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The Management of a Moroccan Population of Medically Compromised Children: A Satisfaction Survey among Parents in the Pediatric Dentistry Service CCTD of Casablanca

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Abstract

Oral problems can have a considerable impact on the general health and quality of life of healthy children and even more those with physical or mental disabilities. And conversely, general status can affect oral status. In fact, the satisfaction assessment in the dental care field is mandatory toward both healthy and medically compromised children. Unfortunately, in Morocco, studies taking into account the needs of the Moroccan population and especially the medically compromised children in the field of dental care are very few, that's why the main objective of this study was to measure the satisfaction of the parents of these children with their management of oral health. within the CCTD pediatric dentistry service in Casablanca.

Keywords : Satisfaction, Survey, Medically compromised children, Parents, Dental care, Morocco.

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INTRODUCTION

Oral health is an essential and integral component of health. It is an integral part of health status and a determining factor in quality of life.

Therefore, the relationship between oral health and general health is no longer in question. A disturbed oral health may have general repercussions on cardiovascular, respiratory, endocrine (diabetes), renal, dermatological diseases and even psychological ones. .... [1,2]

Oral problems can have a considerable impact on general health and quality of life of healthy children. Their effect on children with chronic and acute diseases can be much more severe. In particular, it includes children with cardiovascular, hematological, respiratory, endocrine diseases... who are at increased risk of fatal complications.

In addition, the quality of life of patients with physical or mental disabilities may be compromised by the dental condition [3].

And conversely general status may affect the oral one [1].

In a vision of global care of the patient, the collaboration between the pediatrician and the dentist is essential. This collaboration is justified by the knowledge of the impact of oral and dental pathologies on the general health status and the integration of these pathologies in the global health concept. If left untreated, even for a short time, oral diseases can have harmful consequences. An oral infection is considered as a risk factor for many general health conditions [1].

Nowadays, each person seeking care is a patient who has become more demanding as to the quality of the medical service. They are more attentive to the reception, the listening, the comfort, the information transmitted, and they consider access to health care as a right.

Thus, in the oral health field, the relationship between satisfaction and care depends on several variables, some of which are socio-demographic and independent of the services offered (age, gender, etc.), while others are related to the care provided (comfort, information, privacy, etc.). In view of this diversity, overall patient satisfaction, although difficult to achieve, must be a major objective for a health service.

In developed countries, the assessment of patient satisfaction with oral health care in hospitals is mandatory [4,5], the same is not true in Africa [6]. In Morocco, very few satisfaction surveys have been conducted in hospitals, and even fewer in medically compromised children probably because the national health policy programs include rarely this approach.

According to the study of Bensouda & coll (2017) that examined the profile of medically compromised children followed and consulted at the pediatric dentistry department of Casablanca. This category of patients represented 34% of all the children consulted and followed at the same service over a period of 2 months, the DMFT and dmft indexes were respectively 6.42 and 3.44. The mean plaque index was 1.04. The oral status of medically compromised children is alarming with a large number of decayed teeth and few treated teeth. This is related to the quality of oral hygiene measures provided by these children and their parents, as well as the impact of health status [7].

Given the needs and requirements of this population in the field of dental care, the main objective of this study was to measure the satisfaction of the parents of these children about their oral health management in the pediatric dentistry service CCTD of Casablanca.

MATERIALS AND METHODS

A descriptive cross-sectional survey was conducted among parents of patients at risk followed up at the pediatric dentistry service of Casablanca during a two-month period (from January 2020 to March 2020).

Data collection was performed through a questionnaire administered by a single interviewer to the parents of the children followed at the pediatric dentistry service of Casablanca. These data were recorded on five sections (patient identification, medical profile of the patient, chief of complaint of the sick child at the pediatric dentistry service CCTD, parent’s satisfaction with the accessibility of the pediatric dentistry service, reception and management of the sick child in the pediatric dentistry service and overall satisfaction of the parents.

The results were analyzed using the SPSS version 20 software at the laboratory of community health, epidemiology and biostatistics of the Faculty of Dentistry, University of HASSAN II of Casablanca, Morocco. The qualitative variables were expressed by their numbers and percentages and the quantitative variables by their mean and standard deviation.

RESULTS

1-SOCIO-DEMOGRAPHIC RESULTS:

Our survey included 212 parents of sick children followed at the pediatric dentistry service CCTD of Casablanca, 118 (55,7%) of whom were boys. 53.2% of our study population was aged between 6 and 12 years old.

The socio-economic level of the population was estimated to be average for 30.7% of the children and low for 67%.

Concerning the patients who had medical coverage, 26.4% had compulsory health insurance (CNOPS, CNSS), 63.7% had medical assistance (RAMED) and 6.6 had other types of insurance (FAR, SANAD, AXA…).

2-PATIENT'S MEDICAL PROFILE

Among the study population, 48.1% were children with special needs and 21.2% of the children had a multi-systemic disease.

The average duration of the disease was 8.88 years (+/- 4.46). 82.5% of children had a medical follow-up with a quality of follow-up described as continuous in 75% of the sick children and interrupted in 7.5% of them. (TABLE I).

Regarding oral health care, 50.9% of the children in our study were followed by professors, 29.2% were followed by pediatric dentistry specialists and 12.7% were followed by a post graduated student in the pediatric dentistry service.

Among the children who had medical follow-up, communication between the pediatrician and the dental professional in the pediatric dentistry service was established in 46.7% of the study population. This communication was only at the beginning of the oral-dental treatment for 40.1% of the children and both at the beginning and during the treatment for 5.7% of the children at risk.

3-REASONS FOR VISITING THE PEDIATRIC DENTISTRY SERVICE OF THE CCTD:

The present study showed that 29.7% of the medically compromised children were referred by their pediatrician for oral health care and that 45.8% of the study population came for an emergency. (TABLE II)

4- SATISFACTION OF PARENTS OF MEDICALLY COMPROMISED CHILDREN:

66.5% of parents of this children population surveyed found the center's opening hours convenient.

Locating the pediatric dentistry service was easy for 65.1% and moderately easy for 34%.

The price of a consultation at the pediatric dentistry service was acceptable for 18.4%. The price was judged between convenient and moderately convenient for 29.2%, and 64.2% of the parents of sick children were not concerned by the last two questions concerning the price.

The waiting time to get an appointment was considered as acceptable for 54.2% of parents of sick children. 83.5% of parents of sick children found the registration staff friendly.

Waiting time for administrative procedures was acceptable for 44.8% and moderately acceptable for 42.9% of parents. 67% of parents found the time spent in the waiting room moderately acceptable.

Regarding dental care, 38.2% of the parents of medically compromised children who benefited from communication between the attending physician and the dentist of the pediatric dentistry service were satisfied with this communication. With 90.1% of the parents who were satisfied with the modalities accompanying the management of their children to control child anxiety (psychological approach, sedative premedication, sedation by inhalation of the equimolar mixture oxygen-nitrous oxide). (TABLE III)

5-OVERALL SATISFACTION

The present study showed that 72.2% of the parents were very satisfied with the care provided to their children by the dentists of the pediatric dentistry service and that 89.2% of the parents planned to carry out the care of their children, in the future, in the same service.

Through this study, it was also noted that the pediatric dentistry service was able to meet the expectations of 59.9% of the parents and that 90.1% of the parents planned to recommend this service to their entourage.

Table I: Patient's medical profile

Categories of diseases	(N)	(%)
Hematological and oncological diseases: Thalassemia, Hemophilia A, Iron deficiency anemia, Leukemia, Neurofibromatosis, Lymphoma, Neuroblastoma, Nephroblastoma, Medulloblastoma, Hodgkin disease …	10	4.7
Cardiovascular diseases: Congenital heart disease, Valvular stenosis, AAR, Bicuspid aortic valve…	10	4.7
Endocrine diseases: IDDM, NIDDM, growth retardation …	8	3.8
Infectious diseases: Tuberculosis meningitis, Sinusitis…	0	0
Nervous system disorders: Epilepsy, Hydrocephalus, Krabbe syndrome …	8	3.8
Respiratory diseases: Asthma, severe bronchitis, chronic nasal obstruction...	2	0.9
Gastrointestinal diseases: Gastritis, celiac disease.	2	0.9
Dermatological diseases: Epidermolysis bullosa, Ectodermal dysplasia, Netherton syndrome, Skin allergy....	4	1.9
Multi-systemic diseases: Patients with more than one general pathology.	45	21.2
Autoimmune diseases: Immune deficiency, juvenile arthritis, rheumatoid arthritis, Digeorge syndrome.	5	2.4
Patients with special needs: Mental retardation, Down syndrome, Deaf and dumb, Autism, Cerebral Palsy...	102	48.1
Other: Kidney disease, G6PD deficiency, Ataxia telangiectasia, Favism, Liver cirrhosis …	16	7.5
Follow-up by the pediatrician		
Yes	175	82.5
No	37	17.5
Location of the follow-up		
Hospital	126	59.4
Private structure	49	23.1
Quality of the follow-up		
Good /continuous	159	75
Bad/ interrupted	16	7.5

Table II: Reasons for the child's visit to the pediatric dentistry service of the CCTD

	(N)	(%)
Reason for consultation itself:		
Emergency	**97**	**45.8**
Pain	58	27.4
Infection	33	15.6
Trauma	6	2.8
Oral cavity conditioning recommended by the treating professional	**63**	**29.7**

	(N)	(%)
Routine examination/consultation	**52**	**24.5**
Reasons for visiting the pediatric dentistry service:		
Referred by private dental surgeon	42	19.8
Referred by the child's pediatrician	88	41.5
Self-referral	51	24.1
Because he/she benefits from Medical assistance	19	9.0
Other: Referred by health center dental surgeon...	12	5.7
Reasons for choosing pediatric dentistry service:		
For care requiring specialist skills (sick child)		
Yes	73	34.4
No	139	65.6
Because you trust the skills of the doctors in the pediatric dentistry service		
Yes	25	11.8
No	187	88.2
Because you feel that your child receives better care at the University Hospital		
Yes	13	6.1
No	199	93.9
For economic reasons (less expensive than private practice		
Yes	7	3.3
No	205	96.7
because you benefit from Medical Assistance		
Yes	32	15.1
No	180	84.9
Other: (Difficulty in taking care of the child, referred by a doctor, refusal to take care of the child in the private sector, a neighbor or an acquaintance...)		
Yes	162	76.4
No	50	23.6

Table III: Satisfaction of parents regarding their child dental management

	(N)	(%)
Communication between the pediatrician and the dentist		
Satisfied	81	38.2
Moderately satisfied	1	0.5
Unsatisfied	1	0.5
No opinion	15	7.0
Behavior of the dentist		
friendly	209	98.6
moderately friendly	2	0.9
not at all friendly	0	0.0
No opinion	1	0.5
Listening of the dentist		
Completely	209	98.6
Moderately	3	1.4
Not at all	0	0.0
No opinion	0	0.0
Information given by the dentist		
Clear	195	92.0
Moderately clear	12	5.7
Not at all clear	2	0.9
No opinion	3	1.4
Information given by the dentist on the relationship between general and oral health		
Yes	134	63.2
No	78	36.8
Comfort in the pediatric dentistry service		
Acceptable	172	81.1
Moderately acceptable	22	10.4

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	(N)	(%)
Inacceptable	0	0.0
No opinion	18	8.5
Respect for privacy and confidentiality		
Acceptable	199	93.9
Moderately acceptable	2	0.9
Inacceptable	0	0.0
No opinion	11	5.2
Quality of the treatment		
Appropriate	162	76.4
Moderately appropriate	37	17.5
Inappropriate	0	0.0
no opinion	13	6.1
Anxiety management of the child (psychological approach, sedative premedication, sedation by inhalation of the equimolar mixture oxygen-nitrous oxide: EMONO)		
Satisfied	191	90.1
Moderately satisfied	5	2.4
Unsatisfied	16	7.5
No opinion	0	0.0
Consideration of the general condition during oral health care		
yes	156	73.6
No	1	0.5
Don't know	55	25.9
Satisfaction with the consideration of the general condition during oral health care		
Satisfied	151	71.2
Moderately satisfied	1	0.5
Unsatisfied	0	0.0
No opinion	4	1.9
Follow up by the dentist		
Satisfactory	210	99.1
Unsatisfactory	2	0.9

DISCUSSION

The present study involved 212 patients aged between 6 and 12 years old. Another study carried out in Casablanca, involving 555 patients, revealed a predominance of the 7- to 12-year-old age group. This early consultation of our little patients could be explained by the high rate of early childhood caries (ECC) which occurs at an early age and which pushes parents to consult. In Morocco, its prevalence remains moderate to severe in preschool children (23% in 1993) [8]. Indeed, the sample included slightly more male than female children with a percentage of 55.7%. Similarly, a study on the profile of patients at risk, conducted in 2017 in Casablanca found more male than female children with a percentage of 54.6% [7]. In fact, a survey, conducted by A. Brown in Saudi Arabia [3].in 2009, showed that 52.59% of the children examined were boys and 47.41% were girls. We concluded that in all studies, there is a balance between the proportions of both sexes.

The present survey showed that in the pediatric dentistry service, the most encountered diseases are those related to disabled patients (48.1%). In contrast, studies conducted in the CCTD of Casablanca [7], Saudi Arabia [3] and Turkey [9], lower prevalences were mentioned. This high percentage observed in our country could be explained by the close collaboration between the University Children's hospital and the pediatric dentistry service, which facilitates access to dental care for these patients. Hematological and oncological diseases represent 4.7% while the study conducted in the CCTD of Casablanca [7] and in Saudi Arabia [3] showed a higher prevalence (19.4%). Heart disease accounts for 4.9% of sick children. This percentage is much lower than the one found in Boston [6] (23%), in Saudi Arabia [3] (18.48%) and, in the study, conducted in Casablanca in 2017 (7.2%) [7]. Multi-systemic diseases represent 21.2% of the sick patients. The study conducted in 2017 in the CCTD of Casablanca [7] showed the same prevalence (20.6%), these figures are higher than those reported in other countries such as Turkey [9], (3.03%). Other diseases are present in the population consulting the CCTD with a lower percentage such as endocrine diseases (3.8%), nervous system diseases (3.8%), autoimmune diseases (2.4%) and dermatological diseases (1.9%).

Regarding the follow-up in the pediatric dentistry service, 50.9% of the sick children were followed by professors, 29.2% followed by a specialist in pediatric dentistry, and 12.7% by a post-graduate student in pediatric dentistry. This can be explained by

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the good management and the importance given to this category of patients. Within the service of pediatric dentistry, medically compromised patients are in general preferentially followed up of by specialists, post graduate student or by dentists in training for the University Diploma of pediatric dentistry because they require particular skills such as good psychological approach, fast management and very regular follow-up, that couldn't be insured by undergraduate students.

Communication between the dentist in the pediatric dentistry service and the pediatrician was absent in 36.3% of cases. Unfortunately, a large proportion of these children not benefit from medical follow-up, this is why the dental doctor referred them to hospital structures providing this kind of services.

In the pediatric dentistry service, 24.5% of these children consulted for a routine examination or consultation and 45.8% consulted for a dental emergency. A study carried out in the University of Hacettepe [9] reported that the systematic visit or routine examination were the first reason for consultation of their patients (46.4%). This could be explained, in our study by the fact that the oral status is often relegated to second place in children with chronic disease, and parents are mainly concerned with the general condition of the child.

As for satisfaction with the care, 98.6% of the parents of medically compromised children expressed that the listening ability of the doctor was sufficient, who took care of the medically compromised child in the pediatric dentistry service. Indeed, in Tanzania [10, 11], studies conducted in 2013 and 2021 reported that patients were mostly satisfied with the friendliness of the dental doctor.

In the present study, 98.6% of the parents of medically compromised children expressed that they were sufficiently listened to, and 92% confirmed that they received clear information about their sick children's health problems. In contrast, a study conducted in 2010 in Dakar [12] reported that only 23.4% of the patients consulting the dentistry service expressed that they had been sufficiently listened to, and 53.2% that they had received information on the health status of their children. While the studies conducted in Tanzania in 2013 and 2021 [10, 11], reported respectively that 98.2% and 93.4% of patients were satisfied that they were listened to sufficiently, and were satisfied with the information they were provided.

Regarding the overall satisfaction with the CCTD pediatric dentistry service of Casablanca, 95.8% of the parents of medically compromised children were satisfied, 72.2% of them were very satisfied with the pediatric dentistry service and with the care provided to their sick children by the dentists of the same service. In fact, when evaluating the satisfaction of a service, the ability to meet expectations is an essential factor of quality, as is the quality of the care offered. Moreover, a service must meet the expectations not of one patient, but of all patients. This is a difficult task because expectations vary from patient to patient and from time to time. If this expectation is fully met, the parent will be fulfilled and will most likely return.

In the present study, more than 90% of the parents of children reported that they will definitely recommend the pediatric dentistry service to their family and friends. This score relates again to the ability to meet expectations and the ability to retain parents of sick children. This is very important because measuring patient satisfaction regarding health facility can also be reflected in patient's willingness to recommend this one. Sociological studies estimate that a satisfied person will influence 5 people around him/her, while a dissatisfied person will tell about his/her misadventure and influence 9 to 16 people around him/her (Formavision, 2000) [13].

Recommending the pediatric dentistry service of the CCTD will therefore positively influence new patients and lead to a renewed patient base. Every effort should be made to maintain this level of quality.

CONCLUSION

Patient satisfaction is an important indicator of the results of care dental. Its measurement is essential today particularly in order to assess and improve the performance of health care institutions.

More and more health care facilities are integrating satisfaction surveys into their quality processes. The quality approach has indeed become a necessity to target and respond to patients' expectations. It will probably become a legal obligation.

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Potential Conflicts of Interest: None

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Author's contributions:

Bensouda: Conception of the study
Aljalil: Data Analysis
Abidar: Investigator
ElArabi : Design of the study

The manuscript has been read and approved by all the authors, and all requirements for authorship were respected

BIBLIOGRAPHY

1. Pan American Health, O. (2014). Planning and Human Resources Development Unit for Health, Ministry of Health, Government of Trinidad and Tobago. *Consultancy report for the second assessment of Trinidad and Tobago's progress towards the achievement of the Regional Goals for Human Resources for Health. Government of Trinidad and Tobago*.
2. Abiko, Y., Paudel, D., Matsuoka, H., Moriya, M., & Toyofuku, A. (2021). Psychological backgrounds of medically compromised patients and its implication in dentistry: A narrative review. *International journal of environmental research and public health*, *18*(16), 8792.
3. Brown, A. (2009). Prévalence des caries et besoins de traitement des enfants en bonne santé et médicalement compromis dans un établissement de soins tertiaires en Arabie saoudite. *East Mediterr Health J*. 378-86.
4. Ministère de l'emploi et de la solidarité (France). Secrétariat d'État de la santé. Direction deshôpitaux. Évaluation de la satisfaction des patients : Document d'orientation à l'intention des établissements de santé. Informations Hospitalières. 1998; 47:1-5.
5. Itty, A. (2016). *Parental Perception of Oral Health Experiences for Medically Compromised Children: Evaluating the Role of In-House Hospital Dental Services* (Doctoral dissertation).
6. Organisation mondiale de la santé (OMS). Nouveau rapport sur les maladies bucco-dentaires dans le monde. Genève : OMS ; 2004.
7. Sana, B., Mouna, E., Zineb, A., Soukaina, E. M., Sarah, B., Mouna, H., & Samira, E. (2019). Profile of Medically Compromised Children Attending the Pediatric Dentistry Department of the Casablanca Dental Consultation and Treatment Center. *Int. J. Dent. Med*, *5*(1), 35.
8. Elarabi, S., & Msefer, S. (1996). La carie du biberon: les habitudes de succion nutritives et la carie dentaire chez l'enfant. *Espérance médicale 1996; 18 (3)*.
9. Dörfer, C., Benz, C., Aida, J., & Campard, G. (2017). The relationship of oral health with general health and NCDs: a brief review. *International dental journal*, *67*, 14-18.
10. Hirani, V. A., & Masalu, J. R. (2013). Patient satisfaction after receiving dental treatment among patients attending public clinics in Dar es Salaam. *Tanzania Dental Journal*, *18*(1), 26-30.
11. Matofari, B., Machibya, F.M., Mtaya-Mlangwa, M., (2021). Patients Satisfaction Toward Dental Health Services OfferedatMnazi- Mmoja Dental Clinic in Dar Es Salaam, Tamzania. *Oral Health Dental Sci*. 1-5.
12. M 1, D., Cisse 2, D., CMM 3, L., D 4, F., & R 5, T. (2010). Évaluation de la satisfaction des patients admis en service d'odontologie à Dakar. *Pratiques et organisation des soins*, (3), 225-230.

WEBOGRAPHY

13. Formavision. La qualité de service, 2000, Available on : www.formavision.com/dlgs/Clientcoeur.doc