

## 5 Psychological aspects of Quality of life on strabismus

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### Abstract

**Objectives:** To determine Quality Of Life using two preformed questionnaire ASQE and CVFQ in Strabismic subjects compared with Controls, and to assess QOL according to Gender and Angle of Deviation.

**Methods:** This is a cross-sectional observational study conducted over 100 strabismic subject who visited tertiary eye hospital. Initially Subject underwent comprehensive eye examination to rule out any ocular pathology. Once subject was identified for the study, then subject and parent both were requested to fill up the questionnaire. All data were scored in Likert scale where 0 indicate worst and 1 indicate best.

**Result:** No statistically significant difference was found in overall QOL of strabismic subject and parent, compared with control and their parent. Clinical significant difference was found in some domains when assessed in gender.

### Introduction:

Quality of life (QOL) is emerging as an important outcome measure for interventions designed to improve health, wellbeing or both. Concept of QOL is increasingly recognized as an important measure in health care and can be defined as an individual's evaluation of his/her overall well-being & life experience, which is influenced by physical, psychological, social & environmental factor. QOL uses sequence focuses on different aspects of health & well being & proper use of medical technologies designed to improve people's QOL. Health & well being are very personal & private issues, the perception of individuals determine the acceptance, rejection or adjustment of technological devices.<sup>1</sup>

Strabismus is a clinical condition in which the eyes are not aligned properly. It is sometimes assumed that subject with strabismus may suffer from various psychological & emotional problems. A number of instruments are available for measuring HRQOL(Health Related Quality Of Life) in strabismus including but not limited to: CVFQ (Child Visual Function Questionnaire), 20-item Adult Strabismus Questionnaire (AS-20), Amblyopia & Strabismus Questionnaire (A&SQ), 25-Item National Eye Institute Visual Function Questionnaire (VFQ-25), Derriford Appearance Scale 24 (DAS-24).

Environmental factor like cultural and social impact, Personal factors, life style have effect on QOL.<sup>2</sup> The aim of the study is to determine the QOL of Strabismic subject in western part of India.

**Method** 100 Subjects with strabismus who visited at a tertiary eye hospital in Ahmedabad within the period of October 2014 to December 2015 were included. Subjects with any systemic & ocular pathology were excluded. Questions from two preformed questionnaire ASQE,<sup>3</sup> and

CVFQ<sup>4</sup> were used. ASQE is 5 domains questionnaire which includes Distance vision, Visual disorientation, Social contact & appearance, Diplopia & Fear of losing better eye. CVFQ is a vision specific QOL instrument designed for use in children, consist of 6 domains i.e. General Health, General Vision, Family impact, Personality, Competence and treatment. These questions were translated into Gujarati language following standard rules of translation and validated. After comprehensive eye examination these questionnaire were given to respective Subjects and also to their parents. Responses were scored in Likert scale where 0 indicate worst and 1 indicated best. 100 age matched subjects without any systemic and ocular pathology other than refractive error were taken as control. Scoring for control group was also similar as that of strabismic subjects.

**Data Analysis** All the data were entered in Microsoft Excel version 2007. A total score was computed by taking average of the subscale scores. Mean and Standard Deviation were computed for comparison of different dimension of data. For within group comparison between different dimensions paired T-Test was used. Unpaired T-Test was used for comparison between different groups. P value greater than or equal to 0.05 were considered as statistical significant.

**Result** The demographic data of 100 strabismic subjects & control are shown in table 1. There was no statistical significant difference in overall QOL between Subjects & control ( $p=0.20$ ). When analyzed separately or each domain Visual orientation, Diplopia had no statistical significant difference when compared with controls. There was significant statistical & clinical difference in domains of Social contact & cosmetic problem, Distance Estimation, Fear of losing better eye between subject & controls. Figure 1 shows overall QOL of strabismic subject from the perspective of parent of subject and control. Table 2 shows the individual domains of QOL of parent and controls. When Overall QOL was compared between Male & Female subject there was no clinically significant difference shown in figure 3. There was significant difference was found in Exotropic subject as compared to Esotropic ( $p=0.009$ ) Subject in which greater difference was found in the domain of Fear of losing better eye & Social contact and cosmetic problem.

**Discussion** HRQOL is an important tool for the assessment of Quality Of Life. It can assist in clinical treatment of a disease condition, enhance practical decision making. In the present study 5 domains were used to assess Quality Of Life. Using ASQE questionnaire subjects with strabismus were found to have no statistical significant difference in overall Quality Of Life when compared to control group. Whereas from the study by Hui Yung Lam, Psychosocial and functional implications of strabismus in adult patients using the AS-20 score, statistical difference were found in Strabismic subject as compared to that of the control group ( $p=0.035$ )<sup>2</sup>. The difference is may be due to different factors like age of the Subject, Social background, Economical status, Different Questionnaire were used.

In the present study Fear of losing better eye, Social contact & Cosmetic Problem domains were clinically as well as statistically affected. This may be due to appearance of squint which was making social contact difficult for the Subject. Appearance has enormous influence on psychological functioning & the eyes in particular play an important role in perceived attractiveness & communication. unsurprisingly, ocular misalignment has considerable impact on QOL.<sup>5</sup> Due to visible misalignment of the eye strabismic people were shown to have negative bias & disadvantage in their social life. This may lead to social phobia & depression which make them more disable in social life, family & work.

General health & treatment of subject were clinically as well as statistically affected compared with control. This statement agrees with the study done by Vision-related Quality Of Life & Emotional Impact in Children with Strabismus by Y Chai, Y Shao.<sup>6</sup>

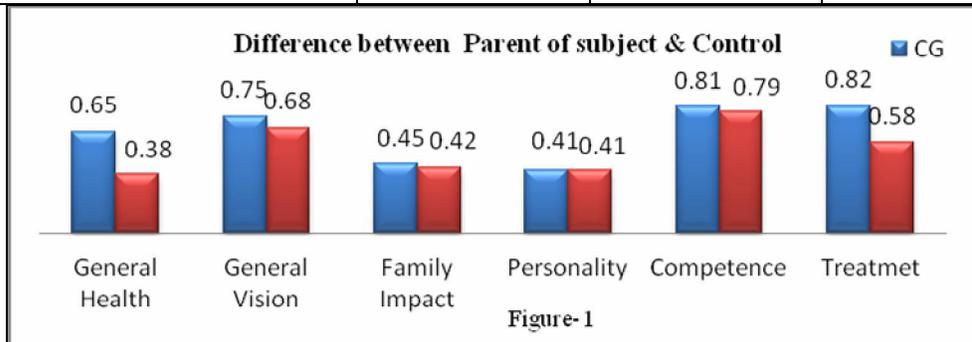
Appearance was one of the factors in strabismus which affected Quality Of Life. There was a significant difference in the QOL in Esotropic subjects compared with Exotropic Subject. This might be due to easy identification of the Exotropes than Esotropes by the general population. No clinical significant difference was found in the overall QOL between male & female using ASQE questionnaire. When assessed separately Social contact & cosmetic problem had greater clinical & statistical significant difference in QOL in male as compared to female. This may be due to recent change in the trend where males are becoming cosmetically more aware as compared to females.

It is found from the present study that now a strabismic subject may be easily accepted due to which no significant differences were found which affect Quality Of Life of a strabismic subject.

**Conclusion** In the present study no significant differences were found in overall QOL. Whereas clinical significant differences were found in domain like Social contact and cosmetic problems, General Health.

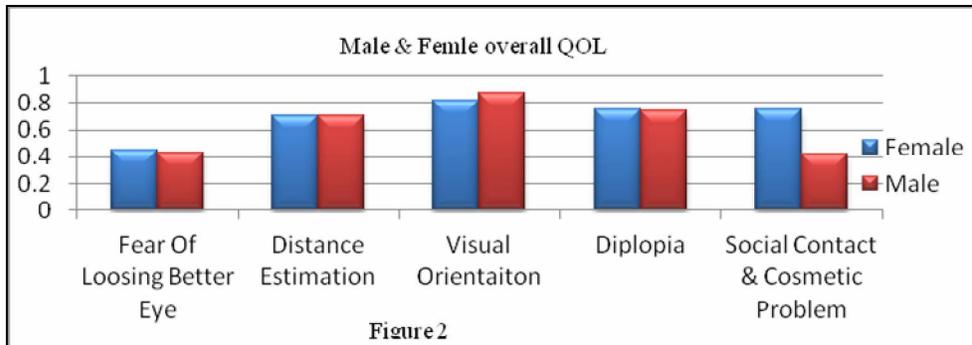
**Table 1**

Subject			
<b>Age</b>	Exo	Range:5-19	Mean:10.1(±3.56)
	Eso	Range:6-13	Mean:9.99(±3.58)
<b>Gender</b>	Male(42)	Exo:37	Eso:5
	Female(58)	Exo:51	Eso:7
Angle Of Deviation			
<b>Type of Deviation</b>	<b>Range</b>	<b>&lt;15PD</b>	<b>&gt;=15PD</b>
Eso	10-40	3	20
Exo	4-40	20	57



**Table 2**

Component of parent of subject & Control	P value
General health	0.005
General vision	0.94
Family Impact	0.25
Personality	0.30
Competence	0.42
Treatment	0.60



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