

Journal of
Nursing Science

Keywords

Visually Impaired Students,
Adaptation,
Quality of Life,
Nurse Role

Received: June 17 2015

Revised: June 26, 2015

Accepted: June 27, 2015

Effect of Vision Impairment on Quality of Life of Students in El-Nour Institute at Shebin El-Kom

Amal A. Hussein¹, Nahla A. Safan¹, Nagawa A. Zein El-Dein²,
Hanaa El-Safi¹

¹Community Health Nursing, Faculty of Nursing, Menoufia University, Shebin El Kom, Egypt

²Pediatric Nursing, Faculty of Nursing, Menoufia University, Shebin El Kom, Egypt

Email address

nagawa_ahmedzin@ymail.com (N. A. Z. El-Dein)

Citation

Amal A. Hussein, Nahla A. Safan, Nagawa A. Zein El-Dein, Hanaa El-Safi. Effect of Vision Impairment on Quality of Life of Students in El-Nour Institute at Shebin El-Kom. *Journal of Nursing Science*. Vol. 1, No. 3, 2015, pp. 34-43.

Abstract

Background: Vision impairment and blindness are significant community problem that affected their quality of life. The aim of the present study was conducted to examine the effects of vision impairment on the quality of life of visually impaired students. **Design:** a descriptive analytic design was utilized. **Sample:** Purposive sample includes all visually impaired students at El-Nour institute in Shebin El-Kom (72 students) was included in this study. Tools included (1) structured interviewing questionnaire developed by the researchers (2) Quality of life Likert scale, VFQ-25 is a constructed vision specific QOL questionnaire and adaptation on blind life were developed to evaluate the effect of visual disability on health related quality of life (HRQL). **Results:** more than half of the studied sample (59.7%) has moderate quality of life score compare to 28% of students have high quality of life score and 12.3% of students have low quality of life score. The emotional and social domain was the most affected dimension in the quality of life. The most related factors that affecting students quality of life were age, sex, ocular involvement, health services provided, coping methods, sleeping pattern, parents education and knowledge. **Conclusion:** Vision impairment mainly affects quality of life of students which interfere with emotional state, social functions, and enjoying life. **Recommendation:** It is important to conduct counseling to their parents about emotional, physical and psychological needs, provide early preventive and rehabilitative efforts to prevent longitudinal deterioration and improve their quality of life.

1. Introduction

Visual impairment (VI) in childhood has a lifelong implication for both the child and their family. It affects the child's development, education, and the care given by families and professionals. It also shapes the adult, affecting employment and social prospect. Vision impairment occurs when some people loss the sense of seeing since birth or before the age of five years. They can not see any thing forever and they must depend on other senses and other assistive methods to cope with normal life (1) The terms "partially sighted", legally blind, low vision and "totally blind" are used to describe students with different levels of visual impairments. Increasing number of children with visual impairments caused by different etiologies. Visual field loss (VFL) may occur after lesion to the eye e.g., glaucoma related macula degeneration to the optic nerve, and/ or optic neuropathy. Also, it may occur after trauma or after lesions of the post chiasmatic pathway, as well as after stroke, tumor or trauma. Children with visual impairment have impact on

their family and friends relationships as they grow up. In addition, visual impairment leads to impairments in activities of daily life such as reading, traveling, and / or over all orientation. Furthermore, it may have severed impact on the child well-being and quality of their life (2) Decreased visual acuity does not have lead to loss of independence. Often simple changes in the home and school combined with the use of low vision or blind aids and proper organization can allow the person with visual impairment to live as they had been used to living and accustomed adaptation in his/ her life (3).

The concept of quality of life (QOL) has been developed over many decades and applied to a wide range of target group and whole. There are two distinct approaches to study the quality of life, the first is the health approach and the second is the social indicator approach. The main domains of Quality of life are the same for people with or without disabilities. QOL of visually impaired people influences can be seen in legislations policies and programs that aim to improve their lives, personal satisfactions, success, community membership and participation. Also, it helps in identifying the most appropriate choice among alternatives that involves trade-off between adverse effect of vision impairment and rehabilitations need of the students (4).

Nurses should support students with vision impairment to live and work in the community. The disability nurses strive to offer sensitively designed person centered holistic care. It is the predominant role of the nurse to enable each student to choose the life which he / she wishes and to enables them to attain it. So the disability nurses must have a different skill that equipped them to offer support and to communicate empathically in meaningful life with each visually impaired student. Also, cooperates with their teachers and their families which help in prevention of social, physical, and psychological problem to those children as early as possible (5).

1.1. Theoretical Framework

The concept of quality of life is one of the basic concepts in the life especially in psychology. It has been developed over many decades and applied to a wide range of target groups and whole populations (6). The model includes physical, spiritual, intellectual, social, emotional and occupational components that are inter winned to move people to work common goals to achieving optimum QOL (7).

1.2. Operational Definition

Quality of life is "The degree to which a person enjoys the important possibilities of his or her life". The Quality of Life Model is based on the categories "being", " belonging", and "becoming", respectively who one is, how one is not connected to one's environment, and whether one achieves one's personal goals, hopes, and aspirations (8).

The definition of vision impairment by the Centers for Disease Control and Prevention (CDC) says a visually impaired person's eyesight cannot be corrected to a "normal level" (9).

1.3. Aim of the Study

Examine the effect of vision impairment on the quality of life of students in El-Nour Institute at Shebin El-Kom.

1.4. Research Questions

1-Is there a relationship between vision impairment and quality of life of students in El-Nour Institute at Shebin El-Kom?

2-What are the factors that affecting visually impaired student's quality of life

2. Subjects and Method

2.1. Research Design

Descriptive analytic design was used in carrying out this study.

2.2. Setting

The study was conducted in El-Nour Institute at Shebin El-Kom city. It is boarding governmental school for male and female students with vision impairment. It consists of one building which contains two floors, one for boys and other for girls.

2.3. Subjects

All students enrolled in the previously mentioned institute (purposive sample) were included in the study. They were 72 students; 42 male and 30 female. Their age ranged from 6 to 18 years in the three levels of education, primary education (37) students, preparatory education (16) students and secondary education (19) students. Pilot study was excluded from the total number of students.

2.4. Tools for Data Collection

Three tools were used to collect the necessary data for this study.

Tool 1:- Structured Interview Questionnaire

It was developed by the researcher to collect data about vision impairment students. It was divided into three parts:

Part 1: Include biomedical data of the students. as age, sex, residence, birth order, level of education and family size. history of disability (onset, causes, history of affection of other family member, regular follow up, multiple impairment and using of assistance method.

Part 2: School supporting system which includes food services, presence of appropriate educational methods such as Brill method, typewriter, computers, play, recreations methods. These questions responses were by yes /or no.

Tool 2: Quality of Life Likert Scale developed by National Eye Institute Visual Function Questionnaire (NEI-VFQ)- 25 (10) :

VFQ-25 is a constructed vision specific QOL questionnaire developed to evaluate the effect of visual disability on health

related quality of life (HRQL). It was developed by RAND corporation and funded by The National Eye Institute (NEI) in the mid of 1990. The NEI VFQ-25 is a shorter version of NEI VFQ-52 to become useful in clinical practice and improve the quality of data. It was designed to be used for adults. And it was modified by the researcher to be used with children. The VFQ-25 consists of a set of 25 vision targeted questions representing 5 vision related constructs. It consisted of 60 statements which are translated into Arabic language to facilitate understanding and minimize misconception. The VFQ -25 generate the following five subscales to measure student's quality of life.

- Physical state:

This part contained twelve statements to assess the student's ability to perform activities of daily living. Scoring System: was classified as independent, partially dependent, and completely dependent. Each item is converted from 0 to 100 score. So, the higher score indicate high quality of life for students and scored as Independent (25-36) (65-100%), partially dependent (13-24) (35-64%) and completely dependent (1-12) (0-34%).

- Mental and emotional state:

It included ten statements to assess the student's mental and emotional state such as worrying about the future, mood changes from happiness to sadness, feeling of pressure on others, feeling of impressments, feeling of hesitated, crying, dealing with others by tensions and feeling lonely. The subscale coded and scored as follows; Never (20-30) (65-100%), sometimes (10-19) (35-64%) and often (1-9) (0-34%).

- Play and recreation:

It included eleven statements that reflect the student's play and recreation activities which the vision impairment prevent him from playing sports, special hobby, listening to radio or TV, family picnic, participating with other in social and sporting activity. The subscale coded and scored as follows; not difficult (22-33) (65-100%), sometimes difficult (11-21) (35-64%) yes difficult (1-10) (0-34%).

- Social state:

It included sixteen statements to assess social problems of the students such as problems in dealing with family, teachers, friends, neighbors, visiting relatives, celebrations, knowing others from voice, staying alone, problems with transport, helping others, family school visits, problem with money needs, calling family, and staying in school hostel. The subscale coded and scored as follows; not difficult (32-48) (65-100%), sometimes difficult (16-31) (35-64%) yes difficult (1-16) (0-34%).

- Degree of satisfaction:

It included eleven statements which reflect general satisfaction of student's. The subscale coded and scored as follows; satisfied (22-33) (65-100%), partially satisfied (11-21) (35-64%) not satisfied (1-10) (0-34%).

Global score for total quality of life classified as 1- low quality of life (1-60) (< 35%), moderate quality of life (61-120) (>35-65%) and high quality of life (121-180) (>65-100%)

Tool 3: Parent's and child adaptation questionnaire

developed by the researcher Including knowledge about vision impairment, abilities of parent and child to adapt independency for daily life activities. It included types of vision problems, causes, effects of visual impairment on family and child adaptation, needs of their children, needs for follow up, social, emotional relation with their children and the type of help they provide for their children to made suitable home environment. The scale graded by (1-3) and classified as complete incomplete or wrong answer

3. Method

3.1. Approval to Conduct the Study

Formal letters were issued from the Faculty of Nursing, Menoufia University to obtain an official approval to carry out the study at El. Nour Institute in Shebin El-Kom. The letters explain the aim, tools of the data collection and time of the study

3.2. Human Rights and Ethical Consideration

The purpose of the study was explained to each participant in the sample. The researcher approached each participant. Each participant gave written consent to participate in the present study. Before inclusion in the study the participant was informed that participation is voluntary and they can withdraw at any time, and total confidentiality of the obtained information will be maintained. Ethical rights was guaranteed by ethical committee of the faculty committee.

3.3. Pilot Study

The pilot study was conducted on a sample of 10% of students to test the feasibility, clarity, consistency of the study and applicability of the tool, and to estimate the appropriate time needed to collect the data. The pilot study subjects were excluded from the main sample. According to the pilot study, tool modifications were done.

3.4. Validity

Content Validity of the tools was ascertained. The content of the interview was submitted to a panel of 3 of nursing experts one from Nursing psychology, one from nursing administration and one from pediatric Nursing. Modification of the tools was done according to the panel's judgment on the clarity of the sentences, the appropriateness of its content, the sequence of its items, and the accuracy of scoring and recording of the items in accordance with (Polit et al, 2001) (11).

3.5. Reliability

A test –re-test reliability was done to assess the consistency of the tool to measure items reliability. The questionnaire was given with a group of 10 visually impaired subjects and the answers were analyzed. The same questionnaire was given to the same group after 2 weeks and the answers were analyzed and computed to the results of the first test. The reliability was

computed. It was ($r = .79$).

3.6. Procedure

At the beginning, it was necessary for the researcher to introduce herself and explain the purpose of the study to visually impaired students and their families. The study began at November 2011 and ended at March 2012 (5 month).

1-An interview with the mothers or fathers was held to collect biosocial data, medical conditions and use of adaptation methods of their children for their visual impairment.

2-The students were interviewed to elicit data about their quality of life and adaptation methods for their impairment. The used time ranged from 30 to 45 minutes according to their age and level of the education.

3.7. Statistical Analysis

Data were statistically analyzed using SPSS statistical package version 16 on IBM compatible computer. Statistical presentation and analysis of the present study was conducted, using number and percent, mean & standard deviation, t-test, and Pearson's correlation test. Test of significance was used and level of significance determined at 0.05 and 0.001 for highly significance

4. Results

Table (1) It clarified that age of visually impaired students was ranged from 6- 12 and >12-18 years were nearly equally distributed (49.2%) and (50.8%). In addition, more than half of the students (58.5%) were boys.

Figure (1) showed that the most common causes for visual impairment were congenital factor which constitute about half of the sample (44.6 %). while low vision impairment constitute (13.8%) and retinal separation constitute (4.6%).

Figure (2) figure 2 revealed that the majority of the visually impaired students (80%) had binocular vision impairment.

Figure (3) revealed that the majority of visually impaired students (80%) use helping aids to cope with life.

Table (2) showed that majority of parents (70.7%, 58.5%, 60%) had incomplete knowledge about types of vision impairment. More than half of parent (55.4%) taking their children with them while visiting relatives.

Figure (4) showed that most of parents (70.8%) had incomplete knowledge about causes of vision impairment.

Figure (6): showed that more than half of the studied sample (59.7%) has moderate quality of life score compare to 28% of students have high quality of life score and 12.3% of students have low quality of life score.

Table (3) Showed that there is a positive relation between student's sex and level of education with physical, emotional and enjoying states ($P < 0.01$). However there is no relation between levels of education on other quality of life.

Table (4) it clarified that there were statistical significance differences between cause of vision impairment and satisfaction total score ($p < 0.05$). However there is no

significance difference between causes of vision impairment and other dimension of quality of life.

Table (5): clarified that improved quality of life of visual impairment students was highly statistical significance ($P < 0.01$) with presence of health services at school for their physical state, while, they were unsatisfied from appropriate methods for education ($P < 0.05$).

Table (6) showed a positive correlation between child adaptation and the most variable of quality of life except for bathing and therapeutic competences which represents child maladaptation in those aspects.

Table (1). Distribution of visually impaired students by their Socio-demographic characteristics.

Variables	Students Socio demographic data N = 65	
	No.	%
Age		
6--	32	49.2
12 – 18 years	33	50.8
Gender		
boys	38	58.5
girls	27	41.5
Education level		
Primary	34	52.3
Preparatory	14	21.5
Secondary	17	26.2
Father's education		
- Illiterate	12	20.2
- Primary education	14	23.8
- Secondary education	27	45.8
- University education	6	10.2
Father's occupation		
- Employee	28	47.5
- Specialized worker	15	25.4
- Not working	1	1.7
- Farmer	15	25.4
Mother's education		
- Illiterate	28	43.8
- Primary education	5	7.9
-Basic .education	3	4.7
- Secondary education	27	42.2
- University education	1	1.6
Mother's occupation		
Working	21	32.8
House wife	43	67.2
Father and mother are relatives		
-yes	25	38.46
-no	40	61.54

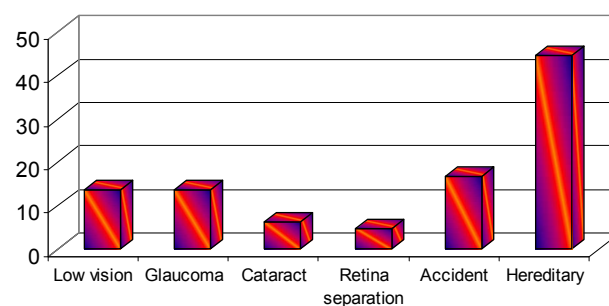


Figure (1). Distribution of visually impaired students according to their causes of vision impairment.

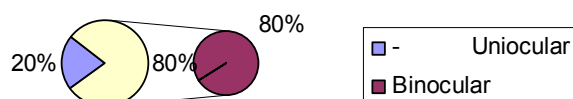


Figure (2). Distribution of visually impaired students according to their ocular involvement.

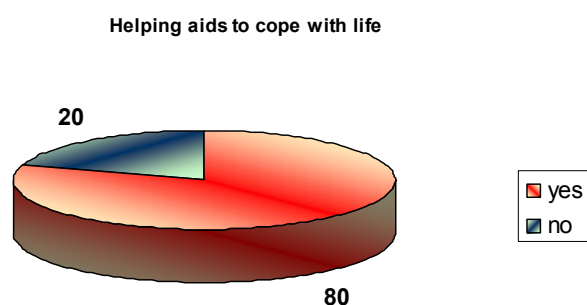


Figure (3). Distribution of visually impaired students according to using of helping aids to cope with life.

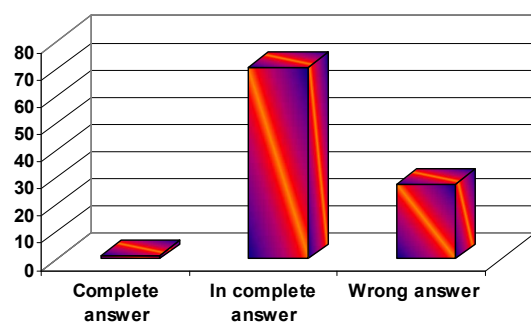


Figure (4). Distribution of parent's knowledge about causes of vision impairment.

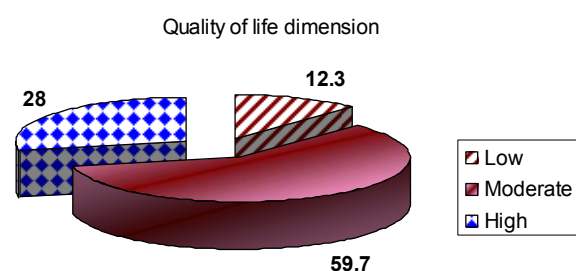


Figure (5). Distribution of global quality of life score of visually impaired students.

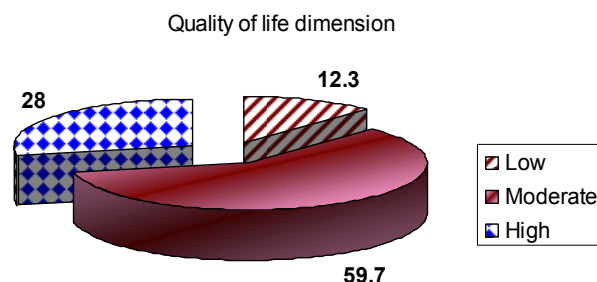


Figure (6). Distribution of global quality of life score of visually impaired students.

Table (2). Parent's knowledge about vision impairment and their adaptation.

Variables	N=65	
	No.	%
Types of vision impairment.		
- Complete answer	1	1.5
- In complete answer	46	70.8
- Wrong answer	18	27.7
Effect of VI on student's health.		
- Complete answer	23	35.4
- In complete answer	38	58.5
- Wrong answer	4	6.1
Regular follow up for eye.		
yes	22	33.8
sometimes	39	60.0
no	4	6.2
Taking child with you on visiting relatives.		
Yes	28	43.1
Sometimes	36	55.4
No	1	1.5
Providing healthy food.		
Yes	11	17.2
Sometimes	51	79.7
- No	3	3.1
Preparing suitable environment for child life.		
- Complete answer	24	36.9
- In complete answer	36	55.4
- wrong answer	5	7.7

Table (3). Relation between total mean score of quality of life of visually impaired students with their levels of education and sex.

Quality of life Total Score	Levels of education						P- value	Sex of students				T. Test p- value
	Preparatory		Primary		Secondary			Boys		Girls		
	No.	%	No.	%	No.	%		No	%	No	%	
	34	53.3	14	21.5	17	26.2		38	58.5	27	41.5	
	± SD \bar{X}		±SD \bar{X}		± SD \bar{X}			± SD \bar{X}		± SD \bar{X}		
Physical state	1.98±0.26		2.37±0.1		2.37±0.13		< 0.01	2.16±0.29		2.17±0.29		> 0.05
Emotional state	1.75±0.31		1.75±0.31		1.58±0.43		< 0.05	1.79±0.35		1.58±0.30		< 0.05
Enjoying life	2.19±0.24		2.41±0.23		2.19±0.35		< 0.05	2.27±0.27		2.19±0.29		< 0.05
Social state	2.17±0.18		2.31±0.22		2.24±0.26		> 0.05	2.25±0.21		2.18±0.22		> 0.05
Satisfaction	2.28±0.19		2.42±0.24		2.29±0.22		> 0.05	2.36±0.19		2.24±0.23		> 0.05

Table (4). *Quality of life of visually impaired students regarding to its causes.*

Quality of life dimensions	Causes of vision impairment	No.	%	$\pm SD \bar{X}$	T. Test	p-value
Physical state total score	Low vision	9	13.8	2.17 \pm 0.17	1.86	> 0.05
	Glaucoma	9	13.8	2.16 \pm 0.28		
	Cataract	4	6.2	2.33 \pm 0.15		
	Retina separation	3	4.6	1.94 \pm 0.34		
	Accident	11	16.9	2.31 \pm 0.32		
	Congenital	29	44.6	2.11 \pm 0.31		
Emotional state total score	Low vision	9	13.8	1.78 \pm 0.36	938	> 0.05
	Glaucoma	9	13.8	1.72 \pm 0.42		
	Cataract	4	6.2	1.88 \pm 0.29		
	Retina separation	3	4.6	1.43 \pm 0.42		
	Accident	11	16.9	1.67 \pm 0.45		
	Congenital	29	44.6	1.69 \pm 0.27		
Enjoying life total score	Low vision	9	13.8	2.13 \pm 0.36	4.75	> 0.05
	Glaucoma	9	13.8	2.23 \pm 0.22		
	Cataract	4	6.2	2.20 \pm 0.33		
	Retina separation	3	4.6	1.88 \pm 0.21		
	Accident	11	16.9	2.31 \pm 0.32		
	Congenital	29	44.6	2.29 \pm 0.24		
Social state total score	Low vision	9	13.8	2.32 \pm 0.18	4.42	> 0.05
	Glaucoma	9	13.8	2.15 \pm 0.24		
	Cataract	4	6.2	2.38 \pm 0.18		
	Retina separation	3	4.6	2.00 \pm 0.06		
	Accident	11	16.9	2.29 \pm 0.27		
	Congenital	29	44.6	2.18 \pm 0.18		
Satisfaction total score	Low vision	9	13.8	2.31 \pm 0.16	12.16	<0.05
	Glaucoma	9	13.8	2.18 \pm 0.14		
	Cataract	4	6.2	2.32 \pm 0.24		
	Retina separation	3	4.6	2.12 \pm 0.28		
	Accident	11	16.9	2.41 \pm 0.26		
	Congenital	29	44.6	2.34 \pm 0.21		

Table (5). *Relationship between the Mean and stander deviation for provided health services and presence of enough educational methods with quality of life .*

quality of life dimension	Presence of school health service				P. Value	enough educational methods				T. Test p- value
	Yes		No			Yes		No		
	N o.	%	N o.	%		N o.	%	N o.	%	
	21	32.3	44	67.7		8	12.3	57	87.7	
	±SD	\bar{X}	±SD	\bar{X}		\bar{X}	±SD	\bar{X}	±SD	
Physical state total score	2.01± 0.36		2.24± 0.22		< 0.01	2.09 ± 0.45		2.18 ± 0.27		> 0.05
Emotional state total score	1.79 ± 0.23		1.66± 0.38		> 0.05	1.66 ± 0.25		1.71 ± 0.36		> 0.05
Enjoying life total score	2.26±0.30		2.23±0.27		> 0.05	2.38 ± 0.26		2.22 ± 0.28		> 0.05
Social state total score	2.17± 0.20		2.24± 0.22		> 0.05	2.20 ± 0.26		2.22 ± 0.21		> 0.05
Satisfaction total score	2.32± 0.19		2.31± 0.23		> 0.05	2.36 ± 0.19		2.30 ± 0.22		<0.05

Table (6). Correlation between adaptations of visually impaired students with their quality of life.

Correlation variables	satisfaction total score QOL	social state quality of life	enjoying life	quality of life emotional state	quality of life total physical state	family knowledge about child condition	adaptation in therapeutic competences	child adaptation in moving	child adaptation in wearing clothes
child adaptation in eating	-.602(**)	-.697(**)	-.387(**)	-.415(**)	-.725(**)	-.388(**)	.046	-.696(**)	-.533(**)
P- value	.000	.000	.001	.001	.000	.001	.717	.000	.000
child adaptation in bathing	.139	.130	-.211	.339(**)	.054	-.277(*)	-.019	.052	.335(**)
P- value	.271	.301	.091	.006	.670	.026	.879	.680	.006
child adaptation in wearing clothes	.470(**)	.438(**)	-.161	.501(**)	.490(**)	.030	-.077	.573(**)	1
P- value	.000	.000	.199	.000	.000	.810	.545	.000	
child adaptation in moving	.623(**)	.515(**)	.180	.360(**)	.757(**)	.407(**)	-.023	1	.573(**)
P- value	.000	.000	.150	.003	.000	.001	.859		.000
adaptation in therapeutic competences	-.007	-.025	-.126	.059	-.034	.064	1	-.023	-.077
P- value	.954	.846	.316	.642	.786	.614		.859	.545
family knowledge about child condition	.147	.183	.287(*)	-.047	.321(**)	1	.064	.407(**)	.030
P- value	.244	.145	.020	.710	.009		.614	.001	.810
quality of life total physical state	.812(**)	.772(**)	.397(**)	.581(**)	1	.321(**)	-.034	.757(**)	.490(**)

5. Discussion

Children who are visually impaired can do virtually all the activities and tasks that sighted children. They also have common sense like normal children. But they don't have special sign for vision which affect the physical, social, and emotional development as well as certain behavior related to feeling of disability such as hating self, lack of self esteem, worry and fear from the future Ysseldyke,⁽¹²⁾

The present study showed that the percentage of vision Impairment of boys exceeded that of girls and there were statistical significance differences in the mean score of physical and emotional dimension of quality of life. This result is consistent with the study of Wong et al⁽¹³⁾, which indicated that the prevalence rate of vision impairment condition among boys is higher than in girls. This could be related to traditions which impose that visually impaired girls should stay at home not institutionalized or due to for fear of sexual assault or from social stigma, and don't send them to school. Otherwise visually impaired boys could be sent for the school where they trained for certain education or occupations purposes.

There is significance difference between age of visually impaired students and physical dimension mean score. These results come in agreement with Rasmeet and Ahalaya,⁽¹⁴⁾ who reported that advanced age may be associated with decrease in the degree of dependency on others. This could be related to accumulation of experiences that lead to independency.

More than three quarters of the sample had bilateral vision impairment. This finding was similar with Cochrane et al.,⁽¹⁵⁾ who could mean that children with one eye affected still maintain a reasonable degree of functionality and independency. When the second eye got affected then

substantial disability develop which interfere with their adaptation, dependency and quality of life.

More than two thirds of student's parents had wrong or incomplete knowledge about vision impairment and care needed. Also, about one third of fathers were governmental employee. Likewise the majority of their mothers were low or none educated and housewives. The low educational level of mothers and fathers correlated to the low mean score of physical, emotional and social dimensions of quality of life of children. This finding was in the same line with Percival and Hanson,⁽¹⁶⁾ which reflect moderate quality of life of those children. Meanwhile parents with higher level of education can obtain information about how to deal with child with disability and be aware of the social and emotional needs to support their children. These factors contributed to low level of care and knowledge provided for visually impaired students, and skills needed for their developmental care, adaptation and affect the quality of life of and vise verse.

The majority of students complains from decrease in health services, lack of educational materials, playing tools and support which affect their independency and quality of life. These findings come contradicted with Percival and Hanson⁽¹⁶⁾. they stated that information need to be updated on how to access health services for blind and partially sighted children including medication, support, housing and transport which increase their adaptation of daily living task and increase quality of life. This discrepancy may be due to decrease facilities in developing countries rather than developed one.

The global score of quality of life indicated that more than half of the studied sample had moderate quality of life score and more than one quarter had high quality of life score and the remains for low quality of life score. Also, the most affected dimension was the emotional and mental domains. These results were consistent with the findings of Rasmeet

and Ahalaya,⁽¹⁴⁾ who found that children with VI had significantly lower quality of life scores. This could be related to the type of ocular involvement of vision impairment on the child early life adaptation, which prevent them from expressing their emotions and learning from imitation to what their seeing where visually impaired students need more modification in their life to cope with their limitation. Also, Finger et al.,⁽¹⁷⁾ who studied the "Impact of the Severity of Vision Loss on Vision related Quality of Life. They reported that only severe vision impairment and blindness led to clinically meaningful decline in vision specific mobility and activity limitation. Likewise, McKean et al.,⁽¹⁸⁾ reported that health related quality of life is diminished even in persons with relatively mild visual field loss. This finding could be because prevention and management measures in person with visual field loss may be important in preventing or reducing poor health related quality of life (HRQOL). Impaired vision was associated with significantly lower scores in physical functioning and emotional functioning scales. However, Nordmann et al.,⁽¹⁹⁾ reported that the developed population quality of life global score showed an over all good quality of life. This discrepancy in the findings could be because the health care system offered to developed population is higher in quality than that of rural Egyptian population. So, it is important to provide good care and programs for visually impaired people to avoid deterioration of their QOL.

Regarding play and enjoyment parameter of quality of life, for visually impaired revealed that they were moderate for most of the students. This finding is consistent with the finding of Lamoureux et al.,⁽²⁰⁾ which reflect the effect of vision impairment and low physical fitness level. On the other hand, Wong et al.⁽¹³⁾ explained his findings and reported that the reason could be related to deficit in sport devices at school and sometime parents don't have enough money to buy suitable playing materials as the child age developed and growing toward adulthood reduce them from participation on playing activities suitable to their impairment. This discrepancy could be due to lack in playing materials, devices and play ground at school and also, affected by their disabilities and independency in mobility. In addition, physical parameter of quality of life, lead to meaningful decline in vision specific mobility, activity of daily living limitation, vision related dependency increased, decrease in educational achievement and poor vision related mental health which gained through visual field Finger et al.⁽¹⁷⁾. This could be because visually impaired students were partially dependant in the activity of self care, adaptation with meeting needs and their level of dependency reduced by growing up. Furthermore, students vision impairment when they grow up they spend too much time on thinking about his or her future or staying with friends for communication and adapt more to their disability.

Girls in primary and secondary level were affected than boys by moderated disturbance in their emotional dimension of quality of life which affect there self esteem and enjoyment dimension of quality of life, although this difference was more pronounced at secondary level. This finding was supported by

Rasmeet and Ahalaya⁽¹⁴⁾ who found that the type of vision impairment may be a factor in determining emotional state. This could be related to deficit on love and supported care in the school and lack of proper guidance. As well boys were more playful than girls which enhance their energy in playing. In addition, girls like to stay alone, cry more, and have a feeling of burden to others and develop inability to express heart-felt feelings. Their facial expression affects others, feeling, or has anxiety toward their future and marriage. This finding is supported by Rovner and Casten,⁽²¹⁾ whose found that their was a high relation between vision impairment and feeling of depression. Also, Kazdein,⁽²²⁾ mentioned that staying in school hostel affect the emotional and social status of the students because they are away from their family.

Also, in the current study revealed that the social parameter of quality of life was affected by their age, sex, mother's job, mother's education, parent's knowledge about vision impairment and sleeping pattern. This is supported by Elkhateeb and Elhadedi,⁽²³⁾ who found many behavioral and social problems in visually impaired students related to social relationship. This is supported by Wanger,⁽²⁴⁾ who reported that social development is learned by imitation of other people. So, social development in visually impaired students is delayed than normal children. In addition Kef,⁽²⁵⁾ inferred that the visually impaired students feel of fear, anxiety, loss of self esteem, lack of safety and self pressure, that make them less happy and had poor coping with their social life. Also, physical appearance may lead to reduced acceptance by sighted peers. This can result in such actions as isolating oneself. This could be due to parents are usually close to their blind children and do every thing for them, and don't allow their children to go out frequently for fear of accidents or fearing from other children. In turn these behaviors limit their social interaction and contact with others, and may lead to delay in their social development.

Adaptation of visually impaired students and their parents with their life revealed that, more than half of the students had moderate quality of life score and moderate level of adaptation. In other ward there was a positive correlation between children adaptation and their quality of life dimensions. This is supported by Perles,⁽²⁶⁾ Who studied "How to Make Adaptations for Visually Impaired Students" the researchers apply a variety of strategies to cope with daily living problems. which includes reproducing educational materials in enhanced media such as large print, or adding features to a product such as a tactile surface or a brightly colored label for low vision to inform the person of its contents, Also, Vale and Smyth.,⁽²⁷⁾ advocate the use of low vision equipment and improved lighting in the home, along with accompanying training, which can enable many blind and partially-sighted people to live independently. So, school nurses, teachers and parents have a special role to enhance adaptation for those children to promote good quality of their life.

6. Conclusions

- More than half of visually impaired students had

moderate quality of life score, and the most affected dimension of quality of life was the mental and emotional state.

- Quality of life of visually impaired students was affected by age, sex, severity of vision impairment, health services provided to them, helping aids, and sleeping environment.
- More than half of the visually impaired students prefer to stay in school hostel but they need additional services to be present at school like enough educational method, play ground, playing materials, enough communication methods, healthy food and enlargement of hostel.

Recommendations

1-Nurses should conduct pre-marital counseling to eliminate hereditary factor and detect early any vision impairment cases

2- Providing early preventive and rehabilitative efforts to prevent longitudinal deterioration through Links with other agencies, including screening services social services, health services, and psychological services with visual impairment which impact on the level of quality of their life.

References

- [1] Rahi J, Manaras I, Tuomainen H, and Hundt G, (2005): Health services experiences of parents of recently diagnosed visually impaired children. *British Journal of Ophthalmology*. Vol. 89(2), pp. 213 – 218.
- [2] Sterns G, McCormick G, (2007): Ophthalmologic disorders. In: Duthie EH, Katz PR, Malone ML, eds. *Practice of Geriatrics*. 4th ed. Philadelphia, Pa: Saunders Elsevier; chap 24.
- [3] Raphael D, (2001): Evaluation of Quality of Life initiatives in health promotion in I. Rootman, M Goodstadt, B. Hyndman, D. McQueen, L. Potvin, J. Springett and E. Ziglio Evaluation in Health Promotion, Principles and Perspectives.
- [4] Optelec (2012); Useful Home Adaptation for visually Impaired, U.S. Inc. All Rights Reserved - Sites Powered by Optelec
- [5] Gray C, (2005): Computers skills and usage of students in grade 10-20 who are legally blind: Descriptive analysis. *Dissertation Abstract International*, 64 (09) 3147A,(UMI NO.3106887).
- [6] Chamber, M., (2004); A guidance to Community Quality of Life Assessment, Reteretived july 18 located at <http://www.Jcc.Org2>.
- [7] Sutton S, (2009): A multidimensional Model of Quality of Life in Older Age. *Aging and Mental health Journal*, 6 (4), Pp 355-371.
- [8] Kahneman, D.; Deaton, A. (2010): "High income improves evaluation of life but not emotional well-being". *Proceedings of the National Academy of Sciences* 107 (38): 16489–16493. doi:10.1073/pnas.1011492107. PMC 2944762. PMID 20823223
- [9] American Foundation for the Blind, (2007): Statistics and Sources for Professionals. Retrieved December retrieved from <http://www.afb.org/Section.asp?SectionID=15&DocumentID=1367>
- [10] National Eye Institute, (1996): Visual Function Questionnaire (NEI-VFQ)-25., July 29, 1996, Located at <http://www.agingeye.net/glaucoma.OAQ.pdf>
- [11] Polite D, Hungler B, Beck C, (2001): *Essential of Research Designs for Nursing*. 5th Ed, Lippincot Williams & Wilkins/ Philadelphia, New York. Chapter 8, Pp 167.
- [12] Yasseldyke M, (2004): Behavioral and mental problems for people with vision impairment. Located at <http://www.Zulfi.edu.sa/vb/s/>.
- [13] Wong H, Machine D, Tan S, Wong T, and Saw S, (2009): Visual Impairment and its impact on health related Quality of life in Adolescence, ministry of health, Singapore, vol. 147, (3) PP.505- 511
- [14] Rassmeet K, & Ahalya S, (2010): The Effect of Visual Impairment on Quality of Life Of Children aged 3-16 years , Optometry Department, Oxford Eye Hospital , West Wing, British Journal, Vol 1136 (10) 182386.
- [15] Cochrane G, Marella M, Keeffe J, and Lamoureux M, (2011): The impact of vision impairment for children (IVI-C) Validation of vision specific pediatric quality of life quastionnaire analysis, Center for eye research Australia, Department of ophthalmology , University of Melbourne ,Est Melbourne, Victoria, Australia, Vol.. 52 (3):1632-40.
- [16] Percival J, and Hanson J, (2007): Social care and inclusion of older people with visual impairment. *British Journal of Social Work*, Vol. 35(2), pp. 189 – 205.
- [17] Finger R, Kupitz D, Holz F, Balasubramaniam B , Ramanian R, and Lamoureux E, (2011): The Impact of the Severity Of Vision Loss On Vision related Quality of Life in India, Department of Ophthamology , University of Bonn, Germany, Vol. 52 (9) : 6081-8.
- [18] Mckean R, Varma R, Wu J, Hays R, Azed S , (2007): Department of Preventive Medicine , Keck school of Medicine, University of Southern California, Los Angeles, California, USA,
- [19] Nordmann J, Auzanneau N, Ricaed S, Berdeaux G, (2003): Vision related Quality of life and topical treatment Side effect, Health Quality of life Outcomes, 1:1- 9 located at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC317367/pdf/1477-7525-1-75.pdf>.
- [20] Lamoureux E, Chong E, Thumboo J, Wee H, Wang J, Saw S, Aung T and Wong T, (2008): vision impairment , ocular condition and specific function, Center for eye research Australia, University of Melbourne , Australia, Vol. 115 (11) :1973-81.
- [21] Rovner B, and Casten R, (2001): Neuroticism predicts depression and disability in age-related macular degeneration. *Journal of American Geriatrics Society*. Vol. 49(8), pp. 1097–1100.
- [22] Kazdein M, (2003), Behavioral and mental problems for people with vision impairment. Located at <http://www.Zulfi.edu.sa/vb/s/showthread.php?t=3911>.
- [23] Elkhateeb S & Elhadedi H, (2005): Behavioral and mental problems for people with vision impairment. Located at <http://www.Zulfi.edu.sa/vb/s/showthread.php?t=3911>.

- [24] Wanger J, (2004): Behavioral and mental problems for people with vision impairment. Located at [http:// www Zulfi edu.gov. sa/vb/s/ show thread.php?=t 3911](http://www.Zulfi.edu.gov.sa/vb/s/showthread.php?t=3911).
- [25] Kef S, (2002): Psychosocial adjustment and meaning of social support for visually impaired adolescent, Journal of visual impairment and blindness, 96 (1) Pp 22-37
- [26] Perles C, (2012): How to Make Adaptations for Visually Impaired Students Located at http://www.ehow.com/how_5672936_make-adaptations-visually-impaired-students.
- [27] Vale D, and Smyth C, (2002): Changing the way we think about blindness: myth and reality. London. Vol.13 (8):1415-24.