"Measuring Oral Health Related Quality of Life before and after Full Mouth Rehabilitation in Children under Local Anesthesia"

A Prospective Study

Thesis

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Dedication

My late Father

whose last wish was to see me as a paediatric dentist and who taught me how to work hard and enjoy my life. I hope I have made him proud.

My Mother

Who is my role model and who is an example of a highly successful and strong woman.

My Husband

Who always guides and supports me in my life

My Mother in Law

Without her this work wouldn't have been possible

Last but not least ***My Sons***

Who know very well how to make me laugh

List of Abbreviations

Word	Abbreviation
Quality of Life	QoL
Health related quality of life	HRQoL
Oral health related quality of life	OHRQoL
General Anesthesia	GA
Patient Reported Outcomes	PROMS
Socioeconomic status	SES
Minimal Important Difference	MID
Child perception questionnaire 8-10	CPQ8-10
Child perception questionnaire 11-14	CPQ11-14
Parental Child Perception Questionnaire and Family Impact Scale	P-CPQ and FIS
Child Oral Health Impact Profile	COHIP
Early Childhood Oral Health Impact Scale	ECOHIS
Scale of Oral Health Outcomes	SOHO
Geriatric/ General Oral health Assessment Index	GOHAI
Early Childhood Caries	ECC
Decayed Missed Filled Teeth Index	DMFT Index
Social Impacts of Dental Disease Dental Impact Profile	SIDD (DIP)
Dental Impact on Daily Living	(DIDL)
Oral Health Quality of Life Inventory	(OHRQoLI)
Oral Health Impact Profile	(OHIP)
American Society of Anesthesiologists Physical Status Classification System	ASA

Children's Fear Survey Schedule-Dental Subscale	CFSS-DS
Randomized Controlled Trial	RCT
Child Behaviour Checklist	CBCL
Youth Self Report	YSR
Teacher Report Format	TRF
Diagnostic and Statistical Manual	DSM
International Collaborative Study of Oral Health Systems	ICSII
Non Starch Polysaccharides	NSP
Protein Energy Malnutrition	PEM

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Introduction

Quality of life (QoL), or the degree of well-being felt by an individual. is a term that has been used since Aristotle, meaning happiness. [1,2]

The ***WHO*** defines it as "Individuals' perceptions of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns" and it is being recognized and implemented as a valid parameter in the assessment of every individual in almost every area of the physical and mental healthcare, including the oral health. [1,2,3]

It is well known that oral conditions affect the individual's different aspects of life including the physical, psychological and social role. A person, whether young or old, suffering from carious teeth, gingivitis, periodontitis and other oral conditions will not perform well in his/her life. He/she will have difficulty in eating, drinking, sleeping, and going to work or school and hence won't be able to maintain a normal life. [4]

Dental caries is the most common chronic childhood disease, that is five to eight times more common than the second most common chronic disease in children, bronchial asthma. [5] It is quite known that dental caries not only negatively impacts children's development, emotional and social health and school performance, their families and the wider community, but may also affect their future development, career and academic achievement. [6–8]

In spite of the remarkable decrease of dental caries occurrence in developed countries over the last few decades, it still has a high

prevalence in developing countries and in certain segments of the population (children, adolescents and low socioeconomic statuses population). This in turn affects the QoL negatively by increasing the burden (e.g., cost), pain, lack of sleep and in rare cases can cause death of the affected individuals. Thus, to control the epidemic nature of the disease, more effort is required to be done by the public and the governments by creating and implementing the appropriate preventive and treatment strategies. [5,9,10]

That is why studies have been lately focusing on the impact of oral diseases on the individual's QoL and have been measuring this impact, since dentists should deal with patients as human beings and not merely with their teeth and gums. [4]

There are different ways to measure the individual's QoL. These measurements were developed over several times starting by ***Cohen and Jago in 1976,*** who developed the socio-dental indicators. ***In 1994 Slade*** and ***Spencer, Broder et al. in 2000*** and ***McGrath and Bedi in 2003*** developed different instruments for QoL measurement. [11]

Slade divided them into three categories, namely: **a) *Social Indicators***, which are used at the community level to measure the burden of oral diseases on the community, **b) *Global Self Rating Items***, which comprise a general question regarding the perspective of the individual towards his/her oral health and **c) *Multiple Item Questionnaires***, which are further divided into different categories consisting of specific questions regarding the individual's perspective toward his/her oral health. [4,12]

Review of Literature

The definition of health has evolved over time. From the biomedical perspective, it was defined as "A state characterized by anatomic, physiologic, and psychological integrity; ability to perform personally, in family, work and in community roles; ability to deal with physical, biologic, psychological and social stress." [12]

The idea of the health-related quality of life (HRQol) began to appear when the ***WHO*** defined health in ***1948*** as "A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." It was then revised to "The extent to which an individual or group is able to realize aspirations and satisfy needs, and to change or cope with the environment. Health is a resource for everyday life, not the objective of living; it is a positive concept, emphasizing social and personal resources, as well as physical capacities." [13]

Al Shamrany et al. emphasized that with the appearance of the concept of the 'silent revolution' driven by ***Ronald Inglehart***, in the second half of the 20th century, there was a shift in the values of the highly-industrialized societies from being materialistically driven, focusing only on economic stability and security to post-materialistic values focusing on self-determination and self-actualization. For instance, treating and maintaining the health of teeth and gums would be the concern of patients with materialistic values, while those with post materialistic ones would have a much broader perspective focusing on

the aesthetic appearance and its impact on their self-esteem and interaction with others. [4]

In addition, there was a replacement of the medical model of health that concentrated on "The body and mind dualism" where the body was regarded as being a machine isolated from the person, to the socio-environmental model of health that focused on the patient's subjective experience and interpretation of health and disease. [14]

This model has led to the appearance of the so-called 'Patient reported outcomes' (PROMs) concept, which can be defined as: "Reports coming directly from patients about how they feel or function in relation to a health condition and its therapy without interpretation by health care professionals or anyone else". This concept has the following merits:

1) Patients evaluate their health conditions subjectively and hence are the best ones to assess their HRQoL and Oral Health Related Quality of Life (OHRQoL).

2) Patients take part in the healthcare process.

3) Elimination of observer bias.

4) Taking patients' point of views into consideration increases public accountability. [14–16]