

The Impact of Contact Lenses on Quality of Life

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Abstract: The study was conducted to determine the socializing and psychological factors in contact lens users. Descriptive cross-sectional study was conducted from December 2021 to February 2022 in a study period of 3 months. This study was carried out at The University of Faisalabad and Madinah Teaching Hospital, Faisalabad. The sample size was of 150 patients in this study. Data was collected by convenient sampling technique. Inclusion standards were 15 to 30 years old, and both genders (male and female). In this study soft contact lens user wearing duration since one year of two types (daily wear and extended wear). Results:- Mean \pm Standard deviation is 24.59 ± 2.284 years. 86% and 84% were self-confidence and feel delighted. 92% were complimented while 90% were socially comfortable and 86% were working easily in their lives. Only 13% felt difficulty in sports and 18% had difficulty in wearing and removal of contact lenses. Contact lenses were affordable for 76% of subjects. Only 9.3% had eye allergies and 20% were going for routine eye exam for contact lenses. Contact Lens Quality of Life has good psychometric qualities. To summarize ocular and visual effects further composed of parameters that concluded as there were less than 30% of contact lens users with visual symptoms. It is concluded that subjects who were fitted with soft contact lenses, their quality of life was improved.

Keywords: Quality of Life, Contact Lens, Psychological Factors

1. Introduction

Quality of life (QoL) is a universal concept that has a variety of different political, philosophical and health-related definitions [1-2]. Health-related QoL (HRQoL) comprises of functional, physical, social and emotional health of a person [2-4]. A questionnaire developed by Pesudovs et al. named CLIQ (Contact Lens Impact on Quality of Life) targeted the adults who needed refractive correction and did not have any other ophthalmic problem. Its validity and reliability has also been established for the Contact Lens wearers not having any ocular disorder [5, 6]. The 28-item CLIQ questionnaire does not only include limitations and visual function in activities of daily life related to the impairment of visual function, but also the effect of Contacts lens on lives of patients from various

stand points [7-9]. Changes in the QoL of patients who do wear contact lenses have been reported with questionnaires that are conventionally validated. However, several among these questionnaires are limited to dry eye symptoms and one to psychological issues [10].

Subjects in their teenage are often fitted with elective contact lenses for the correction of refractive errors by eye care practitioner [11]. Common related problems are dryness and discomfort which may be linked with the soiling and lens surface dryness as well as signs of the ocular discomfort [12]. The patients who don't have obvious degraded lenses or ocular signs of irritation may also report relatable symptoms. Previous studies review does examine remarkable psychiatric and psychological circumstances and mechanisms which may lead toward or augment the incidence of these symptoms to occur and become a problem [13].

Optimal contact lens wear generally defined as being able

to have at least rather than when wearing glasses for at least six days a week while wearing contact lenses comfortably for at least 12 hours each day [14]. Children and adults can both benefit from wearing contact lenses, which can enhance general visual satisfaction, athletic ability, and self-perception [15]. Growing evidence also suggests that two contact lens-based treatments, soft multi-focal and overnight orthokeratology contact lenses, can slow a child's progression toward myopia [16]. It might be a significant public health achievement because significantly reducing one's overall amount of myopia may improve one's experience with vision in general and may lower one's risk of developing vision problems. Therefore, it is more crucial than ever to make sure that patients are successful contact lens wearers [17].

Patient's non-compliance is a key issue while considering the failures of contact lens and linked ocular issues. Education of patients is believed to have supreme importance for improvement of compliance, especially when the education process comprises of written as well as verbal commandment [18]. This study is aimed to notice how contact lens wearing is affecting the wearer's quality of life in aspects of ocular and visual functions, appearance and socioeconomically and psychologically. The purpose of the study was to evaluate the impact of contact lenses uses on quality of life and to determine the ocular manifestation and self-confidence in contact lens user. To determine the socializing and psychological factors in contact lens users.

2. Methodology

Descriptive cross-sectional study was conducted from December 2021 to February 2022 in a study period of 3 months. This study was carried out at The University of

Faisalabad and Madinah Teaching Hospital, Faisalabad. The sample size was of 150 patients in this study. Data was collected by convenient sampling technique. Inclusion standards were 15 to 30 years old, and both genders (male and female). In this study soft contact lens user wearing duration since one year of two types (daily wear and extended wear). In present study only included those who were using contact lenses for cosmetic use (desire to enhance or change eye colour) as well as only spherical refractive error. Patients with mild degree of astigmatism was also considered.

All ocular pathologies such as inflammation of disease of anterior segment, chronic allergies, keratoconus, systemic disease aggregative by contact lens wear, autoimmune diseases /immunocompromised were excluded from the study. Patients who were using other type of contact lens (RGP lens & Scleral) and they have irregular astigmatism was not included in this study. Data was collected through self-structured close ended questionnaire. Consent was taken from each subject. [19] The study was conducted on 150 contact lens users with no other visual problems. All subjects were had to undergo routine ophthalmological examination. Descriptive statistics was used to analyses the results. Data analysis procedure was done with SPSS software (version 23.0) and the results were $>5\%$ probability.

Ethical approval from the ethical committee of The University of Faisalabad has been taken before conducting this research. Both verbal consents were obtained after briefing sufficient information, respective objectives and design of the study, presumed adequate opportunity to consider all the options, all the will ensured understood this information, to volunteered subject matter and continued to provide information, exchanged information and asked questions were relevant to the study.

3. Results

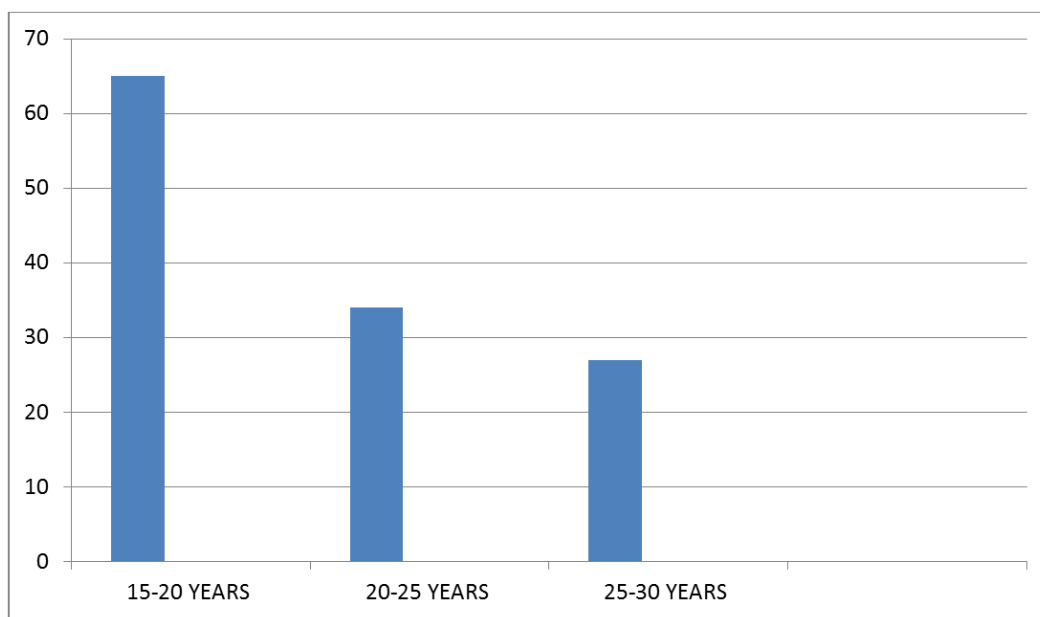


Figure 1. Age Distribution.

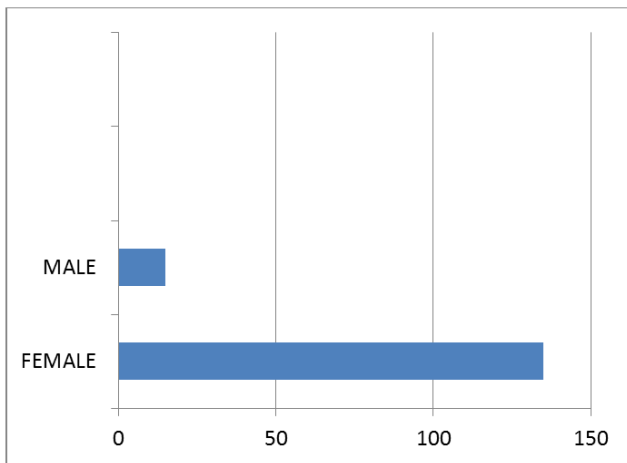


Figure 2. Gender Distribution.

This study was carried out at The University of Faisalabad and Madinah Teaching Hospital, Faisalabad. The sample size was of 150 patients in this study of aged 15-30 years. On evaluation and analysis of data the number of patients with varying age groups and percentage. Out of 150 subjects minimum age of participants is 20 and maximum age is 29. Mean \pm Standard deviation is 24.59 ± 2.284 years. Quality of life is assessed through, visual effects, appearance and socio-economic status (figure 1). There were 150 total subjects (N=150) in which 15 were males (10 %) and 135 were female (90 %). In the study there was greater number of

female contact lens user than males (Figure 2). There were 150 subjects in this study in all who used soft contact lenses wearing contact lenses duration 16 subjects had less than 6 hours while 83 subjects were for 6-8 hours and 51 subjects using more than 8 hours (Figure 3).

Data was collected through closed ended questionnaire. Questionnaires was consist of three main subheading:

- 1) Ocular and Visual effects.
- 2) Appearance.
- 3) Socioeconomic and psychological factors.

First component of questionnaire Ocular and Visual effects further composed of parameters that concluded as there were less than 30% of contact lens users with visual symptoms.

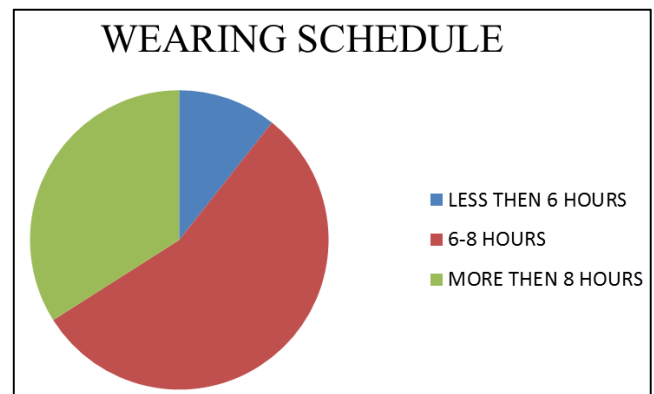


Figure 3. Wearing Schedule.

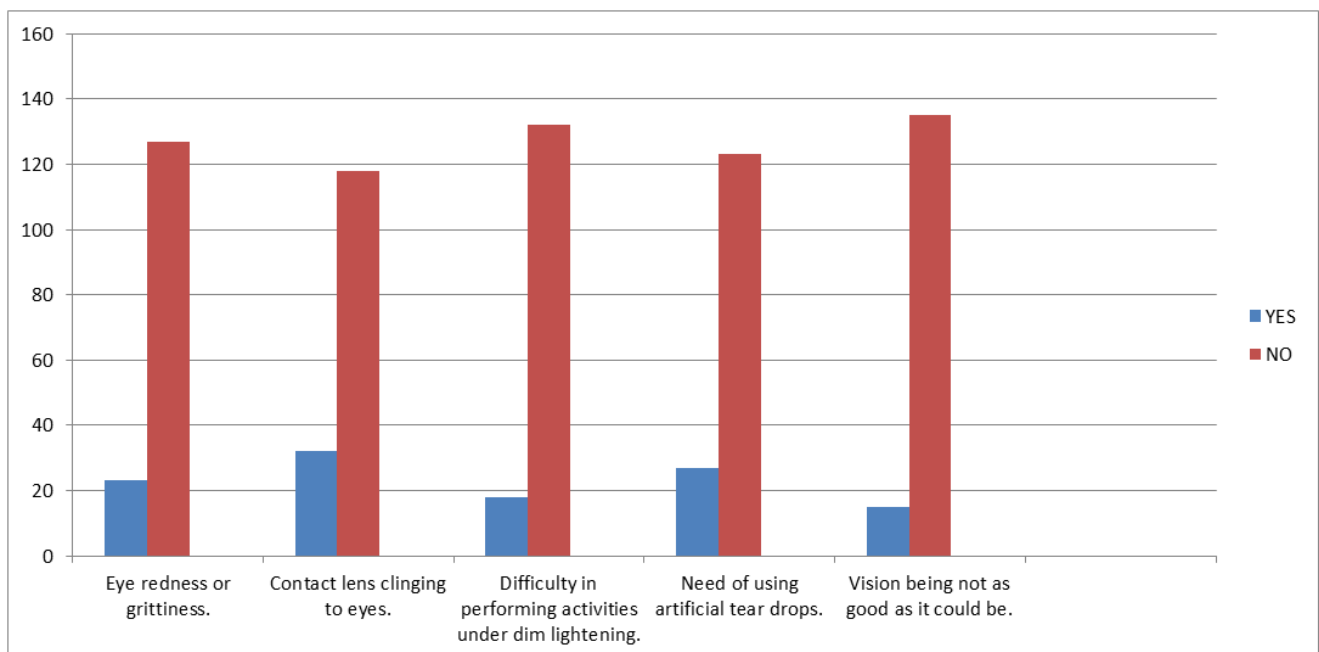


Figure 4. Contact lens impact on Ocular and Visual effects.

Only 15.3% had redness, 21.3% had problems of contact lens clinging, 12.0% faced difficulty in performing activities under dim light, 18.0% need artificial tears and only 10% had vision as not good as it could be.

Table 1-5. Contact lens impact on ocular and visual effects.

Table 1. Eye redness or grittiness.

Eye Redness or Grittiness	Frequency	Percent
Yes	23	15.3
No	127	84.7
Total	150	100.0

Table 2. Contact lens clinging to eye.

Contact Lens Clinging to Eyes	Frequency	Percent
Yes	32	21.3
No	118	78.7
Total	150	100.0

Table 3. Difficult contact lens clinging to eyes y inperforming activity under dim light.

Difficult Contact Lens Clinging to Eyes in Performing Activity Under DIM Light	Frequency	Percent
Yes	18	12.0
No	132	88.0
Total	150	100.0

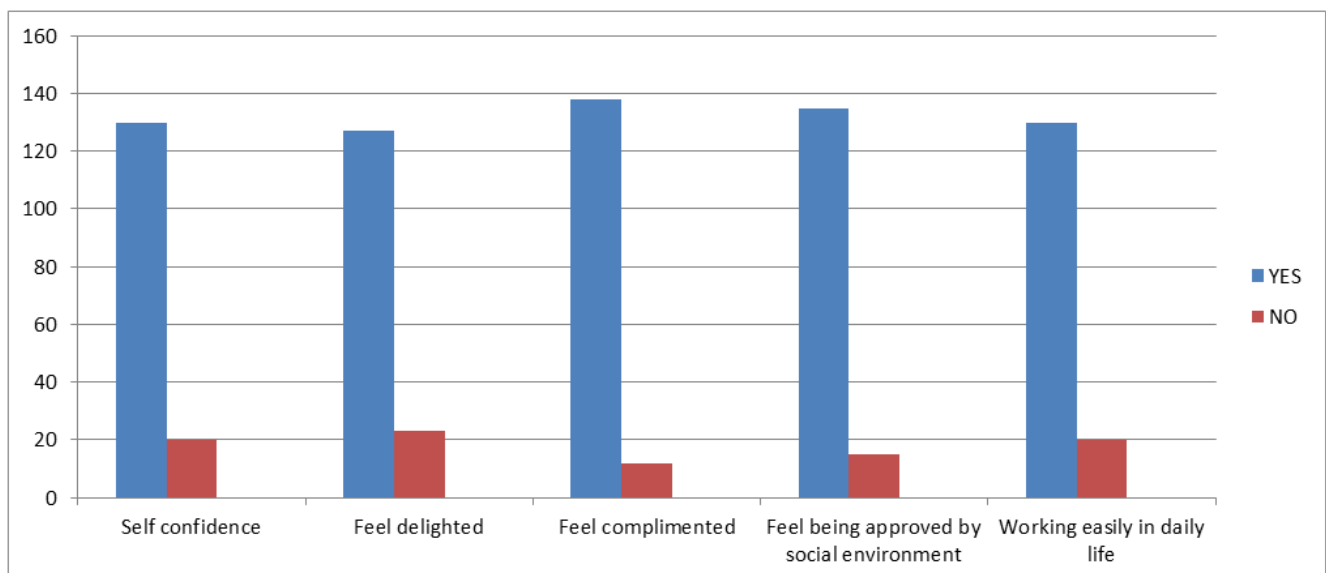
Table 4. Need for use of artificial drops.

Need for Use of Artificial Drops	Frequency	Percent
Yes	27	18.0
No	123	82.0
Total	150	100.0

Table 5. Vision being not as good as it could be.

Vision Being Not as Good as It Could Be	Frequency	Percent
Yes	15	10.0
No	135	90.0
Total	150	100.0

Second component of questionnaire Appearance that's highlights the quality of life which is further composed of parameters that concluded as more than 80% users showed good appearance effects while using contact lens.

**Figure 5.** Contact lens impact on appearance.

86% and 84% were self-confidence and feel delighted. 92% were complimented while 90% were socially comfortable and 86% were working easily in their lives.

Tables 6-10. Contact lens impact on appearance.

Table 6. Self confidence.

Self Confidence	Frequency	Percent
Yes	130	86.7
No	20	13.3
Total	150	100.0

Table 7. Feel delighted.

Feel Delighted	Frequency	Percent
Yes	127	84.7
No	23	15.3
Total	150	100.0

Table 8. Feel complimented.

Feel Complimented	Frequency	Percent
Yes	138	92.0
No	12	8.0
Total	150	100.0

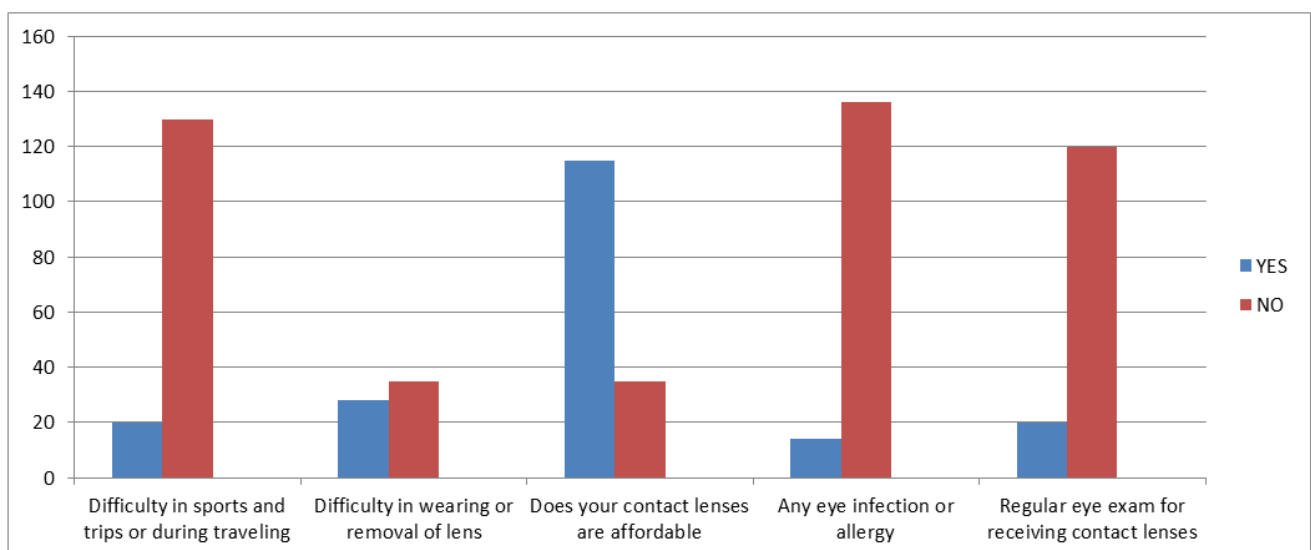
Table 9. Feel being approved by social environment.

Feel Being Approved by Social Environment	Frequency	Percent
Yes	135	90.0
No	15	10.0
Total	150	100.0

Table 10. Working easily in daily life.

Working Easily in Daily Life	Frequency	Percent
Yes	130	86.7
No	20	13.3
Total	150	100.0

Third component of questionnaire socioeconomic and psychological factors that's highlights the quality of life which is further composed of parameters that concluded associo-economic and psychological factors were also significant.

*Figure 6. Contact lens impact on socio-economic status.*

Only 13% felt difficulty in sports and 18% had difficulty in wearing and removal of contact lenses. Contact lenses were affordable for 76% of subjects. Only 9.3% had eye allergies and 20% were going for routine eye exam for contact lenses.

Tables 11-15. Contact lens impact on socio-economic status.

Table 11. Difficulty in sports and trips or during traveling.

DIFFICULTY IN SPORTS AND TRIPS OR DURING TRAVELING	Frequency	Percent
YES	20	13.3
NO	130	86.7
Total	150	100.0

Table 12. Difficulty in wearing or removal of lens.

DIFFICULTY IN WEARING OR REMOVAL OF LENS	Frequency	Percent
YES	28	18.7
NO	122	81.3
Total	150	100.0

Table 13. Does your contact lenses are affordable.

DOES YOUR CONTACT LENSES ARE AFFORDABLE	Frequency	Percent
YES	115	76.7
NO	35	23.3
Total	150	100.0

Table 14. Any eye infection or allergy.

ANY EYE INFECTION OR ALLERGY	Frequency	Percent
YES	14	9.3
NO	136	90.7
Total	150	100.0

Table 15. Regular eye exam for receiving contact lenses.

REGULAR EYE EXAM FOR RECEIVING CONTACT LENSES	Frequency	Percent
YES	30	20.0
NO	120	80.0
Total	150	100.0

All these results summarized to be a good impact of contact lens with low percentage of people with visual symptoms, high percentage of people with good appearance and less percentage of people who are affected economically and psychologically. To summarize those subjects fitted with soft contact lenses, their vision-related quality of life improves.

The study was to look into the advantages of wearing contact lenses for individuals to see if they improve quality of life as much as they advertise. Contact lens wear has significant quality-of-life benefits over non-CL wear, and it improves the efficacy of daily activities. Increase the confidence of the people they admired. Contact lens user acknowledged that they feel more self-assured, delighted, and appreciated by their interactions with other people, that they work more comfortably on a continuous basis, and so that they socialize more freely.

4. Discussion

This study was conducted from December 2021 to February 2022 in a study period of 3 months. The sample size was of 150 patients in this study of aged 15-30 years. Based on self-reported data from the CLIQ Questionnaire, discovered statistical differences between CLs users in the impact of Quality of life in the current study. There were 150

total subjects (N=150) in which 15 were males (10 %) and 135 were female (90 %). A study was conducted in 2019 found that female patients were more likely to wear contact lenses than male patients. This relates to the current research findings [19].

There were 150 subjects in this study in all who used soft contact lenses wearing contact lens 16 subjects less than 6 hours while 83 subjects was for 6-8 hours and 51 subjects using more than 8 hours. According to the majority of this study's findings, a study in 2022 in which contact lens wearers used their lenses for more than 8 hours each day [20].

Several investigations have illustrated that youngsters can wear and take care of contact lenses, however it is uncertain whether the advantages of contact lens wear exceed the hazards. With the help of the Pediatric Refractive Error Profile, conducted a study in 2010 compares the advantages of vision-related quality of life for kids who were randomly assigned to wear contacts or glasses for three years. Younger myopes who are fitted with contact lenses have a higher quality of life connected to their vision than those who wear glasses. The benefits will be greatest for youngsters, adolescents who engage in extracurricular activities, students who are driven to wear contacts, and young ones who dislike how they look wearing glasses. This study's findings are related to the current study's findings [21-22].

In this study first component of questionnaire Ocular and

Visual effects further composed of parameters that concluded as there were less than 30% of contact lens users with visual symptoms. Only 15.3% had redness, 21.3% had problems of contact lens clinging, 12.0% faced difficulty in performing activities under dim light, 18.0% need artificial tears and only 10% had vision as not good as it could be. Vidal-Rohr M et al., [23] study results correlates with present study which investigate as initially suggested, strengthening a soft contact lens' physical surface characteristics raises wearer comfort as experienced by the wearer, which should lead to a decrease in contact lens discontinuation.

Second component of questionnaire was appearance that's highlights the quality of life which is further composed of parameters that concluded as more than 80% users showed good appearance effects while using contact lens. 86% and 84% were self-confidence and feel delighted. 92% were complimented while 90% were socially comfortable and 86% were working easily in their lives. A study was analyzed better appearance with contact lens users [24]. Another study stated that utilizing cosmetic contact lenses improves attractiveness. Although using contact lenses had no effect on how 8 to 11-year-old myopic children perceive themselves overall, they are more likely to perceive themselves positively in terms of their physical attractiveness, athletic prowess, and social acceptance. This justify the present study results [25].

Third component of questionnaire socioeconomic and psychological factors that's highlights the quality of life which is further composed of parameters that concluded as socio-economic and psychological factors were also significant. Only 13% felt difficulty in sports and 18% had difficulty in wearing and removal of contact lenses. Contact lenses were affordable for 76% of subjects. Only 9.3% had eye allergies and 20% were going for routine eye exam for contact lenses. A study conducted a study which results correlates' with the present study findings [26].

The study was to look into the advantages of wearing contact lenses for individuals to see if they improve quality of life as much as they advertise. Either the Contact lens wear has significant quality-of-life benefits over non-CL wear, or it improves the efficacy of daily activities. Either increases the confidence of the people they admired.

5. Conclusion

Contact Lens Quality of Life has good psychometric qualities. To summarize ocular and visual effects further composed of parameters that concluded as there were less than 30% of contact lens users with visual symptoms. Only 15.3% had redness, 21.3% had problems of contact lens clinging, 12.0% faced difficulty in performing activities under dim light, 18.0% need artificial tears and only 10% had vision as not good as it could be. To conclude the quality of life which is further composed of parameters that concluded as more than 80% users showed good appearance effects while using contact lens. 86% and 84% were self-confidence and feel delighted. 92% were complimented while 90% were

socially comfortable and 86% were working easily in their lives. Socioeconomic and psychological factors that concluded were also significant. Only 13% felt difficulty in sports and 18% had difficulty in wearing and removal of contact lenses. Contact lenses were affordable for 76% of subjects. Only 9.3% had eye allergies and 20% were going for routine eye exam for contact lenses. It is concluded that subjects who were fitted with soft contact lenses, their quality of life was improved.

6. Limitations

Patient disinterest was a study limitation, along with study was restricted to people aged 20 to 35 years. It has not been followed up on to check a comprehensive detailed eye examination. Only outdoor patient encounters at MTH and University were included in the study. The present study's student limitations also included uncooperative patients, a smaller sample size, and a shorter duration.

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