

Mothers' sense of coherence and oral health-related quality of life in cleft lip and palate children visiting a private dental college: A Survey

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ABSTRACT

Background: In addition to an adjusting physical appearance, children with cleft lip and palate also deal with psychological and psychosocial limitation. Mothers' sense of coherence (SOC) could be a psychosocial determinant of oral health quality of life (OH-QoL) of cleft lip and palate patients. Hence, the present study was done to assess the relationship of mothers' SOC on OH-QoL in cleft lip and palate patients. **Materials and Methods:** The present cross-sectional questionnaire study was conducted on mothers of cleft lip and palate children. The first part consisted of demographic details. The second part of scale was the early childhood and oral health impact scale (ECOHIS) which had a total 13 questions with responses on a 4-point Likert scale. The third part was to assess mothers' SOC using a short version of SOC-13 consists of 13 items on a 7-point Likert scale. Chi-square test was applied to assess the association between mothers' SOC, sociodemographic characteristic, and children's OHRQoL. In the analysis, $P < 0.05$ was considered significant. **Results:** Out of 69% of low SOC population, 21.73% were rural, 20.39% were from peri-urban, and 57.97% population was from urban areas. Out of 150 participants, 2.40% in high ECOHIS were illiterate/primary school, "31.32% were high school/intermediate/diploma had high ECOHIS while 66.26% were high school/intermediate/diploma" had low ECOHIS, and 25.37% were graduate/postgraduate. Mothers' education and locality were statistically significant $P < 0.001$. **Conclusion:** Action to enhance mothers' SOC might form part of oral health promotion and help to improve the oral health quality of life of cleft lip and palate patients.

Keywords: Cleft lip, cleft palate, oral health-related quality of life, sense of coherence

Introduction

Learning to live with a change in the appearance of one's face due to any injury or disease is a difficult task. It is challenging

for children with congenital craniofacial conditions or disease and their parents to adjust.^[1] Cleft lip and palate is the most common congenital craniofacial abnormality with a prevalence of 9.92 per every 10,000 live births.^[2] A cleft is a birth defect that occurs when tissues of lip and/or palate of fetus do not fuse very early in pregnancy. The etiology is unknown but can also be due to genetic and environmental factors. Significant literature has shown that in addition to an adjusting physical appearance,

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children with cleft lip and palate also deal with psychological and psychosocial limitation. The existing care that is provided is mainly aimed at physical rehabilitation and psychosocial issues are often neglected.^[1]

Parents' Sense of Coherence (SOC) has already been shown to be associated with their children's oral health status.^[3,4] The appropriate use of health services is a significant determinant of a population's health.^[5,6] However, from childhood to adolescence, parents' attitude toward upbringing of child, their socioeconomic status, and positive experiences at home will influence a child's behavioral pattern. According to Antonovsky, sense of coherence is a sense of looking at/confronting one's life and environment with the ability to cope with stressors.^[7] A person's SOC reflects their orientation to life and the extent to which they experience life as comprehensible, manageable, and meaningful.^[8,9] The complex combination of repetition of life experiences of successfully coping with stress, participating in decision leads to the development of SOC. Moreover, Antonovsky also noted that parents with high SOC will foster a child with higher SOC and will readily provide the child with positive life experiences.^[7] He referred only to the parent and did not address the gender, but the amount of time the mother spends with the child is more; hence, women play and have an empirical role in parental care in the contemporary world. For this reason, mothers were considered for the study.^[7] Hence, mothers play a significant role in the utilization of dental services for children.^[4,10]

Mothers' SOC could be a psychosocial determinant of oral health quality of life (OH-QoL) of cleft lip and palate patients. The children affected by this defect tend to have hampered the quality of life.^[11] Oral health-related quality of life (OHRQoL), as a "multidimensional construct that includes a subjective evaluation of an individual's oral health, functional well-being, emotional well-being, expectations and satisfaction with care, and sense of self" may be particularly salient to children with orofacial anomalies.^[12,13] Oral health conditions can have a negative impact on the functional, social, and psychological wellbeing of young children and their families, causing pain and discomfort for the child.^[14,15] Assessing the impact of oral health on the life quality of children can improve communication between patients, parents, and the dental team and can provide an outcome measure for clinicians to assess the quality of life.^[14] Eslami *et al* and Topolski *et al.* found that children with facial difference have lower QoL scores compared to other children with no such defect.^[16,17]

One useful approach called family-centred care (FCC) defined as "a way of caring for children and their families within health services which ensures that care is planned around the whole family, not just the individual child/person, and in which all the family members are recognized as care recipients."^[18] There have been limited numbers of studies conducted to assess the relationship of mothers' sense of coherence on oral health-related quality of life in children in the Indian scenario.^[4] However, to the best of authors' knowledge, no similar studies have been conducted to assess the relationship of mothers' SOC

Table 1: Mothers' Sense of Coherence and Demographic variables

Characteristics		High SOC		Low SOC		Chi-square value	P
		n	%	n	%		
Mothers' Education	Illiterate/Primary school	4	4.93	7	10.14	31.611	0.001*
	High school/Intermediate/Diploma	21	25.92	46	66.66		
	Graduate/postgraduate	56	69.13	16	23.18		
	Professional/honors	0	0	0	0		
	Total	81	54	69	46		
Locality	Rural	35	43.20	15	21.73	13.905	0.001*
	Peri-urban	23	28.39	14	20.28		
	Urban	23	28.39	40	57.97		
	Total	81	54	69	46		

*P<0.05 is significant

Table 2: Oral Health-Related Quality of life and Demographic Variables

Characteristics		High ECOHIS		Low ECOHIS		Chi-square value	P
		n	%	n	%		
Mothers' Education	Illiterate/Primary school	2	2.40	9	13.4	26.463	0.001*
	High school/Intermediate/Diploma	26	31.32	41	61.19		
	Graduate/postgraduate	55	66.26	17	25.37		
	Professional/honors	0	0	0	0		
	Total	83	55.33	67	44.66		
Locality	Rural	34	40.96	16	23.88	5.090	0.78
	Peri-urban	17	20.48	20	29.85		
	Urban	32	38.55	31	46.26		
	Total	83	55.33	67	44.66		

*P<0.05 is significant

on OH-QoL in children with cleft lip and palate. Hence, this study was conducted with the objective to assess the relationship of mothers' SOC on OH-QoL in cleft lip and palate patients.

Materials and Methods

The study was conducted for a period of 5 months (Feb-June 2017) among 150 cleft lip and palate children reporting to private dental college.

Children of aged 5–20 years and whose mothers consented to participate were included in the study; ethical clearance was obtained before commencement of the study from Institutional Ethical committee on 16/01/2017. The intended sample size was calculated to be 150 keeping 80% power and alpha error at 5%, with anticipated 55% prevalence on at least one impact on children's OHRQoL.

The questionnaire was modified into the regional language, i.e. Marathi. The original questionnaire was first translated from English to the regional language Marathi. This was done by a health care professional whose mother tongue was Marathi but had knowledge of English as well. After the forward translation, it was checked by a panel of bilingual experts who identified and resolved discrepancies between the forward translation and the existing or comparable previous version of the questions. The resultant questionnaire was then back-translated by an individual who had better knowledge of English language but had no knowledge about the nature of the study and questionnaire. The questionnaire was then finally developed in the Marathi language keeping focus on cross-cultural and conceptual equivalence, rather than linguistic/literal.

Data was collected through questionnaires which were distributed to mothers. The questionnaires were collected after 30 min and were checked for completeness. The questionnaire consisted of three parts. The first part consisted of demographic details like name, age, education, and locality.

The second part of scale was the early childhood and oral health impact scale (ECOHIS); it consisted of 13 questions and has two main parts: a child impact question (nine questions) and family impact questions (four questions). The response was coded using 4-point Likert scale: never, hardly ever, occasionally, often/very often, do not know; ranging from 0–4. Subjects with more than one do not know or missing response was excluded from the analysis. The item score was simply added to create a total score ranging from 0–52, with higher score indicating greater impact on oral health and low OHRQoL.

The third part was to assess mothers' SOC using a short version of SOC-13 (Antonovsky, 1993). The SOC consists of 13 items on a 7-point Likert scale with wordings provided only for the extreme scores (1 and 7). SOC consist of 3 measures; comprehensibility (5 items), manageability (4 items), and meaningfulness (4 items). SOC total score ranges from 13–91.

Negatively worded items were reverse-scored; hence, a high score indicated a strong SOC.

The data was entered in Microsoft excel 2010 (developed by Microsoft redmond, WA) and analyzed using STATA version 9.2. Based on median score of 61, scores were dichotomized into high (>61) and low (<61) SOC and similarly ECOHIS into high and low OHRQoL based on median score of 31. Chi-square test was applied to assess the association between mothers' SOC, sociodemographic characteristic, and children's OHRQoL. In the analysis, $P < 0.05$ was considered significant.

Result

Out of the total 150 participants, 4.93% of high SOC are illiterate/primary school and 10.14% are of low SOC. 25.92% are in high SOC while 66.66% are in low SOC in high school/intermediate/diploma category, while 69.13% of population are graduate in high SOC and 23.18% are in low SOC. 43.20% population of high SOC was from rural areas, 28.39% were from peri-urban, and 28.39% were from the urban region. While out of 69% of low SOC population, 21.73% are rural, 20.39% are from peri-urban, and 57.97% population are from urban areas [Table 1].

Out of 150 participants, 2.40% in high ECOHIS are illiterate/primary school, "31.32% were high school/intermediate/diploma had high ECOHIS while 66.26% were high school/intermediate/diploma" had low ECOHIS, and 25.37% were graduate/postgraduate [Table 2].

In high ECOHIS, 40.96% were residing in rural areas, 20.48% were from peri-urban area, and 38.55% were from the urban area, while out of 67% population of low ECOHIS, 23.88% were residing in rural areas, 29.85% were from peri-urban areas and 46.26% were from the urban area [Table 2].

Discussion

Considering a large number of CLP children who receive orthodontic and surgical treatment and the high cost of treatment procedures that are imposed on their family and society, research in the field of quality of life is of utmost importance in these patients.^[16] Cleft lip and palate patients have higher levels of body image dissatisfaction coupled with increased appearance anxiety related to their cleft which might help explain lower QoL.^[19,20] Oral health-related quality of life is an extension of health-related quality of life (HRQoL) that specifically measures the impact of oral diseases on a child's physical and social functioning. There is compelling evidence to support Wilson and Clearly's model which states that quality of life (QoL) is an important outcome associated with psychosocial well-being of a child.^[21,22] A pilot study found that mothers having strong SOC can cope up with the stressors which are directly related to OHRQoL of their children.^[23] It appears that individuals with a strong SOC may be more predisposed to a healthy lifestyle and more likely to respond to health-related advice as compared to their counterparts with a weak SOC.^[3]

Japanese studies have shown that 7% of mothers and 90% of fathers had a permanent job. Thus, the mean time that mothers spend with their child is more as compared to their fathers. Therefore, women play the central role in parental care.^[7] For this reason, we took mothers into consideration in this study.

Mothers' education is significantly associated with OHRQoL of their children. Our study has shown that 69.13% of population were graduate in high SOC and 23.18% were in low SOC. Similar study was carried out which shows that 35.7% are graduate in high SOC and 30.5% were in low SOC.^[23] Hence, mothers having higher education have a protective effect on their children and, on the other hand, children had poor OHRQoL whose mothers were illiterate or have primary education. Most of the working mothers would be away from their children throughout the day. Hence, perhaps it is not their physical presence but the influence of their education or an associated common factor which explains the effect on their children.^[23] This could be the logical conclusion of the relationship between SOC and OHRQoL.^[23] In studies done by Fernandes *et al.*^[24] and Natália *et al.*^[25] Mothers' SOC is a psychosocial determinant that deeply influences the OHRQoL of their child and improving mothers' SOC could productively improve the oral health-related quality of life of their children.

Locality also plays a role in the quality of life. The maximum number of participants from high SOC and ECOHIS were from the urban area while the majority of participants from low SOC and ECOHIS were from rural areas. Thus, people staying in urban areas have better access to dental facilities than the rural area. Thus, mothers' SOC seems to be a resource that enhances the OHRQoL of children directly, or mediated by good perceived health.

Limitations: Though several research studies have been carried out on various aspects of cleft lip and palate, they are insufficient in providing information. The potential limitation of this study is the low sample size and the use of nonrandom sampling technique. Second, the questionnaire method employed to collect the data could have biased our results. The data regarding mothers' age, number of siblings, family income, sanitation, and child's gender were not collected in our study and hence the analysis could not be tested for being potential mediators or confounders during multivariate analysis. The family environment also plays a role in designing the quality of life in children which was not considered in our study. Thus, this could have confounded the association between mothers' SOC and OHRQoL in cleft lip and palate patients in India.

The cleft lip and palate patients may face a lot of psychological and social problems leading to low oral health-related quality of life; hence, it becomes necessary to explore mothers' sense of coherence and improve it so that the impact of cleft lip and palate can be minimized. Counseling can be a great preventive tool to overcome the problems associated with cleft lip and palate.

Conclusion

When a child is diagnosed with cleft lip and palate, parents' SOC score changes over time. However, the pattern in these changes varies between mothers from different demographic regions and those having different levels of education. SOC can be used as a construct to form the coherence needed to create a health-promoting society. The learning is facilitated when the information is structured, comprehensible, and meaningful. Efforts should be taken to enhance dental facilities in rural areas, which will lead to better access to dental services which in turn will improve the oral health of the less privileged population.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the participants have given their consent for their images and other clinical information to be reported in the journal. The participants understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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