

Validation and Reliability of Questionnaire Evaluating the Role of Feeding Practices and Maternal Influences on Early Childhood Caries amongst 2 to 6 Year Old Children in Kolkata, West Bengal

Dr. Pritha Pramanick¹, Dr. Riya Kundu², Dr. Abhisikta Ghosh³, Dr. Biswaroop Chandra⁴,
Dr. Shabnam Zahir⁵

¹Postgraduate Trainee, Department of Paediatric and Preventive Dentistry, Guru Nanak Institute of Dental Science and Research, Kolkata, West Bengal

Corresponding Author Email ID: [pramanickpritha03\[at\]gmail.com](mailto:pramanickpritha03[at]gmail.com)

²Postgraduate Trainee, Department of Paediatric and Preventive Dentistry, Guru Nanak Institute of Dental Science and Research, Kolkata, West Bengal

³Postgraduate Trainee, Department of Paediatric and Preventive Dentistry, Guru Nanak Institute of Dental Science and Research, Kolkata, West Bengal

⁴Professor, Department of Paediatric and Preventive Dentistry, Guru Nanak Institute of Dental Science and Research, Kolkata, West Bengal

⁵Professor and Head of the Department, Department of Paediatric and Preventive Dentistry, Guru Nanak Institute of Dental Science and Research, Kolkata, West Bengal

Abstract: Aim: The aim of the study was to check the validity and reliability of questionnaire evaluating the role of feeding practices and maternal influences on Early Childhood Caries. Materials and Methods: A pilot study was done with participants, including boys and girls, who visited the outpatient department. Children between the ages 2 to 6 years were included in the study. Parents filled up the questionnaire which consisted of 22 items. The English version of the questionnaire was formulated through various literature reviews and was sent to a bilingual teacher for translation into Bengali(V1) and Hindi(V2). After that, questionnaire was sent to bilingual teacher for any semantic correction and made idiosyncratic variants. The scale was then back translated into the original language. Data were tabulated and analyzed and the statistical methods used were Cronbachs alpha, Inter-observer reliability and Content validity ratio. Results: Content Validity Ratio ranged is within the acceptable limit. For Intra-class correlation coefficient questions showed good reliability. Cronbach's alpha indicates the questionnaire has overall good validity and reliability. Conclusion: The questionnaire is a simple and valid scale which can be used to evaluate the role of feeding practices and maternal influences on Early Childhood Caries.

Keywords: Early Childhood Caries, Feeding habits, Maternal influence

1. Introduction

According to the American Academy of Pediatric Dentistry (AAPD), 2008, Early Childhood Caries (ECC) is defined as "one or more decayed (noncavitated or cavitated lesions), missing (because of caries), or filled tooth surfaces in any primary tooth in a child aged 71 months or younger. [1] Several factors are associated with Early Childhood Caries, such as child's dietary habits, oral hygiene habits, different feeding practices like bottle feeding, prolonged breast feeding for two years or more, formula feeding or combined. [2, 3]

ECC is also known as Maternally Derived Streptococcus Mutans Disease (MDSMD) which clearly shows that maternal risk factors can influence the child's oral health as well. Therefore, the mother's socioeconomic status, oral hygiene index, oral hygiene habits, education and decision making ability in the family are taken into account to check their correlation with Early Childhood Caries among

children. [4]

The overall prevalence of Early Childhood Caries in India is 49.6% and in West Bengal is 50.37%. [4] It is also seen that mothers practice prolonged feeding habits in Kolkata, West Bengal.

To ensure that mothers have adequate knowledge regarding the proper maintenance of oral health and feeding practices and their role in the family, a questionnaire is developed.

The present study aimed to develop and validate questionnaire to evaluate the role of feeding practices and maternal influences on Early Childhood Caries amongst 2 to 6 year old children in Kolkata, West Bengal.

2. Literature Survey

There are several associated risk factors with Early Childhood Caries such as different feeding practices, oral

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hygiene habits, gender, diet. It is seen that mothers in the state of West Bengal are not educated enough about the adequate feeding practice and duration of their children so the prevalence of Early Childhood Caries is high. The population in West Bengal is diverse and therefore, socioeconomic status of family, education of mother and decision making ability is taken into account and check their correlation with Early Childhood Caries among children.

3. Definition of Problem

Early Childhood Caries is one of the most common oral health disease during early childhood and it causes discomfort, pain to the child, leading to masticatory and speech problems, low self-esteem and decline in the quality of life. Several factors that influence the disease such as dietary habits, feeding habits, maternal characteristics. It is important to evaluate the role of feeding practices and maternal influence on Early Childhood Caries.

4. Methodology Participants

A pilot study was done with participants, including boys and girls, who visited the outpatient department of Department of Paediatric and Preventive Dentistry, Guru Nanak Institute of Dental Sciences & Research, Panihati, Sodepur, Kolkata. Children between the ages 2 to 6 years were included in the study. Parents filled up the questionnaire. Children having diagnosed with systemic diseases or mental disorders and developmental anomalies were excluded from the study.

5. Questionnaire

The questionnaire is formulated through various literature reviews. The questionnaire consisted of 22 items where the first five items denote general information about the patient. The questionnaire consisted of three subscales, namely factor 1 (Decision making abilities of mother: Item 1), factor 2 (Mother's and child's oral hygiene habits: Item 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12), factor 3 (Child's feeding practices: Items 13, 14, 15, 16, 17). This is a close ended questionnaire which included options regarding the decision making ability in the family, oral hygiene habits and feeding practices.

6. Procedure

1) Assessment of Content Validity

The content validity was tested by administering the questionnaire to 10 social workers for reviewing. The social workers were provided with a 4-point content validity assessment tool to assess the relevancy of the tool. The English version of the questionnaire was formulated through various literature reviews and was sent to a bilingual teacher (English to Bengali) for translation into Bengali (version 1, V1) and (English to Hindi) for translation into Hindi (version 2, V2). After that, V1 was given to a Bengali language teacher for any semantic correction and made idiosyncratic variants (version 3, V3). In the same manner, V2 was given to a Hindi language teacher for any semantic correction and made idiosyncratic variants (version 4, V4). In collaboration with a researcher, social worker and other mental health care

professionals, V2 was compared to the final version of Bengali. The scale was then back translated into the original (English) language. In collaboration with a researcher, social worker V3 and V4 was compared to the final version of Bengali and Hindi respectively. The scale was then back translated into the original (English) language. In this sense, the intention was to reduce the ambiguity and misinterpretation, to ensure a good adaptation to the population that understands the Bengali and Hindi language.

2) Assessment Of Reliability

Inter – observer reliability was tested to measure reliability. Data was collected from the mothers and their children attending the Outpatient Department of the institute in the month of June and July 2022. The questionnaires were distributed among 15 mothers in the language they preferred. Same questionnaire was administered by a second investigator to the same set of parents within 2 weeks of administering the questionnaire by the first investigator.

7. Statistical Analysis

The tabulation of the data, generation of graphs and tables were done in Microsoft Excel. The statistical analysis was done using IBM SPSS statistics 27.0 (IBM Corporation, Armonk, NY, USA). The level of significance was fixed at $p=0.05$ and any value less than or equal to 0.05 was considered to be statistically significant. Content Validity Ratio, ICC and Cronbach's alpha was measured.

Internal Consistency

Internal consistency refers to the degree of agreement or correlation between different items or questions within a measurement instrument, such as a questionnaire or a scale. It is a measure of the reliability of the instrument, indicating how well the items in the instrument assess the same underlying construct or concept. One common method to assess internal consistency is by using Cronbach's alpha coefficient. Cronbach's alpha is a statistic that quantifies the extent to which the items in a scale or questionnaire correlate with each other. It ranges from 0 to 1, with higher values indicating better internal consistency. (where, >0.9 , Excellent; $0.9 > \alpha \geq 0.8$, Good; $0.8 > \alpha \geq 0.7$, Acceptable; $0.7 > \alpha \geq 0.6$, Questionable) [5,6]

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Figure 1: Internal consistency interpretation

Content Validity Ratio (CVR)

Content Validity Ratio (CVR) is a statistical index used to measure the proportion of experts who agree that an item is essential in a scale or instrument used for content validity assessment. The CVR is typically calculated when a panel of experts rates each item in the scale or instrument as

"Essential," "Useful but not essential," or "Not necessary." The formula for calculating the Content Validity Ratio is as follows:

$$CVR = (N_e - N/2) / (N/2)$$

Where:

Ne: The number of experts who rate the item as "Essential."

N: The total number of experts. The scores given to the questions were-

Essential=3; Useful but not essential=2; Not necessary= 1

For validity ratio, the number of experts who rated 3 for any question were considered as Ne, 0.8 ratio were considered as acceptable. [7]

For a moderate-sized panel of experts (around 5 to 10 experts), the CVR threshold for acceptance is 0.78. This means that at least 78% of the experts must rate the item as "Essential" for content validity. In this case the number of experts were 10.

Intra-class Correlation Coefficient (ICC) –

The Intraclass Correlation Coefficient (ICC) is a statistical measure used to assess the reliability and consistency of measurements or ratings made by multiple raters or observers. ICC evaluates the proportion of total variance that is attributed to different sources of variability, such as between-rater variability and within-rater variability. It tells us how much of the total variability in the measurements can be attributed to differences between the different groups

(e.g., different raters or different time points) relative to the total variability.

ICC values range from 0 to 1, with higher values indicating better agreement or reliability between raters or measurements. The interpretation of ICC values can vary depending on the context and the field of study. However, some general guidelines include:

ICC values lower than 0.5 are reflective of poor reliability, values between 0.5 and 0.75 indicate moderate reliability, values between 0.75 and 0.9 indicate good reliability, and values greater than 0.90 indicate excellent reliability. [8]

8. Results

1) Internal Consistency

Sl No.	Dimension	Cronbach's Alpha
1.	Overall	0.805

As shown in Table I, The Cronbach's Alpha value of 0.767 depicts that the internal consistency of the questionnaire is Excellent. (where, ≥ 0.9 , Excellent; $0.9 > 0.8$, Good; $0.8 > 0.7$, Acceptable; $0.7 > 0.6$, Questionable)

2) Construct Validity

Sl no.	Questions	Item to total correlation	Cronbach's Alpha if item removed
1	Decision making ability of family	0.368	0.801
2	Mother's last visit to dentist	0.747**	0.780
3	Mother's brushing frequency	0.797**	0.815
4	Mother's use of dental floss	0.552*	0.797
5	Mother's use of mouthwash	0.501	0.799
6	Mother's frequency of change of toothbrush	0.644**	0.776
7	Mother's oral hygiene time	0.676*	0.794
8	Child's last visit to dentist	0.743**	0.807
9	Child's brushing frequency	0.511	0.801
10	Child's use of dental floss	0.292	0.821
11	Child's change of toothbrush	0.594*	0.776
12	Child's oral hygiene time	0.545*	0.789
13	Type of feeding habits	0.743**	0.773
14	Frequency of feeding	0.616*	0.788
15	Duration of feeding	0.755**	0.790
16	Time of the day of feeding	0.629*	0.801
17	Content of bottle	0.590*	0.797

** Correlation is significant at the 0.01; * Correlation is significant at the 0.05 .

As shown in Table II, the obtained correlation values of the Questions numbered 2,3,4,5,6,7,8,11,12,13,14,15,16,17 are > critical value and are highly significant, hence these are valid questions.

3) Inter-Observer Reliability

Sl. No	Questions	ICC	95% Confidence Interval	
			Lower	Upper
1	Decision making ability of family	0.806	0.409*	0.917*
2	Mother's last visit to dentist	0.9	0.830*	0.981*
3	Mother's brushing frequency	0.789	0.502*	0.934*
4	Mother's use of dental floss	0.696	0.285*	0.825*
5	Mother's use of mouthwash	0.7	0.291*	0.893*
6	Mother's frequency of change of toothbrush	0.911	0.866*	0.985*
7	Mother's oral hygiene time	0.812	0.636*	0.955*
8	Child's last visit to dentist	0.772	0.407*	0.917*

9	Child's brushing frequency	0.797	0.710*	0.966*
10	Child's use of dental floss	0.803	0.503*	0.934*
11	Child's change of toothbrush	0.82	0.522*	0.937*
12	Child's oral hygiene time	0.799	0.439*	0.923*
13	Type of feeding habits	0.852	0.629*	0.954*
14	Frequency of feeding	0.702	0.448*	0.924*
15	Duration of feeding	0.807	0.5*	0.934*
16	Time of the day of feeding	0.8	0.457*	0.926*
17	Content of bottle	0.931	0.747*	0.971*

*statistically significant.

As shown in Table III, the excellent reliability is seen in Question 2, 6, and 17. Good reliability is seen in Questions 1, 3, 7, 8, 9, 10, 11, 12, 13, 14, 15, and 16. Moderate reliability is seen in Questions 4 and 5.

4) Content Validity Ratio

Sl. No	Questions	CVR	Decision
1	Decision making ability of family	1	Acceptable
2	Mother's last visit to dentist	0.8	Acceptable
3	Mother's brushing frequency	0.8	Acceptable
4	Mother's use of dental floss	1	Acceptable
5	Mother's use of mouthwash	1	Acceptable
6	Mother's frequency of change of toothbrush	0.8	Acceptable
7	Mother's oral hygiene time	0.8	Acceptable
8	Child's last visit to dentist	0.8	Acceptable
9	Child's brushing frequency	1	Acceptable
10	Child's use of dental floss	1	Acceptable
11	Child's change of toothbrush	0.8	Acceptable
12	Child's oral hygiene time	1	Acceptable
13	Type of feeding habits	1	Acceptable
14	Frequency of feeding	0.8	Acceptable
15	Duration of feeding	0.8	Acceptable
16	Time of the day of feeding	0.8	Acceptable
17	Content of bottle	1	Acceptable

All the items of the questionnaire shows CVR from 0.8 to 1. The questions 2, 3, 6, 7, 8, 11, 14, 15, 16 have CVR value of 0.8 and questions 1, 4, 5, 9, 10, 12, 13, and 17 have CVR value of 1. For validity ratio, the number of experts who rated 'essential' for any question were considered as Ne, 0.8 ratio were considered as acceptable. Hence in this case the questionnaire demonstrated overall acceptable content validity. The results are presented in Table 4 and Fig.2

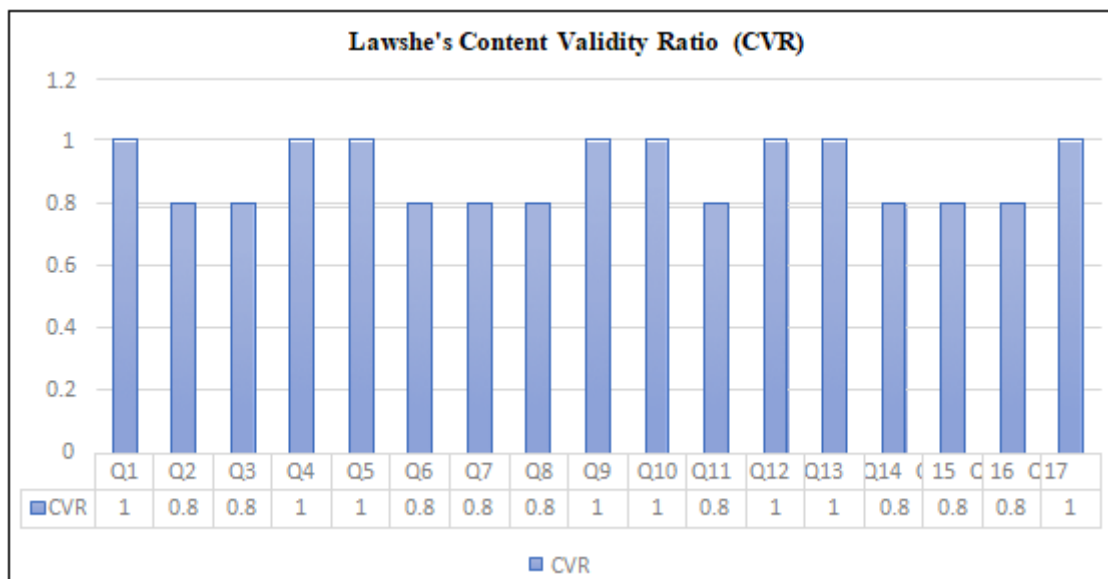


Figure 2: Content Validity Ratio

PARTICIPANT NUMBER-

AGE-

SEX OF CHILD-

MOTHER'S EDUCATION -

OCCUPATION-

FAMILY INCOME-

WHO DECIDES ON CHILD'S HEALTHCARE?

- MOTHER
- FATHER

WHO DECIDES ON LARGE HOUSEHOLD PURCHASES ?

- MOTHER
- FATHER

WHO DECIDES ON VISIT TO FAMILY OR RELATIVES ?

- MOTHER
- FATHER

MOTHER	CHILD
WHEN WAS THE LAST TIME YOU VISITED THE DENTIST? <input type="radio"/> LESS THAN 3 MONTHS AGO <input type="radio"/> FROM 3-6 MONTHS AGO <input type="radio"/> 1 YEAR AGO	WHEN WAS THE LAST TIME YOUR CHILD VISITED THE DENTIST? <input type="radio"/> LESS THAN 3 MONTHS AGO <input type="radio"/> FROM 3-6 MONTHS AGO <input type="radio"/> 1 YEAR AGO
HOW MANY TIMES DO YOU BRUSH TEETH? <input type="radio"/> ONCE <input type="radio"/> TWICE <input type="radio"/> THRICE	HOW MANY TIMES DOES YOUR CHILD BRUSH TEETH? <input type="radio"/> ONCE <input type="radio"/> TWICE <input type="radio"/> THRICE
DO YOU USE DENTAL FLOSS? <input type="radio"/> YES <input type="radio"/> NO	DOES YOUR CHILD USE DENTAL FLOSS? <input type="radio"/> YES <input type="radio"/> NO
DO YOU USE MOUTHWASH? <input type="radio"/> YES <input type="radio"/> NO	
HOW OFTEN DO YOU CHANGE YOUR TOOTHBRUSH? <input type="radio"/> EVERY 3 MONTHS <input type="radio"/> EVERY 6 MONTHS <input type="radio"/> EVERY YEAR	HOW OFTEN DOES YOUR CHILD CHANGE TOOTHBRUSH? <input type="radio"/> EVERY 3 MONTHS <input type="radio"/> EVERY 6 MONTHS <input type="radio"/> EVERY YEAR
HOW LONG DO YOU TAKE FOR ORAL HYGIENE? <input type="radio"/> ABOUT 1 MINUTE <input type="radio"/> ABOUT 2 MINUTES <input type="radio"/> MORE THAN 2 MINUTES	HOW LONG DOES YOUR CHILD TAKE FOR ORAL HYGIENE? <input type="radio"/> ABOUT 1 MINUTE <input type="radio"/> ABOUT 2 MINUTES <input type="radio"/> MORE THAN 2 MINUTES

	AT WHAT AGE DID YOUR CHILD START TOOTHBRUSHING? <input type="radio"/> AT 6 MONTHS OF AGE <input type="radio"/> BETWEEN 1-2 YEARS OF AGE <input type="radio"/> AFTER 2 YEARS
	AT WHAT AGE WAS YOUR CHILD'S FIRST DENTAL VISIT? <input type="radio"/> 6 MONTHS OF AGE <input type="radio"/> 1 YEAR OF AGE <input type="radio"/> MORE THAN 1 YEAR OF AGE
WHAT KIND OF FEEDING DO YOU PRACTICE? <input type="radio"/> BREAST FEEDING <input type="radio"/> BOTTLE FEEDING <input type="radio"/> FORMULA FEEDING <input type="radio"/> COMBINED	
FOR HOW LONG DID YOU FEED YOUR CHILD? <input type="radio"/> LESS THAN 1 YEAR <input type="radio"/> 1-2 YEARS <input type="radio"/> 2 YEARS OR MORE	
HOW MANY TIMES DO YOU FEED YOUR CHILD? <input type="radio"/> 3-5 TIMES A DAY <input type="radio"/> 5-10 TIMES A DAY <input type="radio"/> MORE THAN 10 TIMES A DAY	
AT WHAT TIME OF THE DAY DO YOU FEED YOUR CHILD? <input type="radio"/> AT BED TIME INCLUDING NAPS <input type="radio"/> MOST NAPS BUT NOT DURING NIGHT BED TIME <input type="radio"/> MOST NIGHT BED TIME BUT NOT NAPS <input type="radio"/> OCCASIONALLY AT BED TIMES INCLUDING NAPS	
DAILY BOTTLE CONTENTS: <input type="radio"/> INFANT FORMULA <input type="radio"/> COW'S MILK <input type="radio"/> WATER <input type="radio"/> JUICE <input type="radio"/> SOFT DRINK	

আপনার বর্তমান বয়স -

কাজ -

সমসাময়িক শিক্ষা -

আপনার শিক্ষা -

লেন্স -

পারিবারিক আবেগ -

শিশুর স্বাস্থ্যসেবার বিষয়ে কে শিক্ষায় নেতৃত্ব দেয়?

যা

নিতাই

কে পৃথকভাবে কাজের শিক্ষায় নেতৃত্ব দেয়?

যা

নিতাই

পরিবার বা আত্মীয়দের সাথে দেখা করার শিক্ষায় কে নেতৃত্ব দেয়?

যা

নিতাই

যা	নিতাই
শেষ করে আপনি ডেন্টার কাজে গিয়েছিলেন? <input type="radio"/> ৩-৬ মাসের মধ্যে <input type="radio"/> ৩-৬ মাসের মধ্যে থেকে <input type="radio"/> ১ বছর আগে	শেষ করে আপনার সন্তান ডেন্টার কাজে গিয়েছিলেন? <input type="radio"/> ৩-৬ মাসের মধ্যে <input type="radio"/> ৩-৬ মাসের মধ্যে থেকে <input type="radio"/> ১ বছর আগে
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আপনি কি ডেন্টাল ক্লিন ব্যবহার করেন? <input type="radio"/> হ্যাঁ <input type="radio"/> না	আপনার শিশু কি ডেন্টাল ক্লিন ব্যবহার করেন? <input type="radio"/> হ্যাঁ <input type="radio"/> না
আপনি কি ডেন্টাল ক্লিন ব্যবহার করেন? <input type="radio"/> হ্যাঁ <input type="radio"/> না	

<input type="radio"/> হ্যাঁ <input type="radio"/> না	
আপনি কত ঘন ঘন আপনার শিশুরা পরিবর্তন করেন? <input type="radio"/> প্রতি ৩ মাস <input type="radio"/> প্রতি ৬ মাস <input type="radio"/> প্রতি বছর	কত ঘন ঘন আপনার শিশু টুথব্রাশ পরিবর্তন করে? <input type="radio"/> প্রতি ৩ মাস <input type="radio"/> প্রতি ৬ মাস <input type="radio"/> প্রতি বছর
রৈমিক স্বাস্থ্যবিধির জন্য আপনি কতক্ষণ সময় নেন? <input type="radio"/> প্রায় ১ মিনিট <input type="radio"/> প্রায় ২ মিনিট <input type="radio"/> ২ মিনিটের বেশি	আপনার শিশু রৈমিক স্বাস্থ্যবিধির জন্য কতক্ষণ সময় নেন? <input type="radio"/> প্রায় ১ মিনিট <input type="radio"/> প্রায় ২ মিনিট <input type="radio"/> ২ মিনিটের বেশি
	আপনার সন্তান কোন বয়সে দাঁত রাস করা শুরু করেছিল? <input type="radio"/> ৬ মাস বয়সে <input type="radio"/> ১-২ বছর বয়সের মধ্যে <input type="radio"/> ২ বছর পর
	কোন বয়সে আপনার সন্তানের রথয ডেন্টাল ভিজিট ছিল? <input type="radio"/> ৬ মাস বয়স <input type="radio"/> ১ বছর বয়স <input type="radio"/> ১ বছরের বেশি বয়স
আপনি কি ধরনের ডায়াগনোস্টিক অ্যুজেন্সি করেন? <input type="radio"/> বুকের মুখ ডায়াগনোস্টিক <input type="radio"/> রেডিয়াল ডায়াগনোস্টিক <input type="radio"/> ডায়াগনোস্টিক <input type="radio"/> ডেন্টাল	
আপনি কতক্ষণ আপনার সন্তানকে ডায়াগনোস্টিক করেন? <input type="radio"/> ১ বছরের কম <input type="radio"/> ১-২ বছর <input type="radio"/> ২ বছর বা তার বেশি	
আপনি আপনার সন্তানকে কতবার ডায়াগনোস্টিক করেন? <input type="radio"/> মাস ৩-৫ বার <input type="radio"/> মাস ৫-১০ বার <input type="radio"/> মাস ১০ বারের বেশি	
দিনের কোন সময়ে আপনি আপনার সন্তানকে ডায়াগনোস্টিক করেন? <input type="radio"/> দুপুরের সময় <input type="radio"/> সন্ধ্যার সময়	

<ul style="list-style-type: none"> ○ হ্যাঁ ○ না 	
আপনি কত ঘন ঘন আপনার শিশু টুথব্রাশ পরিবর্তন করেন? <ul style="list-style-type: none"> ○ প্রতি ৩ মাসে ○ প্রতি ৬ মাসে ○ প্রতি বছর 	কত ঘন ঘন আপনার শিশু টুথব্রাশ পরিবর্তন করে? <ul style="list-style-type: none"> ○ প্রতি ৩ মাসে ○ প্রতি ৬ মাসে ○ প্রতি বছর
মৌখিক স্বাস্থ্যবিধির জন্য আপনি কতক্ষণ সময় নেন? <ul style="list-style-type: none"> ○ প্রায় 1 মিনিট ○ প্রায় 2 মিনিট ○ 2 মিনিটেরও বেশি 	আপনার শিশু মৌখিক স্বাস্থ্যবিধির জন্য কতক্ষণ সময় নেন? <ul style="list-style-type: none"> ○ প্রায় 1 মিনিট ○ প্রায় 2 মিনিট ○ 2 মিনিটেরও বেশি
	আপনার সন্তান কোন বয়সে দাঁত ব্রাশ করা শুরু করেছিল? <ul style="list-style-type: none"> ○ 6 মাস বয়সে ○ 1-2 বছর বয়সের মধ্যে ○ 2 বছর পর
	কোন বয়সে আপনার সন্তানের প্রথম ডেন্টাল ভিজিট ছিল? <ul style="list-style-type: none"> ○ 6 মাস বয়স ○ 1 বছর বয়স ○ 1 বছরের বেশি বয়স
আপনি কি ধরনের খাওয়ানোর অনুশীলন করেন? <ul style="list-style-type: none"> ○ বুকের দুধ খাওয়ানো ○ বোতল খাওয়ানো ○ ফর্মুলা খাওয়ানো ○ মিশ্রিত 	
আপনি কতক্ষণ আপনার সন্তানকে খাওয়ালেন? <ul style="list-style-type: none"> ○ 1 বছরের কম ○ 1-2 বছর ○ 2 বছর বা তার বেশি 	
আপনি আপনার সন্তানকে কতবার খাওয়ান? <ul style="list-style-type: none"> ○ দিনে 3-5 বার ○ দিনে 5-10 বার ○ দিনে 10 বারের বেশি 	
দিনের কোন সময়ে আপনি আপনার সন্তানকে খাওয়ান? <ul style="list-style-type: none"> ○ ঘুমানোর সময় ঘুম সহ 	

Figure 3: Questionnaire in English Language

প্রতিমাগী সংখ্যা-

আমু-

বচ্চের কব মিলন-

মাতার কবি শিষ্টা -

পেছা-

পারিবারিক আয়-

বচ্চের কবি স্বাস্থ্যকর্ম্য টেক্সমাল পর কবীন মিলনয় লেতা হৈ?

- হ্যাঁ
- পিতা

বচ্চের কবি খরীদী কব মিলনয় কবীন করতা হৈ?

- হ্যাঁ
- পিতা

পরিবার বা বিলোডারী সে মিলনে কব কৈসন্য কবীন করতা হৈ?

- হ্যাঁ
- পিতা

মহা	বচ্চয়া
অধিকম আয়নে টাটী কে ডাক্টর কৌ কব দিছায়া থা? <ul style="list-style-type: none"> ○ 3 মহীনে সে কম পছনে ○ 3-6 মহীনে পছনে সে ○ 1 সাল পছনে 	আপকা বচ্চয়া বিছনী কার টাল বিকিব্বাক কে পাস কব ময়া থা? <ul style="list-style-type: none"> ○ 3 মহীনে সে কম পছনে ○ 3-6 মহীনে পছনে সে ○ 1 সাল পছনে
আপ বিছনী কার টাটী কৌ ব্রাশ করতা হৈ? <ul style="list-style-type: none"> ○ এক কার ○ দু কার ○ তীন কার 	আপকা বচ্চয়া বিছনী কার ব্রাশ করতা হৈ? <ul style="list-style-type: none"> ○ এক কার ○ দু কার ○ তীন কার
কয়া আপ টেটল ফল্লীস কব উপয়ৌস করতা হৈ? <ul style="list-style-type: none"> ○ হ্যাঁ 	কয়া আপকা বচ্চয়া টেটল ফল্লীস কব উপয়ৌস করতা হৈ? <ul style="list-style-type: none"> ○ হ্যাঁ

○ মহী	○ মহী
কয়া আপ মাতৃসর্বাধ কা ইলেনমাল করতা হৈ? <ul style="list-style-type: none"> ○ হ্যাঁ ○ মহী 	
আপ আপন দুখরস বিছনী কার বদনতা হৈ? <ul style="list-style-type: none"> ○ হর 3 মহীনে ○ হর 6 মহীনে ○ হর সাল 	আপকা বচ্চয়া বিছনী কার দুখরস বদনতা হৈ? <ul style="list-style-type: none"> ○ হর 3 মহীনে ○ হর 6 মহীনে ○ হর সাল
আপ মাতৃক স্বকরসে কে বিয় বিছনয় সালম লেতা হৈ? <ul style="list-style-type: none"> ○ সলসল 1 মিলত ○ সলসল 2 মিলত ○ 2 মিলত সে অধিক 	আপকা বচ্চয়া মাতৃক স্বকরসে কে বিয় বিছনয় সালম লেতা হৈ? <ul style="list-style-type: none"> ○ সলসল 1 মিলত ○ সলসল 2 মিলত ○ 2 মিলত সে অধিক
	আপকা বচ্চয়ে মে কিল উম মে দুখরস কনতা শুরু কিয়া? <ul style="list-style-type: none"> ○ 6 মহীনে কবি উম মে ○ 1-2 সাল কবি উম কে কৌথ ○ 2 সাল কাড
	আপকা বচ্চয়ে কবি পছনী টাল বিকিব্বাক ময়া কিল উম মে হুঙ্ মৌ? <ul style="list-style-type: none"> ○ 6 মহীনে কবি উম ○ 1 বর্ষ কবি আয়ু ○ 1 বর্ষ সে অধিক আয়ু
আপ কিল পকার কে অছার কব অকমাল করতা হৈ? <ul style="list-style-type: none"> ○ কেবট পিটিম ○ কৌল সে দুখ পিলস ○ ফর্মুলা পিটিম ○ সঁমুকার 	
আপনে আপনে বচ্চয়ে কবি বিছনয় সালম তক বিলসয়া? <ul style="list-style-type: none"> ○ 1 বর্ষ সে কম ○ 1-2 সাল ○ 2 সাল বা অধিক 	
আপ আপনে বচ্চয়ে কবি বিছনয় সালম হৈ? <ul style="list-style-type: none"> ○ টিল মে 3-5 কার 	

Figure 4: Questionnaire in Bengali Language

<input type="radio"/> 5-10 बार एक दिन <input type="radio"/> दिन में 10 से अधिक बार	
आप अपने बच्चे को दिन के किस समय खिलाती हैं?	
<input type="radio"/> झपकी सहित सोते समय <input type="radio"/> अधिकतर झपकी लेकिन रात को सोने के समय नहीं <input type="radio"/> अधिकांश रात सोने का समय लेकिन झपकी नहीं <input type="radio"/> कभी-कभी झपकी सहित सोने के समय	
दैनिक बोलल सामग्री:	
<input type="radio"/> शिशु फार्मूला <input type="radio"/> गाय का दूध <input type="radio"/> पानी <input type="radio"/> रस <input type="radio"/> शीतल पेय	

Figure 5: Questionnaire in Hindi Language

9. Discussion

“Validity and reliability are two fundamental components in the estimation of a measurement instrument. Instruments can be divided into conventional knowledge, skill or attitude tests, clinical simulations or survey questionnaires. Instruments measure concepts, psychomotor skills or affective values”. [7] “Face validity was assessed using qualitative ways. However, we assessed content validity quantitatively using content validity ratio. Since, content validity is a prerequisite for other validity tests, it should gain the highest priority during instrument development. Validity is not the property of an instrument, but the property of the values obtained by an instrument used for a specific purpose on a special group of respondents. Thus, on each study for which an instrument is used validity evidence should be obtained”. [5,6,9]

"Reliability is concerned with an instrument's ability to consistently produce trustworthy measurements." It's worth emphasizing that reliability of an instrument is closely related to its validity. Without reliability, it is difficult to establish validity." However, the reliability of an instrument is independent of its validity." [6,10,11] To ensure reliability, Cronbach's alpha integration and ICC were calculated for the questionnaire. In general, the results were acceptable.

This questionnaire has been presented as a simple answering tool. The study proved that proposed scale have acceptable properties of reliability and validity that would validate its application in feeding practices and maternal influence in children having Early Childhood Caries. “Our findings indicate that they remained acceptable following this process. The internal consistency showed acceptable values, framed in the category of “good” (values > 0.7), as reported” by Steiner et al. [6]

10. Conclusion

The maternal factors, such as high caries index scores, poor oral hygiene status and low socioeconomic factors, were the strong risk indicators for identifying children susceptible to caries. Child's feeding habits such as feeding frequency, type of feeding, falling asleep with nipple in the mouth, and duration of breast feeding have significant direct relationship with the severity of ECC. Severity of ECC was found to be significantly related to the children's frequency of

toothbrushing and the oral hygiene status. This study recommended that the questionnaire is a valid and reliable simple, non invasive tool for evaluation of quality of life for mothers and their children suffering from Early Childhood Caries.

11. Future Scope

This questionnaire can be used as a simple and valuable tool to evaluate different feeding habits and maternal influence on the development of early Childhood Caries.

12. Limitation

This study has several limitations. It was a single centred and small population study. We need to further study with multi centric and in big population.

Consent

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

Ethical Approval

Requisite ethical clearance & permission to undertake the study was obtained from Guru Nanak Institutional Ethical Committee of Guru Nanak Institute of Dental Sciences and Research, Kolkata. Ethical approval no is GNIDSR/IEC/21-24/22.

Competing Interests

Authors have declared that no competing interests exist.

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