</table>

Parental reports of child’s oral problems

England, Wales and Northern Ireland 2013

<table>
<thead>
<tr>
<th>Children aged 12,15</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 year olds</td>
</tr>
<tr>
<td>Toothache</td>
<td>14</td>
</tr>
<tr>
<td>Other pain in mouth</td>
<td>13</td>
</tr>
<tr>
<td>Bad breath</td>
<td>13</td>
</tr>
<tr>
<td>Broken tooth</td>
<td>5</td>
</tr>
<tr>
<td>Problems with appearance</td>
<td>5</td>
</tr>
<tr>
<td>Bleeding or swollen gums</td>
<td>3</td>
</tr>
<tr>
<td>Any problem</td>
<td>37</td>
</tr>
</tbody>
</table>

- Toothache, other pain and bad breath from very young age
- Very clear social inequalities: 49% of FSM eligible and 34% of non-eligible with oral problems
Oral Impacts in CDHS 2013

☑ To what extent the mouth affects the Quality of Life of the child

☑ Child-OIDP
  - 8 key aspects of daily life
  - How much the teeth and mouth affect them?… “not at all”… “a little”… “a fair amount”… “a lot”
  - Prevalence by impact; overall; extent (number of impacts reported)
## Oral Impacts on daily life (Child-OIDP) in UK

<table>
<thead>
<tr>
<th>England, Wales and Northern Ireland 2013</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12 year olds</td>
</tr>
<tr>
<td>Children aged 12,15</td>
<td></td>
</tr>
<tr>
<td>Any difficulty in last 3 months</td>
<td>58</td>
</tr>
<tr>
<td>Difficulty eating</td>
<td>22</td>
</tr>
<tr>
<td>Difficult speaking</td>
<td>9</td>
</tr>
<tr>
<td>Difficulty cleaning teeth</td>
<td>22</td>
</tr>
<tr>
<td>Difficulty relaxing</td>
<td>10</td>
</tr>
<tr>
<td>Felt different</td>
<td>14</td>
</tr>
<tr>
<td>Felt embarrassed smiling or laughing</td>
<td>35</td>
</tr>
<tr>
<td>Difficulty doing schoolwork</td>
<td>6</td>
</tr>
<tr>
<td>Difficulty enjoying being with people</td>
<td>9</td>
</tr>
</tbody>
</table>

More than a third of 12-year-olds embarrassed to smile because of their teeth
19 March 2015

More than a third (35%) of 12-year-olds and 23% of 15-year-olds say they have been embarrassed to smile or laugh due to how they feel about their teeth, finds a new UCL-led report commissioned by the Health and Social Care Information Centre.

The new report, Attitudes, Behaviours and Children’s Dental Health, reveals for the first time how children aged 12 and 15 feel about their dental health. It was written by Dr George Tsakos (UCL Epidemiology & Public Health) in collaboration with colleagues at the Universities of Birmingham, Cardiff and the Office of National Statistics.

58% of children aged 12 and 45% of those aged 15 reported that their daily life had been affected in some way by oral problems in the last three months. This was most commonly experienced as embarrassment when smiling, laughing or showing teeth, followed by difficulty eating, and difficulty cleaning teeth.

“Oral conditions can affect children’s quality of life in many different ways, not just with physical impacts such as eating but also psychologically and socially,” says Dr Tsakos. “We found that problems were much worse in those eligible for free school meals, with 33% of 15 year olds eligible and 22% of those not eligible (for free school meals) saying that their oral health made their everyday life more difficult. This highlights the extent of social inequalities in oral health and quality of life among adolescents and the need for preventive strategies to improve oral health, particularly for the more deprived children in the population.”

Other key findings from the report include:

- 44% of 12 year olds and 28% of 15 year olds reported that they would like to have their teeth straightened. Children eligible for free school meals were more likely to want their teeth straightened, but started treatment much later than children not eligible.
- Two thirds of 12 and 15 year olds reported a problem with their dental health in the last three months. The most prevalent problem was sensitive teeth, reported by 32% of 12 year olds and 34% of 15 year olds, followed by mouth ulcers, bad breath, toothache and bleeding gums.
- 71% of 12 year olds eligible for free school meals reported brushing their teeth twice daily, compared with 78% of those not eligible.

“Urgent action is needed to tackle oral health inequalities. It is simply unfair and unjust that children from deprived households suffer so much from dental diseases that are largely preventable. Organisations such as Public Health England have a key role in addressing this problem.”

Professor Richard Watt
Inequalities in Oral Impacts on daily life (Child-OIDP) in UK

Free School Meals (FSM) eligibility does not fit well with good QoL, ... more deprived children are particularly vulnerable

Subjective oral health and quality of life by educational level among dentate

### Child’s oral health: Impact on family life

<table>
<thead>
<tr>
<th>England, Wales and Northern Ireland 2013</th>
<th>5 years</th>
<th>8 years</th>
<th>12 years</th>
<th>15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children aged 5, 8, 12, 15</td>
<td>5 years</td>
<td>8 years</td>
<td>12 years</td>
<td>15 years</td>
</tr>
<tr>
<td>Time off work</td>
<td>7</td>
<td>12</td>
<td>19</td>
<td>23</td>
</tr>
<tr>
<td>Child needed more attention</td>
<td>11</td>
<td>16</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Parent felt stressed or anxious</td>
<td>11</td>
<td>18</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>Parent felt guilty</td>
<td>8</td>
<td>13</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Family activities interrupted</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Parent’s sleep disrupted</td>
<td>7</td>
<td>10</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Financial difficulties</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Any Family Impact</td>
<td><strong>21</strong></td>
<td><strong>32</strong></td>
<td><strong>32</strong></td>
<td><strong>35</strong></td>
</tr>
</tbody>
</table>

Conclusions

✓ Questionnaires provide unique information on national studies that goes beyond what clinical data offers
✓ Collected data needs to be relevant for needs assessment and planning services (not just research)
✓ Behaviours are important but their measurement challenging
✓ The whole spectrum of behaviours is usually ignored despite its relevance for oral health
✓ Dental anxiety “ticks many of the boxes” and seems to provide practical information, but not so much for child populations
Conclusions

✓ Oral symptoms are easy to measure and directly relevant for communication to the “external world” (public and policy makers)

✓ OHRQoL measures can bring out the subject-centred approach and re-orient focus on health

✓ Complex measures in surveys come with key choices:
  ✓ Aim / focus of the survey
  ✓ Severity (importance) vs frequency ratings - links to oral conditions
  ✓ Content vs. length
  ✓ burden to staff and respondents
  ✓ COMPARABILITY and INNOVATION!!!
All these are important challenges and “answers” are almost never obvious…

… but seem very easy compared to the difficulty of using the survey information practically to improve the (oral) health of the population or even of individuals

“Stop smoking, quit drinking, eat less, exercise more! Are you some kind of health nut?”
Thank you for your attention

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