

Restoring Preschoolers' Smile Aesthetics and Its Impact on Social Behaviour

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ABSTRACT: To assess the impact of restoring preschool children's smiles on their social behaviours.

METHODS AND SUBJECTS: A cross-sectional pilot study using a modified questionnaire of "The early Child Behaviour Questionnaire (ECBQ) (Mary Rothbarts 2006), temperament and Toddler Behaviour Assessment Questionnaire (TBAQ) (Goldsmith, 1996).

One paedodontist (M.A) handed the questionnaires to the patient's parents treated in a pedodontics clinic at Al-Andalus Centre Tripoli/Libya to investigate the impact of restoring the smile aesthetic on pre-school social behaviour. Cronbach alpha = (0.875) checked the validity of the modified questionnaire, which was considered valid. Data was analysed using IBM SPSS version 25.

RESULTS: The average score for each item was calculated, then scores were categorized in one of the three groups (No = 0-0.66, sometimes = 0.67-1.33, yes 1.34 – 2). An average score for each subject was calculated to obtain an overall summary of the results for all questions and categorized for 20 children (61%) had answered "yes" and (28%) answered "sometimes ", indicating positive social behaviour improvement, while (11%) answered "NO" with no change.

CONCLUSION: Restoring preschool children's smiles has a positive impact on social behaviour, as the majority of the questionnaire items were answered "yes" by the subjects, and this was confirmed by calculating the overall average for all subjects in all questions (1.43) which is categorized to be "yes".

I. INTRODUCTION

The development of positive social skills in preschool children is critical for building a foundation for future relationships and later academic achievement. (Alzahrani 2019, Caprara 2000). Early childhood caries is an issue faced daily in pediatric dentistry, as it is the most common chronic disease affecting children (Ali et al. 2017, Kabil 2017), It may affect anterior teeth and have a great impact on their smile aesthetics, speech, and social behavior; which could develop inferiority upon their peers because of an unpleasant smile (Ellakany 2021). The study aimed to assess the impact of restoring preschool children's smiles on their social behavior. The general health can be inferred from your oral health, as issues with your mouth can have an impact on other parts of your body. Programs that provide oral health education about preventing and managing various oral health diseases. It also includes oral hygiene instructions on the proper brushing techniques, the use of fluoridated toothpaste, and flossing.

These were delivered in the form of lectures, motivational interviews, and pamphlets, amongst other methods of oral health promotion. The programs utilize one or more of the three learning domains (cognitive, psychomotor, and affective) introduced by Bloom in 1956 [33] Sfeatcu, R.; Dumitrache, M.A.; Cărămidă, M.; Johannsen, A.; Perlea, P.A pilot study on the effectiveness of a 2-year school-based oral health educational programme using experiential learning among adolescents. *Int. J. Dent. Hyg.* 2019, 17, 221–228. a school-based experiential education programme on oral health status, knowledge, and behaviour among a group of schoolchildren in Bucharest. oral health promotion in schools and covered 2 years. Data were collected from 120 teenagers from three schools in Bucharest, Romania. At baseline, all subjects were clinically examined and received a questionnaire. They were split into two groups at baseline: a test group with 76 schoolchildren and a control group with 44 schoolchildren. The schoolchildren included in the test group received three experiential lessons. After every lesson, they filled in the same questionnaire. At the end, all subjects were clinically examined again. The prevalence of dental caries was increased in the control group by 8.58% (N = 3, P = 0.31) and decreased in the test group by 1.64% (N = 1, P = 0.8). Regarding incipient carious lesions, a higher decrease was observed in the test group (D₁₋₂S: 0.78 vs 0.63, P = 0.867). There was a statistically significant plaque index decreased in the

test group (1.32 vs 1.12; $P = 0.01$) and an increase in the control group (1.15 vs 1.79; $P = 0.0001$). More children from the test group ($N = 5$, 7.9%, $P = 0.225$) adopted twice-daily tooth brushing compared to the control group ($N = 1$, 2.9%, $P = 0.52$).

II. SUBJECTS AND METHODS

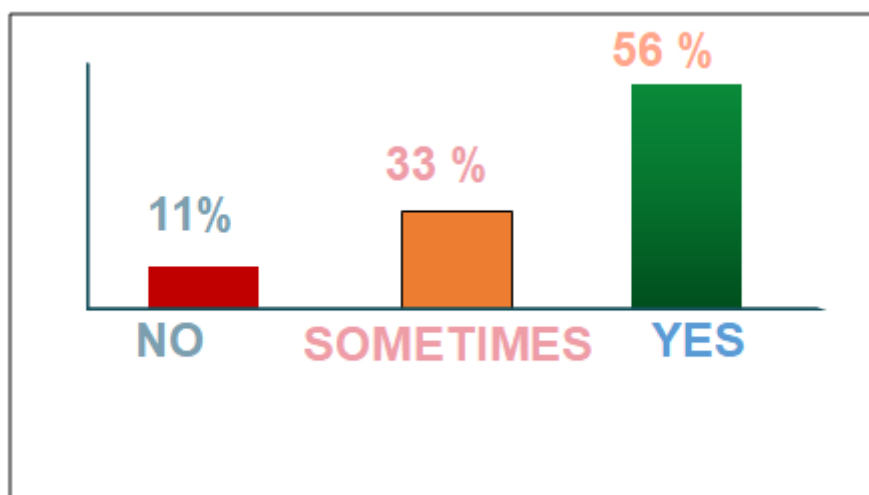
cross-sectional pilot study using a modified questionnaire of “The Early Child Behavior Questionnaire (ECBQ) (Mary Rothbarts 2006), temperament and Toddler Behavior Assessment Questionnaire (TBAQ) (Goldsmith,1996).The questionnaires were handed to the patient’s parents treated in a paedodontic clinic at Al-Andalus Center Tripoli/Libya; by one paedodontist (M.A) to investigate the impact of restoring the smile aesthetic in preschool children on social behavior. The validity of the modified questionnaire was checked by Cronbach alpha = (0.875), which is considered to be valid. Data was analyzed using IBM – SPSS.

Children’s Behaviour Questionnaire	
Does your child enjoy smiling a lot when facing the mirror?	Yes
	Sometimes
	No
Does your child choose his clothes?	Yes
	Sometimes
	No
Does your youngster perform more expressive art, such as jingles or singing?	Yes
	Sometimes
	No
Does your child choose his activity?	Yes
	Sometimes
	No
Does your youngster practice good oral hygiene?	Yes
	Sometimes
	No
Does your child enjoy smiling for normal or digital pictures?	Yes
	Sometimes
	No

III. RESULTS

The average score for each item was calculated, then scores were categorized into one of the three groups (No= 0 - 0.66, sometimes = 0.67-1.33, yes 1.34 – 2). An average score for each subject was calculated to obtain an overall summary of the results for all questions and categorized for 20 children (61%) had answered “yes” and (28%) answered “sometimes “, indicating positive social behavior improvement, while (11%) answered “NO” with no change.

Does your child enjoy smiling a lot when facing the mirror?



The child's behaviour, such as smiling in front of the mirror to show off his teeth, is shown in Figure 1. Of the youngsters in the sample, 56% stated they loved to grin in front of the mirror, while 33% said they did so occasionally and 11% indicated they did not.

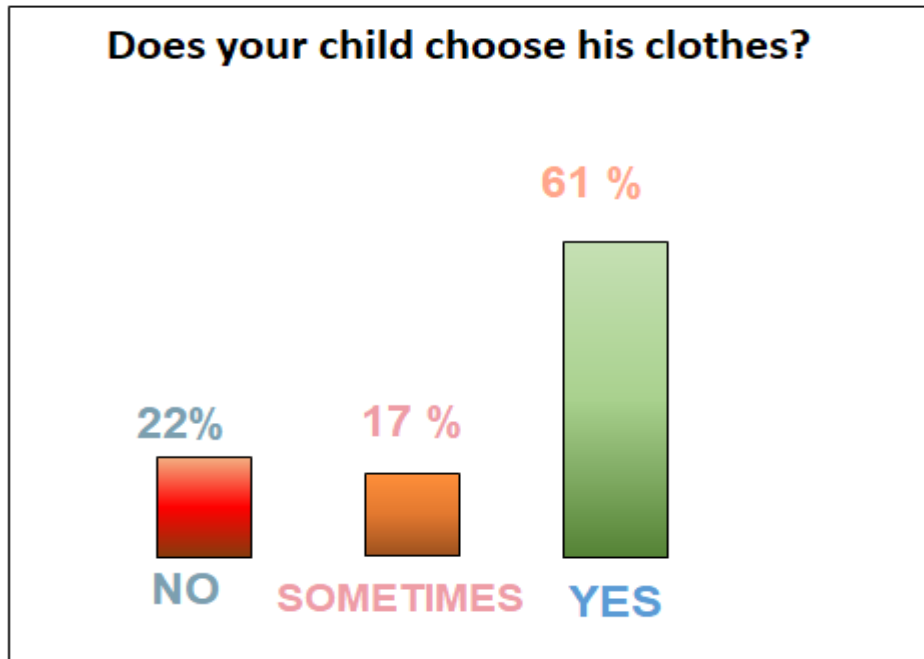


Figure 2 shows that 61% of youngsters enjoy choosing their clothes, 22% do not choose their clothes, and 11% choose their clothes occasionally.

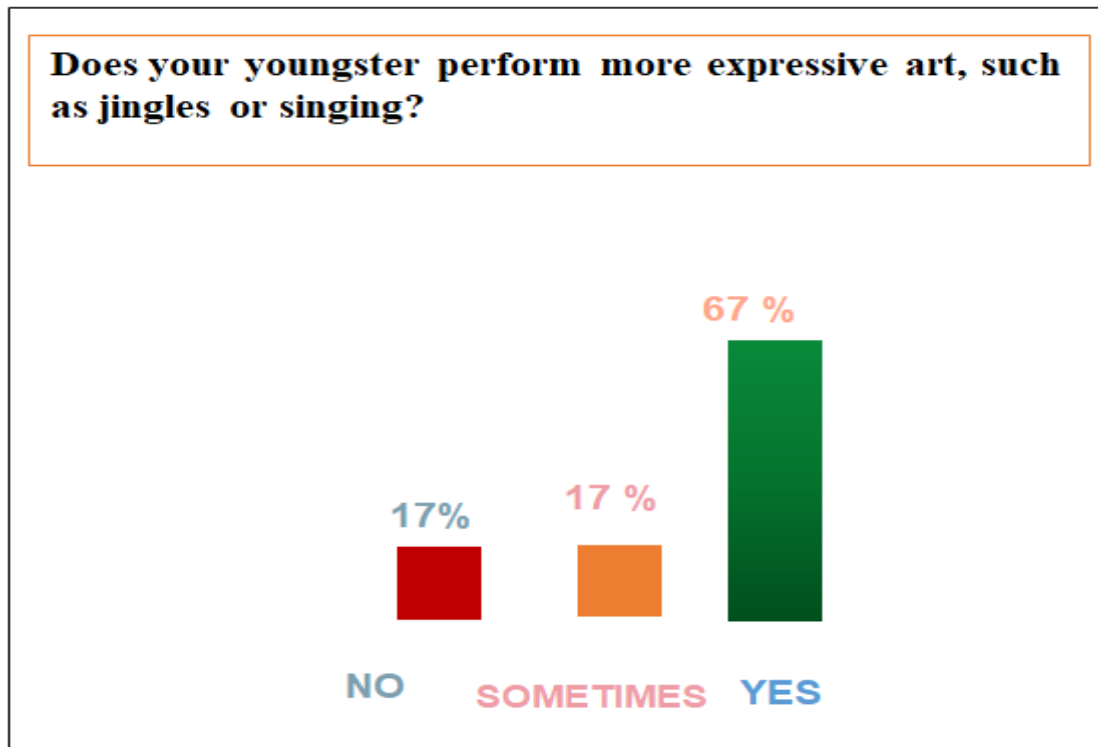


Figure 3 illustrates how 67% of the youngsters said they enjoyed expressive arts like singing or jingles, 17% said they did so occasionally, and 17% said they did not.

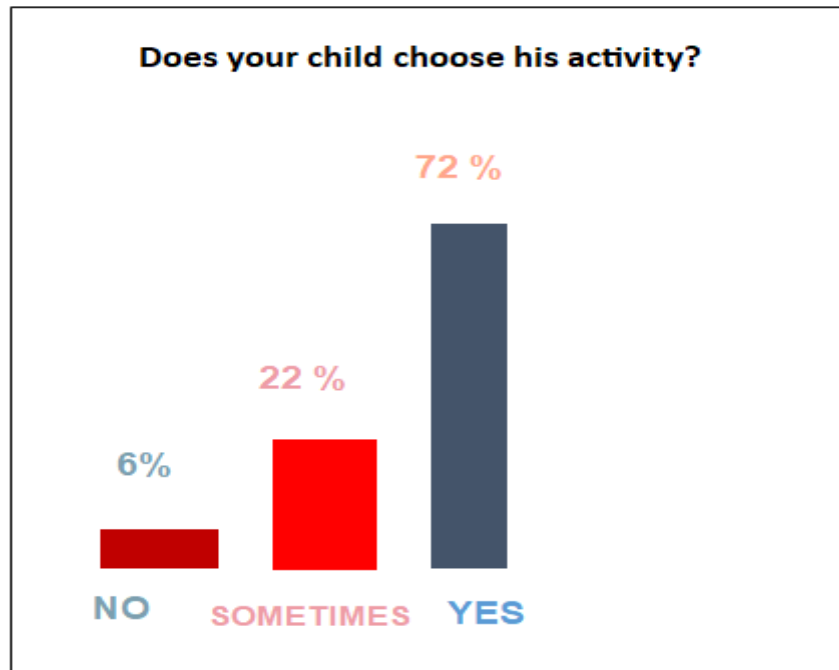


Figure 4 shows how the youngsters in the study sample behaved when engaging in social activities; 72% of them answered "yes," 22% responded "sometimes," and 6% simply said "no."



Figure 5 depicts the behaviours of children about maintaining excellent oral hygiene: 39% practice, 33% occasionally, and 28% do not practice any kind of good oral hygiene.

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overall summary of the results for all questions and categorized for 20 children (61%) had answered “yes” and (28%) answered “sometimes “, indicating positive social behavior improvement, while (11%) answered “NO” with no change

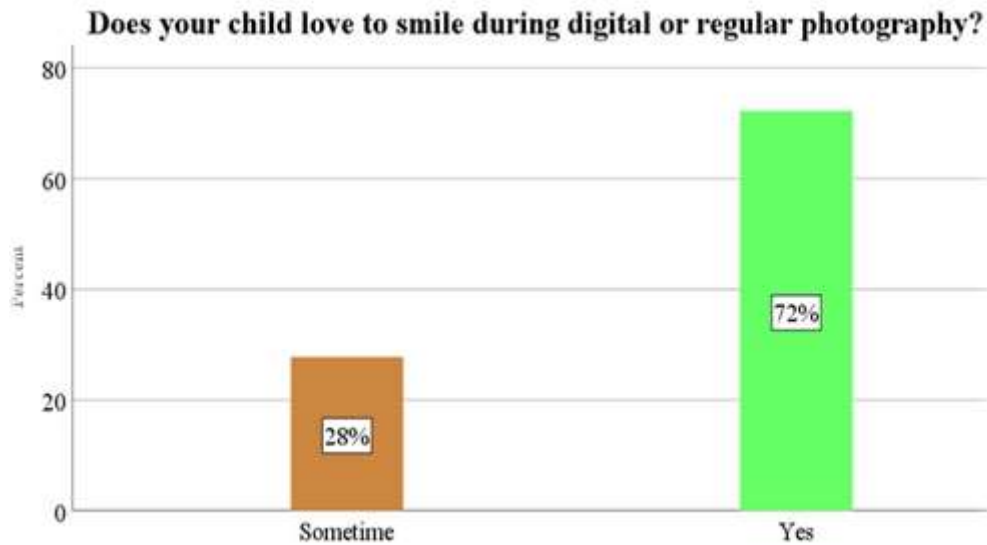


Figure 6 shows how children are perceived for their love of smiling for pictures; 72% of them answered "yes," and 28 replied "no."

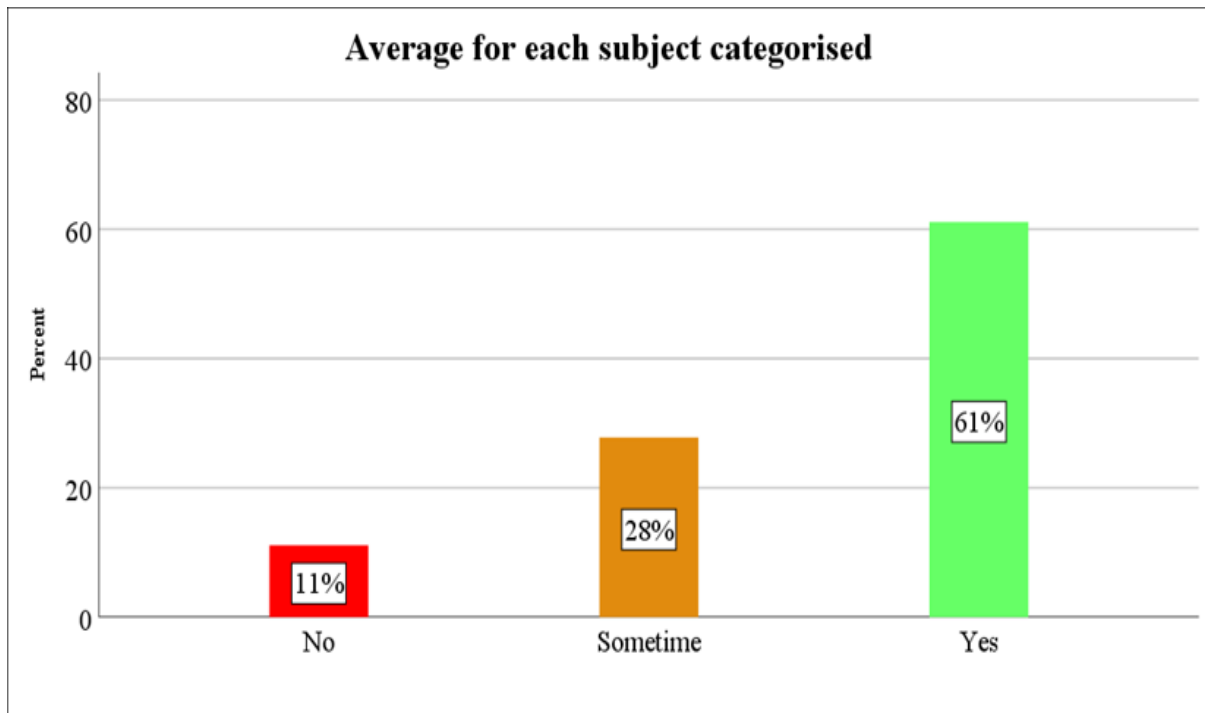


Figure 7 illustrates an overall summary of the answers to all of the questions obtained by calculating the average scores for each subject. The following bar graph shows that, for the majority of participants, their social

Behaviours positively affected almost two-thirds of them (61%), 28% occasionally, and 11% never. Two clinical examples of preschoolers who needed their teeth and smiles improved because they were unhappy with how they looked and how it affected them socially were brought to the dental clinic.

Case 1 : A four-year-old girl complained of having trouble pronouncing words correctly, feeling self-conscious when she smiled, and wanting solutions for an attractive smile. No noteworthy findings from the medical history or extraoral examination were found. The intraoral evaluation revealed remaining primary dentition roots: #51, #52, #62, #61. Resorbed roots #52 #51#61 and Intact not resorbed root #62 as presented in



Intraoral examination: #51, #52, #62, #61 are the remaining roots in the primary dentition.
Roots resorbed #52 #51 #61

Root #62, intact but not resorbed

Intraoral examination: caries present in primary dentition roots #51, #52, #62, and #61, with residual roots #53, #63.

short-lived roots and a brief interdental arch

#53 #52 #51 #61 #62 #53 distance

Final diagnosis: Necrotic #62, Hopeless #52, #51, #61

Plan of treatment:

Extractions #52, #51, #61

Pulpectomy + zirconium Crown #62

Appliance: Gropper (FPD) .



Case 2: Boy, 4.5 years old

The main complaints were about a bad odour, a recurring dental abscess, a need for an aesthetically pleasing

smile, and difficulty pronouncing words.

Medical background: not noteworthy

Extraoral examination: no unusual findings were noted

Intraoral examination: caries present in primary dentition roots #51, #52, #62, and #61, with residual roots #53, #63. tiny roots and an insufficient interdental arch #53 #52 #51 #61 #62 #53 spacing

Dental decay #53, #63, plus necrotizing #52, #51, #61, #62, is the final diagnosis.

Treatment plan: Pulpectomy plus Zirconium crowns on #51, #52, #61, and #62 + Composite #53, #63.



IV. DISCUSSION

The current study demonstrated how restoring preschoolers' smiles will alter their social behaviours. The impact of restoring preschool children's smiles on their social behavior is very crucial to children psychological development. The general health can be inferred from your oral health, as issues with your mouth can have an impact on other parts of your body. The psychological effects of facial aesthetics have a significant impact on life satisfaction in general. Therefore, a smile's aesthetics are crucial to overall beauty. 6-8. Poor grin aesthetics harm social interactions during childhood, as demonstrated by the two cases of children in the current study who complained about their smiles because of their substantially decayed upper maxillary anterior teeth, both instances had poor aesthetic and social impairment regarding their facial appearance and ability to smile. Therefore, practitioners should anticipate that some esthetical characteristics would get more attention from patients than others. For that reason, this study investigated the impression of grin aesthetics from the point of view of children and their parents. It seems that smile aesthetics are indeed considered important, especially in the context of self-esteem and social judgment. According to studies, physically attractive people are more likely to be thought well of and to have higher levels of confidence in themselves. Armalaite, J., Jarutiene, M., Vasiliauskas, A. *et al.* Smile aesthetics as perceived by dental students: a cross-sectional study. *BMC Oral Health* **18**, 225 (2018). <https://doi.org/10.1186/s12903-018-0673-5>

[3]. Langlois JH, Kalakanis L, Rubenstein AJ, Larson A, Hallam M, Smoot M. Maxims or myths of beauty? A meta-analytic and theoretical review. *Psychol Bull.* 2000;126:390–423.

The current study identified the many social behaviours that youngsters perceived, and the majority of them responded favourably. Early prosocial behaviour influences kids' intellectual and social development. Five years later, peer relationships in adolescence were measured for prosocial traits like cooperative, helpful, sharing, and comforting behaviours, while verbal and physical aggressiveness was used to measure antisocial behaviour.

Prosocial and aggressive behaviours in early childhood were looked at as potential indicators of academic success. An important positive impact on social preferences and subsequent academic success is prosocial behaviour. The conceptual model explained 37% of the variance in social preferences and 35% of the variance in eventual academic achievement. Academic performance and other socially desirable developmental outcomes may be impacted by prosociality.

Caprara 2000

Oral health is a good indicator of overall health because problems in the mouth can affect other body regions.

The results of this survey indicate that most subjects answered “yes” to the questions in the questionnaire; this was confirmed by calculating the overall average for all subjects in all questions “1.43” which was categorized as “yes”. It is important to note that the survey only was done on 20 Cases in one center and by one operator, so the results may not be representative of the entire population.

Conclusion

The results of this pilot survey indicate that most subjects answered “yes” to the questions in the questionnaire; this was confirmed by calculating the overall average for all subjects in all questions “1.43” which was categorized as “yes”. It is important to note that the survey only was done on 20 Cases in one center and by one operator, so the results may not be representative of the entire population.

V. CONCLUSIONS

In this group studied, the oral health programme had positive effects on oral health status, oral health knowledge and behaviour among adolescents.

Recommendations :Parents and dentists should emphasize the value of oral hygiene, routine dental visits, and the psychological risks associated with preschool children's compromised dental aesthetics.The necessity of creating and implementing efficient early childhood caries promotion and preventative programs is also highlighted by this study.

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