

# Anticipatory Guidance through Online Motivational Interviewing for Mothers on Early Childhood Caries among Young Children of Age 9–24 Months amidst Pandemics: A Nonrandomized Clinical Trial

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## ABSTRACT

Early childhood caries (ECC) is a multifactorial disease with known etiologic factors and can be very devastating to the oral and general well-being of a child, including psychological impact on a growing child. The irony is among the different factors responsible for milk that is wholesome nutrition, if fed in a wrong pattern, can be the main factor that helps this type of rampant caries spread within no time, leading to pulp exposures and complicating proceedings. Awareness is the mainstay in prevention, and creating it becomes our sole responsibility as a pediatric dentists. A multidisciplinary approach with the involvement of mothers as a main stakeholder in this front becomes a very promising move, so this project is phase two of interprofessional collaboration involving mothers in prevention; the aim of the study is to create awareness among mothers during COVID lockdown so as to prevent ECC in this COVID pandemic.

**Materials and methods:** A total of 222 mothers with 9–24 months old children were selected and added to the e-groups. The allocated mothers were given a pretest questionnaire and collected back with a photo of their child's oral health, and anticipatory guidance and in-depth interviewing were given to them. Follow-up is done in 2, 4, and 6 months. Awareness is evaluated by pre- and posttest questionnaires. Reversal of the white spot is evaluated through indices, and progression is noted.

**Statistical analysis:** The data was analyzed using Statistical Package for the Social Sciences 13.

**Result:** Pretest and postquestionnaire analysis were done using the Chi-squared test. The test shows the marked raise in knowledge, attitude, and practice of mothers on their children after postintervention, which was given through motivational interviewing (MI).

**Conclusion:** In summary, the MI intervention appeared to improve maternal knowledge but had no effect on oral health behaviors or on the progression of early childhood caries (ECC).

**Keywords:** Anticipatory guidance, Early childhood caries, Motivational interviewing, White spot lesions.

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## INTRODUCTION

Early childhood caries (ECC) is known to be a childhood disease with multiple etiology whose manifestation affects the primary teeth during its eruption. The American Academy of Pediatric Dentistry (AAPD) defines ECC as the presence of one or more decayed (non-cavitated or cavitated), missing (as a result of caries), or filled tooth surfaces in any primary tooth in a child 71 months of age or younger. A marker of severe ECC, which is defined as in the AAPD, is any sign of tooth decay on a smooth surface in children under the age of three years. According to Hakan et al, there is a high frequency of ECC in children aged 2–3 years with 46% indicating high frequency at this age. The loss of primary teeth at earlier ages will create problems not only functional problems like mastication, speech, and space management but also psychological problems also. In order to stop the spread of the disease and enhances the strength, appearance and functionality of teeth, modern dentistry and our study aims to control initial lesion noninvasively using remineralizing agents.<sup>1–5</sup>

The coronavirus disease 2019 pandemic has wreaked tremendous damage on the echelons of society and had a negative effect on medical professionals, especially the dentist and restricting overall skills. It's challenging for dental staff to offer even

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the most basic services to the needy due to the contagious virus spread through aerosol by which most of the dental equipment works and even while taking an intraoral radiograph.<sup>6</sup> The virus can persist on all the structures for a long period minimum of 3–12 hours, depending on the substance like metal or plastic, etc., that is frequently found in dental offices, making it crucial to abide by the warning and guidelines provided by many organizations like Indian Council of Medical Research and World Health Organization in order to stop the spread of the disease.

In order to convey this knowledge, the AAPD created anticipatory counselling to know the various developmental milestone of a child of various ages. Consequently, the prenatal period is the ideal time to start counselling mothers and caregivers with a multidisciplinary approach. The preventive counsel will be particularly appreciated by expected parents, especially those who are expecting their first child. Additionally, it's critical for mothers to have enough knowledge of their dental health conditions. As a result, the counseling places a strong emphasis on the value of maternal dental health and the risk of passing cariogenic micro-organisms into their offspring.<sup>7,8</sup>

A two-way collaborative conversation called MI can help people become more motivated and committed to change. Paying close attention to the language of change is a person-centered therapy approach for dealing with the widespread issue of ambivalence regarding the change. It is intended to increase a person's motivation for and progress towards a particular goal by eliciting and analyzing that person's personal motivations for change in a supportive and compensative environment.

A promising method for reducing ECC deterioration is the employment of the MI approach, which is supported by the stages of change theory. Combining MI with other interventions may increase effectiveness, and the combined use of anticipatory guidance with MI may have additional benefits.

Therefore, the study's objective is to determine whether anticipatory guidance through MI is useful in evaluating the awareness to prevent ECC.

## MATERIALS AND METHODS

### Ethical Review

The ethical committee have approved this study (Ref no: IECKVGDCH/SS13/2020-21). All participants are provided with a consent form.

### Study Design

This study manuscript is followed and reported by the trends criteria for a nonrandomized clinical trial. This is a pretest and posttest nonrandomized clinical trial. Sample methodology is through contacts, and their contacts are added to the online groups. So the study is followed by snowball sampling. As it is a duration-based study, *n* (number of participants) may vary from 50 to 200, but those who are willing and satisfies the inclusion and exclusion criteria are selected for the study.<sup>9</sup> Inclusion criteria include the mothers whose children are aged between 9 and 24 months, Dyad willing to participate, Dyad with parental consent and children with erupted upper incisors teeth. Participants excluded in this study have major systemic diseases, such as hemophilia, rheumatic heart disease and Kawasaki disease or any disorder in renal such as acute cystic disease and are on long-term medication and with mucosal lesions and children exposed to fluoride environment.

These participants were educated about oral health awareness, and a consent form with a structured questionnaire was given by the investigator. An oral health evaluation is done using the lift-the-lip procedure that is used on infants and young children by parents or caregivers. Instructions will be given to the parents beforehand through handouts on how to do the lift-the-lip procedure. To find the extremely early indicators of tooth decay, it is necessary to visually examine the upper front tooth in search of the initial lesion, that is, white spot lesions. It is simple to do and does not call for a dental specialist. The goal of lift-the-lip is to encourage

parental and guardian participation in clinical dental services while also educating them about oral health. Additionally, parents are urged to frequently examine their children's teeth at home. The application of lift-the-lip emphasizes the necessity of appropriate training and close collaboration between dental services and child health specialists. Using this technique, the children will be assessed using a mobile camera having a minimum 2 MP resolution and good illumination. Mothers are trained to take standardized photographs. Also, the lesion will be categorized using the online image obtained using the caries risk assessment tool (Fig. 1).

The self-structured questionnaire will collect vital demographic information, and the status of children's oral health will be obtained from mothers. The self-structured validated questionnaire will be used to see the impact of the awareness. This questionnaire will be given to the participants at the baseline and at 6 months. ([https://docs.google.com/forms/d/e/1FAIpQLSeKh26lBaSIFrz7cGrZJQw6O7\\_skSMPAYWW-zaao24tZ633DA/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSeKh26lBaSIFrz7cGrZJQw6O7_skSMPAYWW-zaao24tZ633DA/viewform?usp=sf_link)). The questionnaire consists of a set of 32 questions which is a closed-end type and is measured in a 5-scale Likert scale.

Using statistical power analysis G\*Power three software and considering the goodness of fit test analysis, the current study's sample size was calculated as 197 by maintaining  $\alpha$  error as 0.05 at 95% confidence interval,  $\beta$  error as 0.2, power of the test (1- $\beta$  error) as 80%, effect size (Cohen's *w*) as 0.20 (Manchanda et al.) and degrees of freedom as one. To account for unexpected diversions from statistical presumptions, the final sample was margined to 200, that is, evaluation on a single group of dyads (mother/any one parent and child), a pre- and post-MI within the same group.

The pilot study was done among 30 parents to check the validity and reliability of the study. Here the questionnaire is sent to 30 participants, and how much they are able to understand or read the questionnaire. While validating Flesch Kincaid's readability score: 50.8, Flesch Kincaid's grade level—9.8 and Aiken's *v* index for each item ranged from 0.75 to 1 (high to very high). And separately, face validity is analyzed. The reliability of the study is done using the Cronbach test reveals a score of 0.83 which show the study is acceptable.

Awareness will be given by anticipatory guidance/MI, and then at the time of follow-up, oral screening and evaluation are done to check out the reversal of white spot lesions. End the 6 months, the final posttest questionnaire is circulated, and final oral screening is done and evaluated for any progression. The effect of the MI is assessed by MI treatment integrity (MITI) 3.1.1 (Fig. 2). Then, the data will be collected, assessed and compiled for results.

## RESULTS

To assess the knowledge and attitude of the mothers to ECC, scoring was given as poor and good (Table 1). At baseline, there was a significant difference between the pretest and posttest. The knowledge among mothers in ECC was about 17.1% and gradually increased postinterviewing by around 90.3% by the end of 6 months (Fig. 3). The attitude has slightly significant as it almost gives similar sampling variability and doesn't affect the child's behavior. While in the practices, 90% of mothers accepted to notice any changes seen in the child's mouth often; at the end of postinterviewing, 98% of mothers suggested the lift the lip procedure once a week with their first dental visit to the dentist by early as a tooth erupts and 86% suggested for nutritional and preventive health, 14% suggested for brushing and flossing as most effective in the prevention of ECC.

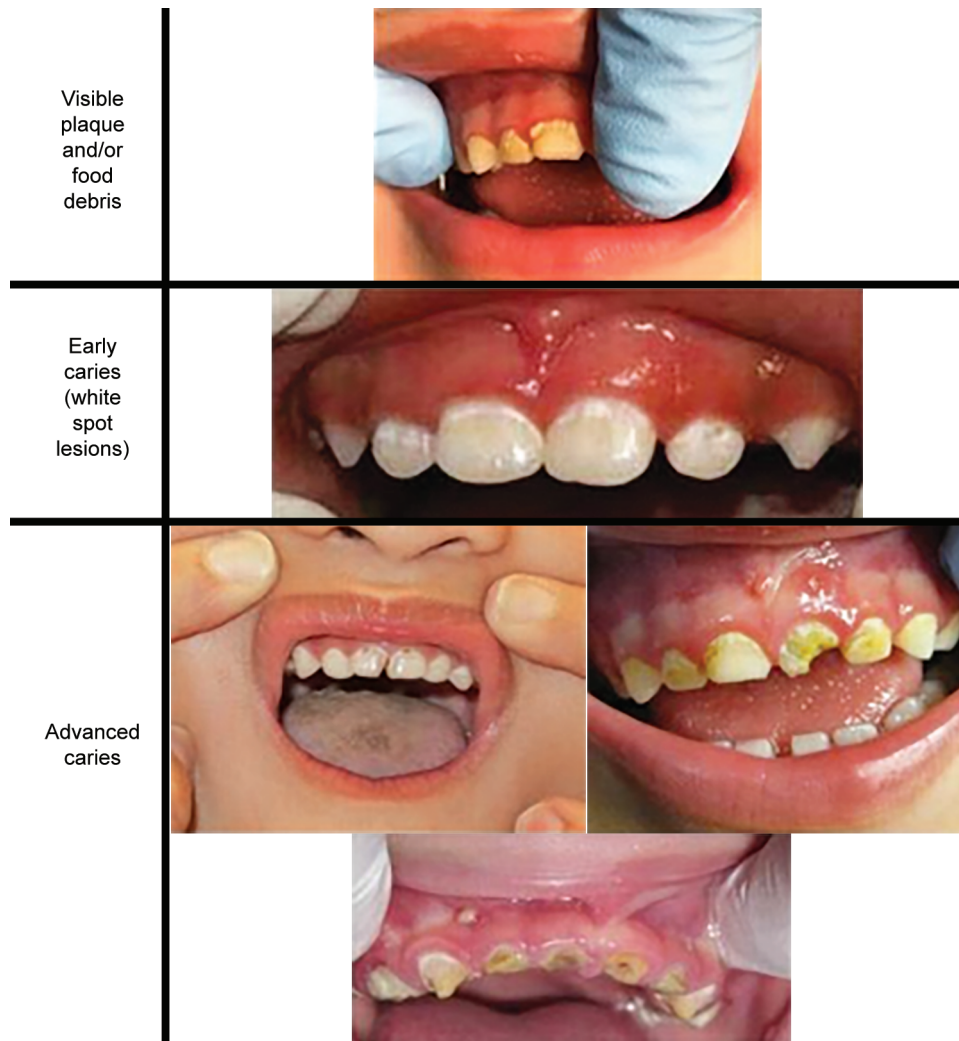


Fig. 1: Canadian caries risk assessment tool for <6 years

Motivational interviewing (MI) was done among the mothers using the MI treatment index 3.1.1, as stated in Figure 2. And at the end of the 6 months, the  $p$ -value significance is found by 1–5 values in the Likert scale.

These results show mothers to attain knowledge on ECC and how to promote the awareness acquired during in-depth interviewing. Tables 2 to 5 show the results for the MI index (Figs 4 to 6).

Reversal of white spot lesion seen after the oral health promotion through MI.

## DISCUSSION

The MI demonstrated a significant difference in the awareness among mothers of children aged 9 months–2 years. Mean awareness after promoting oral health through anticipatory guidance is around 87%. The retention rate for the study was high, at >80% for every planned encounter. All participants completed the MI visits. Participating mothers completed an average of 98.3% of planned MI visits, and the topics related to taking care of their children's teeth were covered by 85–97% of the mothers. The results for participant satisfaction and engagement were very high. Due

to the high participation rates, it was decided not to perform any protocol analysis because the outcomes would have essentially been the same as those from our modified intention-to-treat analysis. The purpose of MI is to encourage people to make changes in an effort to reduce the harmful effects of the targeted behavior. MI was utilized with mothers of the targeted children in this study, and others employed MI interventions to reduce ECC to support them in implementing behavioral changes that would improve the oral health of those children. When compared to using MI directly to change an individual's behavior, the modified purpose of treating oral health and this use of MI with mothers rather than the children of themselves represent a "one person removed" approach that could erode the effectiveness of the intervention. MI was found to be more effective than other health education tactics in eliciting positive changes in teenager's oral health habits and preventing dental caries in a recent study who received MI to improve their own behavior (Wu et al.).<sup>10-20</sup>

Other areas of the health sector, such as substance misuse and quitting smoking, have shown greater success with MI (Brooks et al.). We hypothesize that factors including perceived problem severity, obstacles and repercussions may be played in these reactions. A participation reaction to a behavior modification

Motivational Interviewing Treatment Integrity Code (MITI)  
Coding Sheet Revised June, 2007

Tape # \_\_\_\_\_ Coder: \_\_\_\_\_ Date: \_\_\_\_\_

**Global Ratings**

<b>Evocation</b>		1 <i>Low</i>	2	3	4	5 <i>High</i>
<b>Collaboration</b>		1 <i>Low</i>	2	3	4	5 <i>High</i>
<b>Autonomy/ Support</b>		1 <i>Low</i>	2	3	4	5 <i>High</i>
<b>Direction</b>		1 <i>Low</i>	2	3	4	5 <i>High</i>
<b>Empathy</b>		1 <i>Low</i>	2	3	4	5 <i>High</i>

**Behavior Counts**

<b>Giving Information</b>			
<b>MI Adherent</b>	Asking permission, affirm, emphasize control, support.		
<b>MI Non-adherent</b>	Advise, confront, direct.		
<b>Question</b> (subclassify)	Closed Question		
	Open Question		
<b>Reflect</b> (subclassify)	Simple		
	Complex		
	<b>TOTAL REFLECTIONS:</b>		

First sentence: \_\_\_\_\_

Last sentence: \_\_\_\_\_

Fig. 2: Motivational interviewing (MI) treatment index 3.1.1



**Table 1:** Knowledge among parents regarding ECC and its prevention pre- and postintervention

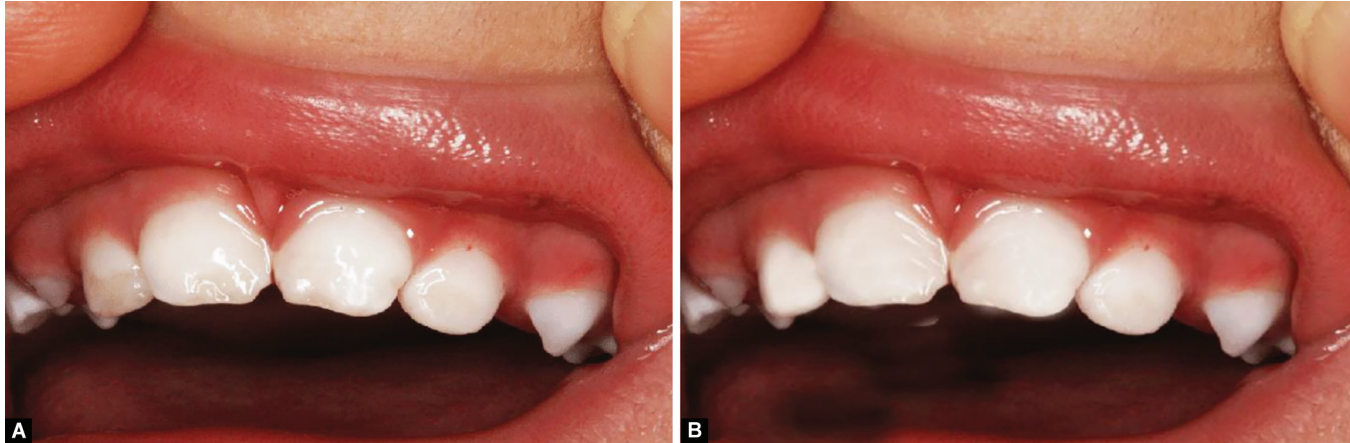
Sl. no.	Questions	Answers	Pretest (n = 222) n (%)	Posttest (n = 222) n (%)	Chi-square value	p-value
1	Do you know about ECC in young children?	Yes	119 (53.6)	222 (100)	-†	-†
		No	95 (42.8)	0		
		Don't know	8 (3.6)	0		
2	Do you know that ECC affects milk teeth in young children?	Yes	81 (36.5)	202 (91)	2.742	0.254
		No	127 (57.2)	20 (9)		
		Don't know	14 (6.3)	0		
3	Do you know that ECC are also called baby bottle syndrome?	Yes	27 (12.2)	91 (41)	11.528	0.003*
		No	128 (57.7)	131 (59)		
		Don't know	67 (30.2)	0		
4	Do you know the importance of the first dental visit in young children?	Yes	62 (27.9)	202 (91)	3.511	0.173
		No	115 (51.8)	20 (9)		
		Don't know	45 (20.3)	0		
5	Do you know preventive dental programs for ECC?	Yes	46 (20.7)	182 (82)	6.772	0.148
		No	122 (55)	10 (4.5)		
		Don't know	54 (24.3)	30 (13.5)		
6	Do you know that cleaning of gums and newly erupted teeth are necessary for young children?	Yes	43 (19.4)	182 (82)	4.768	0.092
		No	126 (56.8)	40 (18)		
		Don't know	53 (23.9)	0		
7	Are you aware that ECC affect the psychological welfare of a child?	Yes	38 (17.1)	152 (68.5)	15.859	0.003*
		No	127 (57.2)	50 (22.5)		
		Don't know	57 (25.7)	20 (9)		
8	What do you think is the main reason for ECC in a child is prolonged feeding at night containing sugar?	Yes	43 (19.4)	192 (86.5)	3.247	0.517
		No	110 (49.5)	20 (9)		
		Don't know	69 (31.1)	10 (4.5)		
9	Do you know that putting your child in a bottle to sleep causes ECC because of the stagnation of milk?	Yes	41 (18.5)	192 (86.5)	7.573	0.109
		No	101 (45.5)	10 (4.5)		
		Don't know	80 (36)	20 (9)		
10	Are you aware that teeth in children put to sleep with sweetened pacifiers predispose to ECC due to high sugar content?	Yes	39 (17.6)	192 (86.5)	1.372	0.504
		No	12255	0		
		Don't know	61 (27.5)	30 (13.5)		
11	Are you aware that ECC affect the overall development of the child?	Yes	38 (17.1)	150 (67.6)	8.202	0.084
		No	107 (48.2)	52 (23.4)		
		Don't know	77 (34.7)	20 (9)		
12	Are you aware that ECC spread from mother to child?	Yes	35 (15.8)	182 (82)	7.060	0.133
		No	112 (50.5)	30 (13.5)		
		Don't know	75 (33.8)	10 (4.5)		
13	Are you aware that prolonged nighttime bottle feeding predisposes to ECC?	Yes	39 (17.6)	192 (86.5)	4.879	0.087
		No	59 (26.6)	0		
		Don't know	124 (55.9)	30 (13.5)		
14	Are you aware that preterm low-birth-weight babies and vitamin deficiencies predispose to ECC?	Yes	34 (15.3)	182 (15.3)	3.054	0.217
		No	137 (61.7)	40 (18)		
		Don't know	5123	0		
15	Are you aware that sweetened medications predispose to ECC?	Yes	36 (16.2)	182 (82)	15.358	0.004*
		No	11150	20 (9)		
		Don't know	75 (33.8)	20 (9)		
16	Are you aware that white spot lesions are early signs of decay which, if not prevented, will result in severe ECC?	Yes	37 (16.7)	171 (77)	10.143	0.038*
		No	115 (51.8)	20 (9)		
		Don't know	70 (31.5)	31 (14)		

Contd...

Contd...

Sl no	Questions	Answers	Pretest (n = 222) n (%)	Posttest (n = 222) n (%)	Chi-square value	p-value
17	Do you really think it is inevitable to get early treatment for children suffering from ECC?	Yes	35 (15.8)	150 (67.6)	18.268	0.001*
No		102 (45.9)	52 (23.4)			
Don't know		85 (38.3)	20 (9)			

\*Statistically significant ( $p \leq 0.05$ ); †, no statistics are computed because posttest Q1 is a constant



**Figs 3A and B:** (A) Initial lesion image; (B) Reversal of lesion

intervention like MI may also be influenced by psychosocial factors, including stress, sense of coherence, oral health locus of control, and fatalistic beliefs (Batliner et al.).<sup>21</sup> These elements might provide plausible explanations for why MI interventions are effective for one population or condition but unsuccessful for another. It is not possible to fully analyze the effectiveness of MI in these other domains of this article, but a new study by Mc Neil et al. offers a view as being more organized than what the approach's creators intended (Miller and Rollnick).<sup>17</sup>

In fact, a MI script was offered to provide direction in carrying out the intervention because it was necessary to standardize the intervention as much as possible in the setting of a clinical trial. Interventionists were much encouraged to adjust the script as necessary to fulfil participant requirements and directives in accordance with the spirit of MI.

The MI intervention, which depends on the formation of a supportive connection between the interventionist and participant, may have been less effective as a result of the endeavor to standardize human relationships. Even though these behavioral pathways are essential for lowering ECC, they are only a small component of the wider schema that links upstream factors to these more nearby factors. The risk of ECC is considerably increased by factors like low socioeconomic level, parental employment, education, and neighborhood and community characteristics (De Fonseca). Children from low-income families also have poor compliance with preventive advice (De Fonseca and Avenetti). According to this idea, "individuals and groups with moderate intervention needs may gain more from it than those with significant needs" (Watt).

Petti et al. in 2010 explained how the social determinants of health, parental psychological stress, and fatalism could affect the linkage indicated in the idea of inverse case law when examining factors linked with ECC in high-risk children. When other basic requirements are not consistently satisfied, even the best intentions for good oral health behaviors may be neglected. When future

initiatives provide programs and treatments that take into account the larger life context and conditions of people within these communities, they may be more successful at addressing the complete spectrum of family needs. (Batliner et al.).<sup>21</sup>

Parallel to this investigation, a similar MI experiment with residents in Boston utilizing the same outcome measures and the same MI intervention with similar results revealed no beneficial benefits for the intervention. The two experiments varied in the employment of a control group, the age of the children, the setting of the trials, and the location. Although both the Boston trial and this one had sizable sample sizes and were carefully planned and carried out, neither study was effective for the high-risk individuals enrolled. The study's strengths were sizable sample sizes, strong protocol adherence, and an attendance rate of 80% or above at all scheduled encounters. The intervention's fidelity was carefully tracked and successfully managed. Meaningful community involvement persisted throughout the whole research. Community people participated in the formulation of retention strategies, and all the study messages were created collaboratively by study staff and community participants. In addition, the trial was monitored by a Data and Safety Monitoring Board that comprised an external body of reviewers.

MI emphasized listening, learning and guiding instead of directing, which was consistent with the mother and caregivers. According to the study by Tomlin et al. in 2014, the MI technique respects the individual and the tribe's sovereignty and right to self-determination; they encourage clients to consider their ambivalence towards behavior change, consider different options for behavior change, and then work with them to set goals and create action plans in consultation with the interventions. According to Batliner et al., the interventions followed the handbook as a guide, taking care to ensure that MI always guided choices and that approach wasn't unduly regimented in a way that would limit answers and results.

**Table 2:** Attitude among parents regarding ECC and its prevention pre- and postintervention

Sl no	Questions	Answers	Pretest (n = 222) n (%)	Posttest (n = 222) n (%)	Chi-square value	p-value
18	I think the examination of a child's oral cavity is necessary?	Strongly Disagree	0	0	2.325	0.508
		Disagree	8 (3.6)	0		
		Undecided	9 (4.1)	0		
		Agree	175 (78.8)	112 (50.5)		
		Strongly Agree	30 (13.5)	110 (49.5)		
19	I think that early detection of ECC will increase the chance of long-term survival of the tooth?	Strongly Disagree	1 (0.5)	0	6.277	0.616
		Disagree	13 (5.9)	20 (9)		
		Undecided	52 (23.4)	0		
		Agree	125 (56.3)	52 (23.4)		
		Strongly Agree	31 (14)	150 (67.6)		
20	Do you think that awareness programs will motivate you to improve your child's oral health?	Strongly Disagree	1 (0.5)	0	11.926	0.155
		Disagree	15 (6.8)	0		
		Undecided	46 (20.7)	20 (9)		
		Agree	133 (59.9)	91 (41)		
		Strongly Agree	27 (12.2)	111 (50)		
21	Did attending an awareness program help you to improve the feeding practices of children with ECC?	Strongly Disagree	0	0	7.719	0.259
		Disagree	15 (6.8)	0		
		Undecided	43 (19.4)	20 (9)		
		Agree	139 (62.6)	62 (27.9)		
		Strongly Agree	25 (11.3)	140 (63.1)		
22	Will correcting the feeding practices improve the child's oral health?	Strongly Disagree	1 (0.5)	0	15.643	0.048*
		Disagree	8 (3.6)	0		
		Undecided	49 (22.1)	20 (9)		
		Agree	137 (61.7)	80 (36)		
		Strongly Agree	27 (12.2)	122 (55)		
23	The interprofessional, multidisciplinary approach will improve the oral health status of children with ECC?	Strongly Disagree	2 (0.9)	0	6.885	0.549
		Disagree	115	0		
		Undecided	42 (18.9)	20 (9)		
		Agree	139 (62.6)	54 (24.3)		
		Strongly Agree	28 (12.6)	148 (66.7)		
24	Will intermittent snack intake lead to ECC in children?	Strongly Disagree	1 (0.5)	0	7.998	0.092
		Disagree	13 (5.9)	0		
		Undecided	5 (2.3)	0		
		Agree	134 (60.4)	111 (50)		
		Strongly Agree	23 (10.4)	111 (50)		
25	Will management of children affected with ECC improve the overall well-being of the child?	Strongly Disagree	0	0	4.719	0.858
		Disagree	16 (7.2)	20 (9)		
		Undecided	42 (18.9)	20 (9)		
		Agree	140 (63.1)	37 (16.7)		
		Strongly Agree	24 (10.8)	145 (65.3)		
26	Will the awareness of expecting mothers about ECC improve their child's well-being?	Strongly Disagree	2 (0.9)	0	16.517	0.036*
		Disagree	12 (5.4)	0		
		Undecided	46 (20.7)	30 (13.5)		
		Agree	143 (64.4)	111 (50)		
		Strongly Agree	19 (8.6)	81 (36.5)		
27	Do you think that regular visit to a pediatric dentist is necessary for the prevention of ECC?	Strongly Disagree	0	0	8.253	0.220
		Disagree	8 (3.6)	0		
		Undecided	45 (20.3)	20 (9)		
		Agree	142 (64)	61 (27.5)		
		Strongly Agree	27 (12.2)	141 (63.5)		

\*Statistically significant ( $p \leq 0.05$ )

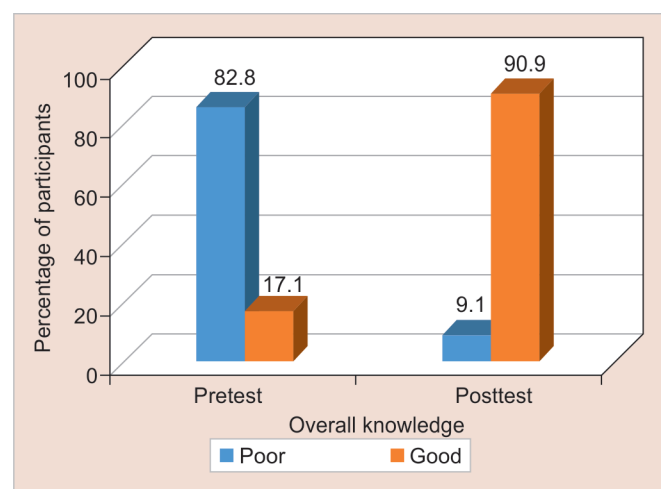
**Table 3:** Practices among parents regarding ECC and its prevention pre- and postintervention

Sl. no.	Questions	Answers	Pretest (n = 222) n (%)	Posttest (n = 222) n (%)	Chi-square value	p-value
28	Have you ever noticed any changes in your child's teeth?	Yes	22 (9.9)	222 (100)	-†	-†
		No	200 (90.1)	0		
29	How often do you emphasize dental examination of children by lifting the lips?	Once a week	126 (56.8)	222 (100)	-†	-†
		Once a month	69 (31.1)	0		
		Once in 6 months	209	0		
		Once a year	3 (1.4)	0		
		If any problem arises	4 (1.8)	0		
30	At what age did you start the oral examination of children with ECC?	6 months	166 (74.8)	202 (91)	6.170	0.187
		1 year	38 (17.1)	20 (9)		
		2-3 years	12 (5.4)	0		
		>3 years	3 (1.4)	0		
		Don't know	3 (1.4)	0		
31	How often do you emphasize improving feeding practices in children with ECC?	Once	110 (49.5)	202 (91)	6.288	0.179
		Twice	94 (42.3)	0		
		Biweekly	10 (4.5)	20 (9)		
		Monthly	7 (3.2)	0		
		Don't know	1 (0.5)	0		
32	In your opinion, which oral health regime is most effective in the prevention of ECC?	Nutritional and preventive oral health	3114	191 (86)	1.081	0.782
		Brushing and flossing	174 (78.4)	31(14)		
		Fluoride supplementations	12 (5.4)	0		
		Wiping the oral cavity of a child with moist cotton and use xylitol wipes	5 (2.3)	0		

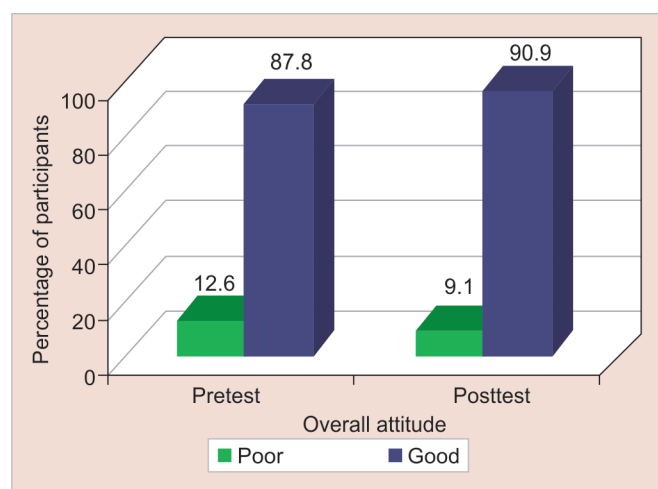
\*Statistically significant ( $p \leq 0.05$ ); †, no statistics are computed because posttest Q28 and Q29 is a constant

**Table 4:** Overall knowledge and attitude among parents regarding ECC and its prevention pre- and postintervention

	Score category	Pretest (n = 222) n (%)	Posttest (n = 222) n (%)
Knowledge	0-8 (poor)	184 (82.8)	20 (9.1)
	9-17 (good)	38 (17.1)	202 (90.9)
Attitude	0-30 (poor)	27 (12.6)	20 (9.1)
	31-50 (good)	195 (87.8)	202 (90.9)



**Fig. 4:** Overall knowledge of study participants pre- and postintervention



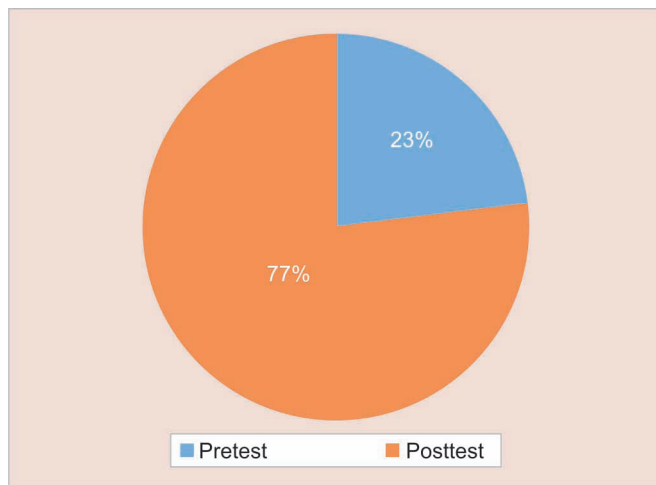
**Fig. 5:** Overall attitude of study participants pre- and postintervention



**Table 5:** *p*-value significance through MI done using MITI treatment index 3.1.1

Sl. no.	MITI questions	Chi-squared test	<i>p</i> -value
1	What type of feeding practices?	5.642	0.621
2	What type of toothpaste is used for the child's teeth for brushing?	6.442	0.043*
3	Have you ever lifted your child's upper lip and noticed any changes?	6.145	0.018*
4	Are you aware that long-time feeding may cause/lead to ECC?	5.984	0.015*
5	Are you aware that the use of fluoridated toothpaste may prevent ECC?	6.147	0.011*
6	Noticing the discolored changes in your child's teeth may be a chance for caries?	7.543	0.812
7	Is giving formula milk/sweetened milk cause ECC? Right/wrong	6.554	0.621
8	Is it necessary to use fluoride-content toothpaste?	3.524	0.297
9	Is it necessary to lift the child's lip and see for any discoloration?	6.175	0.105
10	How can we stop long-time night feeding?	6.772	0.054*
11	Fluoridated toothpaste >3 years—pea sized <3 years—grain sized	6.616	0.026*
12	Main advantages of lifting the lip: Can identify the active lesion or initial caries Can check for white/black lesions	6.358	0.148
13	When feeding can be given	6.118	0.131
14	What type of toothbrush and paste can be used for a child?	5.894	0.451
15	How often should I lift my child's lip and check for any changes?	5.996	0.278

\*Statistically significant (*p* ≤ 0.05)



**Fig. 6:** Overall awareness obtained postinterviewing

## CONCLUSION

In brief, MI provides a better tool for anticipating the Dyad.

It enables the level of knowledge of mothers and caregivers and provides the structural way of anticipatory guidance and self-motivating them to start practicing various steps to prevent ECC. MI has proven to be a successful way of anticipatory guidance.

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