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Understanding the impact of behaviour change supported by motivational interviewing on participant response: delivering what works for caries prevention in high-risk children

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How behavioural interventions work is crucial to identifying mechanisms of change to explain treatment efficacy. This study analyses change processes from a successful randomised controlled trial (Dental RECUR) including: a) goals set collaboratively between parents of children with dental caries and a dental nurse; b) goal type and specificity and c) behaviour change techniques identified to support the achievement of goals.

Participants were parents of 5-7-year-old children due to have teeth extracted because of dental caries recruited at twelve centres across the U.K. Participants took part in a 30-minute therapeutic conversation guided by a dental nurse. Goal data was analysed from 115 parents who provided this information during the conversation. In addition, twenty-two interviews were transcribed and thematically analysed to explore parental approach to changing familial toothbrushing and dietary behaviour.

109 behaviour change goals were set, 94 (86%) related to changing sugar/diet and 68 (62%) to a brushing/oral hygiene behaviour. There were 50 single behaviour goals, 46% of total; of these 37 (74%) related to a sugar behaviour and 12 (24%) were for a brushing/oral hygiene behaviour. Specific familial goals included: 'try a flavour-free toothpaste'; and 'supervise bedtime brushing every night'. Agreed activities to reach the goal included: 'swapping juice for milks'; and 'not to buy chocolate in weekly shop'. Four themes were identified relating to toothbrushing (decisions dictated by path of least resistance, parental views of responsibility, lack of understanding of existing knowledge, extraction experience eliciting motivation for change) and dietary behaviour (parents' perception and knowledge of effects of sugar on oral health, challenges of dietary control, changing eating behaviours and parental control, parents view of oral health and extraction process).

Analysing processes of behaviour change within RCTs can help identify what leads to successful outcomes and guide future interventions.