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SUPPLEMENT ARTICLE

Weight screening in paediatric dentistry: What do families and staff think?

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INTRODUCTION

Dental caries and childhood obesity are multifactorial conditions raising public health concern. Children above or below a healthy weight are more likely to experience dental caries.¹ Childhood obesity is also associated with an increased risk of other health conditions including type 2 diabetes, whereas both obesity and dental caries are associated with numerous physiological and psychological implications such as a negative impact on growth and low self-esteem.² Moreover, children living in more deprived areas of the country are twice as likely to experience dental decay and childhood obesity.² The UK Government's target is to halve childhood obesity by 2030 and to reduce such health inequalities.³

A collaborative approach across health care to support healthier lifestyles is advocated by the British Society of Paediatric Dentistry.² Specialists in Paediatric Dentistry support opportune body mass index (BMI) screening as part of consultations to facilitate sensitive identification of children above and below a healthy weight. Few, however, report routine BMI assessment and share uncertainty over the interpretation of BMI and onward referral.⁴

In response to the call for a collaborative approach and to determine the feasibility of routine BMI screening, the Paediatric Dentistry Department at The Edinburgh Dental Institute, Scotland, commenced routine BMI screening on new patient (NP) clinics in November 2019. Children above and below a healthy weight are sensitively identified. Appropriate referral offered to families involves the child's general medical practitioner (GMP) and/or 'Get

Going' part of NHS Lothian's Child Weight Management Programme.

From November 2019 to July 2021, 825 children (69.4% of all NP activity) had their BMI calculated. One hundred and forty-nine (18.1%) children were above a healthy weight, with 42 (28.2%) accepting referral to 'Get Going'. A total of 17 (2.1%) children were below a healthy weight with families consenting to information sharing with their GMP. Public Health Scotland reports 1% of 5-year-old children at risk of being underweight and 23% at risk of overweight or obesity.⁵ Overall, 29% of children in Scotland are at risk of overweight or obesity.²

In 2021, two service evaluations were undertaken to assess the acceptability of the service development.

Aim

The aim of this study was to assess the acceptability of BMI screening for both children and their families and members of the dental team.

METHOD

Two digital questionnaires, one for dental team members and the other for children and their parent/carer, were designed following clinical governance approval. The link to the staff questionnaire was circulated via email remaining live for one month (01 February 2021 to 29 February 2021).

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Children and families were invited to complete a questionnaire following the assessment during a two-month period (12 February 2021 to 14 April 2021). The acceptance rate was not recorded. The questionnaire sought feedback on their visit with specific questions on BMI assessment. Free text boxes were available for supporting information. Using a 'happy', 'okay' or 'sad' face or an unsure option for each question (Table 1), the first part of the questionnaire encouraged the child's response, with parental/carer support as required. The second part was completed by the parent/carer.

Responses from both questionnaires were exported to and analysed anonymously in Microsoft Excel (Microsoft® Corporation).

RESULTS

A total of 19 staff questionnaires were received from consultants, speciality trainees, dental core trainees, post-graduate students and dental nurses, with a response rate of 70.1%. The questionnaires showed that 80% of staff ($n = 15$) felt that BMI screening had a 'very positive' or 'positive' impact, over 75% reported it was 'very easy', 'easy' or 'quite easy' to measure height and weight, that they had received adequate training and that they would like to see the project extended. It was noted that 32% ($n = 6$) of staff reported encountering some difficulties when raising the issue of weight with families. Common themes, reported as free text answers, highlighted the sensitive nature of BMI discussions, the potential negative impact the pandemic has had on children's food habits, the project's beneficial holistic approach to care as well as focusing on the practicalities of BMI screening including clinic time not being severely impacted.

A total of 49 child and family questionnaires were completed by children aged 2 to 15 years, with more responses from females ($n = 28$ [57%]) than males ($n = 21$ [43%]). Throughout the data collection period, a total of 90 new patients had their BMI calculated yielding a sample size of 44%.

DISCUSSION

As far as the authors are aware, this is the first service evaluation of its kind in the United Kingdom, with findings demonstrating a high level of support for routine BMI screening (Tables 1 and 2).

Accepting that a greater parental/carer involvement, and therefore influence, may have been required for younger children to complete the questionnaire, over four of five children ($n = 40$ [81.63%]) selected a 'happy' face in response to their height/weight being taken, a slightly more favourable response than having their teeth counted ($n = 39$ [79.59%]). Both questions had a less favourable response overall than the remaining questions, which may have related to anxiety with having an actual intervention, that is, height/weight measurement and dental examination. Friendliness of the team ($n = 48$ [97.96%]) and communication throughout the visit ($n = 47$ [95.92%]) were rated highly.

A sensitive approach to BMI discussion is recommended,^{2,4} and it was encouraging that almost all parents/carers felt that they had sufficient privacy ($n = 47$ [95.92%]) and that only one parent/carer disclosed a potential concern over BMI assessment ($n = 1$ [2.04%]).

In the light of the highly supportive feedback, one more department within the institute has commenced BMI screening and colleagues in the Public Dental Service are preparing a pilot.

TABLE 1 Feedback from children following their new patient assessment




Question	Child response <i>n</i> (%)			
				'I do not know'
How do you feel about today's visit?	44 (89.8)	3 (6.12)	0	2 (4.08)
Were the dental team kind and friendly?	48 (97.96)	0	0	1 (2.04)
Did the dental team explain what was going to happen?	47 (95.92)	1 (2.04)	0	1 (2.04)
Did you feel able to ask questions?	42 (85.71)	4 (8.16)	0	3 (6.12)
Did you like the room?	42 (85.71)	6 (12.24)	0	1 (2.04)
Did you like having your height and weight taken?	40 (81.63)	8 (16.33)	0	1 (2.04)
Did you like having your teeth counted?	39 (79.59)	8 (16.33)	2 (4.08)	0
If your friend was coming here today, would you say this is a good place to come?	47 (95.92)	1 (2.04)	0	1 (2.04)

TABLE 2 Feedback from parents/carers following their child's new patient assessment

Question	Response n (%)				
	Very satisfied	Satisfied	Neither	Unsatisfied	Very unsatisfied
How satisfied are you with your child's visit today?	45 (91.84)	3 (6.12)	0	1 (2.04)	0
	Yes	No	Not sure	Comments	
Were you given enough privacy?	47 (95.92)	1 (2.04)	1 (2.04)	Nil recorded	
Did you understand why a BMI measurement was taken?	48 (97.96)	1 (2.04)	0	'Great service' 'In agreement' 'Happy' 'It was good to do'	
Do you have any concerns with the dental team recording these measurements?	1 (2.04)	48 (97.96)	0	'Happy' 'N/A' 'Nil'	

Raising the issue of unhealthy weight is recognised as a challenge for health care professionals for a number of reasons: lack of guidance, knowledge, training and confidence.^{4,6} Findings from this service evaluation suggest that with continued training and support, confidence can be increased within the dental team. Training on weight stigma, eating disorders and how to facilitate weight conversations with families in a supportive manner is ongoing to avoid negative outcomes.

Moreover, BMI assessment can be incorporated into NP clinics with little impact on clinical time and with high acceptance from children and families. Not only do weight and BMI assessment support clinical decisions, such as local anaesthetic and medication prescribing, but they also promote a holistic approach to patient care as reflected from the feedback from staff and families.

ACTION PLAN

The following action plan were proposed:

- Continue to support the dental team and provide regular training to improve outcomes.
- Support local dental roll-out of BMI screening and encourage wider roll-out within paediatric dentistry.
- Continue to work collaboratively with healthcare professionals and weight management programmes and seek outcome data.
- Seek further feedback from families and the dental team.

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