Behavioral Problems among Visually Impaired Children Studying at Special School for Blindness

Amany A. Mohamed[1], Aml S. A. Abdelrahem[2], Sanaa M. Ahmed[3]

[1]Lecturer of Psychiatric and Mental Health Nursing, Faculty of Nursing, Minia University, Egypt.
e-mail: amanyanter36@yahoo.com
[2]Lecturer of Pediatric Nursing, Faculty of Nursing, Minia University, Egypt.
e-mail: dramlpediatric@yahoo.com
[3]Assistant professor of Pediatric Nursing, Faculty of Nursing, Minia University, Egypt.
e-mail: sanaa7058@yahoo.com

Received February 18, accepted March 23, 2019.
doi: 10.47104/ebnrojs3.v1i2.49

ABSTRACT

Context: Visual impairment and blindness are significant ophthalmic disorders around the world. Behavioral problems in visually impaired children are considered as one of the most serious health problems.
Aim: The study aimed to assess behavioral problems among visually impaired children studying at a special school for blindness and assess the association between behavioral problems scores and selected demographic variables of studied children.
Methods: The research design adopted for this study was a descriptive correlational design. A purposive sample composed of one hundred and one (101) parents of children with visual impairment. The children were studying at El Nour School for blindness in Minia city. The data were collected using the parents' interview questionnaire and Child Behavior Checklist/4-18 (CBCL/4-18).
Results: Withdrawn syndrome represented the highest clinical level among the studied children, followed by aggressive clinical behavior. Also, less than a fifth of them had to internalize clinical problems, and 17.8% of them had to externalize clinical problems. A highly statistically significant correlation was revealed between the score of total behavior syndromes and the age of studied children.
Conclusion: Visually impaired children had problems in the total social competence score and all its subscales. About one-third of them had borderline and clinical problems regarding the total score of behavioral syndromes. Also, internalized and externalized problems had reported. The study recommended that further intervention studies are necessary, including parents' class about behavioral problems of visually impaired children and methods to limit its effect on children's lives.

Keywords: Behavioral problems, visual impairment, children, special school, blindness

1. Introduction

Visual impairment (VI) is the disorder of decreased visual functioning, which could not be treated through means of contact lenses or eyeglasses (refractive correction), or other medical or surgical interventions *(DeCarlo, Woo, & Woo, 2006).* The resultant visual limitations are represented by permanent loss of vision, visual field limitation, reduced contrast sensitivity, and increased photosensitivity. Besides, the inability to accomplish activities of daily living as primarily writing and reading *(Kavitha, Manumali, Praveen, & Heralgi, 2015).*

Visual impairment, including blindness, is one of the most significant problems around the globe. Children with lost visual perception need exceptional attention and care. It is considered a crucial factor that hinders healthy development in those children; usually, as a result of untreated, these problems can lead to prolonged disability and reduced quality of life of the children and their families *(Wagbatsoma & Okajie, 2004).* According to WHO, people whose vision is impaired worldwide are above forty million. Eighty percent of them live in developing countries. Approximately 314 million persons with visual impairment are present worldwide; among them, forty-five million are already blind. Generally, children's blindness is still a significant challenge worldwide *(Hallemani, Kale, & Gholap, 2014).*

According to the International Classification of Impairment, Disabilities, and Handicaps, the stages of visual impairment include both moderate or severe visual impairment and blindness. Also, researchers described blindness as the most severe level of visual impairment and defined it as the absence of visual stimuli perception. In another word, it is the complete loss of ability to see *(World Health Organization, 2012).*

The onset of vision loss may be sudden or gradual; both forms of loss cause severe anxiety and stress, resulting from these physical, psychological, and social limitations. Also, mental and emotional disturbances occur when the individual has partial vision loss or blind. A disturbance in the person's self-concept appears as a result of recent vision loss. This disturbance is expressed in self-esteem and role performance (in the family and community) disturbance. Services planned and provided visual impairment and blindness do not focus on vision loss as a terrible incident for the patient during the intervention. The team approach only focuses on the appropriate solutions for solving problems related to loss of vision. These solutions are directed towards assisting the visually impaired or blind

[1]*Corresponding author: Amany Anter Mohamed*

persons to continue their independence as far as they could in performing all activities of daily living *(Kumar, Sarabhai, Rastogi, et al., 1999).*

Brambring (2005) pointed out that vision plays a critical role in child development. Thus, a severe defective vision can be a factor in the occurrence of high risks in various domains such as motor development and non-verbal communication and forming a concept. Within the various developmental domains, visual impairment can affect child verbal communication. The same author added that, unless there are other disabilities, the child could be compensated for visual impairment to avoid any developmental delay.

Children with visual impairment have many serious health problems: behavioral problems, social coping problems, learning disabilities, low level of intelligence, disturbances in academic performance, and slower speech. These disturbances were emphasized by a comparison study between blind children and other sighted groups conducted to assess gross motor skills *development (Agran, Hang, & Blankenship, 2007).* On the other hand, visually impaired children rarely express independence, self-advocacy, and self-direction skills in their behavior *(Runjic, BilicPric, & Alimovic, 2015).*

Visual impairment is a type of physical disability and comprises poor social skills and impaired psychosocial development that could compromise the achievement of the academic goals for those children *(BilicPric, 2007).* Besides, poor social skills deprive the child of healthy relationships with peers and teachers, exposing them to the risk of poor educational attainment *(Bloom, Karagiannakis, & Toste, 2007).* Moreover, *Langeveld, Gundersen, and Svartdal, 2012)* defined behavioral problems like emotional or interpersonal maladjustment that frequently occur in visually impaired children compared with their sighted peers. These behavioral problems could be due to social incompetence in those children *(Heyl & Hintermair, 2015).*

On the other hand, *Shahrum, Farahman, and Fathermeh (2012)* classify the behavior problems in students with visual impairment and social incompetence as externalizing and internalizing behavioral problems. The externalizing behavioral problem could represent maladjustment, peer refusal and rejection, hostility, violence up to physical conflicts, and compulsive conduct. However, the internalizing behavioral problems express themselves as anxiety, depression, and social isolation.

Pinquart and Pfeiffer (2012) reported significant findings that general behavioral problems such as emotional problems and peers' problems were significantly lower among sighted adolescents than their visually impaired peers. Furthermore, behavior difficulties were more evident in the schools of visually impaired students. Besides, internalizing behavioral problems were reported among visually impaired adolescents in the merged schools *(Maes & Grietens, 2004).*

Based on the uniqueness of each child, especially those with visual disability. The schools should discover the proper methods to help those students with achieving their learning needs. Orientation and mobility training are considered supportive of most students with visual disabilities. This type of training assists the students in recognizing their environment and safe transfer. The new assistive technology plays a critical role in facilitating learning in visually disabled children. Various types of technology applications are available for those students, including Braille Lite note-taker, Braille in speak, Hand-free computer system, speaking calculators, telescopic aids, tape recorders, tinted lenses, magnifiers, overlays, and other aids. The selection of which aid will be helpful depends on the visual capacity of each child, the suitability of the assistive technological aids, the preferences, and the needs of each child *(Abaoud & Almalki, 2015).*

2. Significance of the study

Children with visual disabilities are an incredibly diverse group. A recent study conducted by *Yamamah, Talaat, and Mostafa (2015)* studied the prevalence of visual impairment on 1047 boys and 1023 girls in South Sinai and found visual impairment (uncorrected VA ≤ 6/9) detected in 29.4% of children. Those children in their daily life face numerous problems. Examples of those problems are behavioral problems, problems with social adjustment, academic troubles associated with weak intellect, plus slower speech. It is known that children with visual impairments have more emotional and behavioral problems than children with typical development. It has little investigated how widely spread is behavioral problems among visually impaired children in Upper Egypt, and there were no studies reported about behavioral problems among visually impaired children in Minia city. So, the present study was conducted to assess the behavioral problems and explore the association between scores of these behavioral problems and some socio-demographic variables of visually impaired children studying at El Nour School for blindness in Minia city.

3. Aim of the study

The study aimed to assess behavioral problems among visually impaired children studying at a special school for blindness and assess the association between behavioral problems scores and selected demographic variables of studied children.

3.1. Research questions

- What are the behavioral problems of visually impaired children?
- Is there a relationship between behavioral problems scores and selected demographic variables of visually impaired children?

4. Subjects & Methods

4.1. Research design

The descriptive correlational research design was used to carry out this study.

4.2. Research setting

The study was conducted at El Nour School for blindness. It is the only special school for visually impaired

students in Minia Governorate and locates in Minia city. It affiliates to the special learning sector, which a part of the Ministry of Education. The total number of children at school was 111 visually impaired children. It includes 56 children in primary, 25 children in preparatory, and 30 children in the secondary school subsections. Those children represent all nine districts of Minia governorate, which are Dermoas, Mallory, Abokorkas, Minia, Samalout, Mattay, Bani Mazar, Maghagha, and Eledwa.

4.3. Subjects

A purposive sample composed of one hundred and one (101) parents of children with visual impairment get involved in the study. The type of visual impairment for those children measured by a visual acuity test reported in their sheets. Low vision is defined as visual acuity of less than 6/18 but equal to or better than 3/60. Blindness is defined as visual acuity of less than 3/60. This classification was reported in the 10th revision of the World Health Organization International Statistical Classification of Diseases, Injuries, and Causes of Death. The sample choose according to the following criteria:

Inclusion criteria

- Parents of children with low vision or complete blindness
- The age of children ranged from 6 to 18 years old
- Parents who are willing to participate in the study

Exclusion criteria

- Parents of children with other disabilities (e.g., hearing disabilities).

4.4. Tools of the study

Data of this study were collected using the following tools:

4.4.1. Parents' Interview Questionnaire

Pre-designed questionnaire sheet for parents of children with visual impairment that designed by the researchers after reviewing recent related literature to obtain caregiver report of children's socio-demographic data in a standardized format such as age, gender, residence, accommodation, school stage, birth order, degree of visual impairment, fathers' and mothers' educational level, job, and consanguinity.

4.4.2. Child Behavior Checklist/4-18 {CBCL/4-18}

The Child Behavior Checklist/4-18 (CBCL/4-18) is a standardized 3-point Likert type scale widely used for clinical research. The CBCL/4-18 was developed by Achenbach (1991). This tool assesses a wide range of emotional and behavioral problems for children with visual impairment. The parents are requested to fill in the checklist according to their child's findings. The checklist encompasses the following two parts:

The first part is concerned with child social functioning. It includes 20 items concerning the child's social competency during sports and non-sports activities, the child's social relationships with others, and school performance. Each parent is requested to rate the child's competencies and performance on the domains mentioned above throughout the previous six months, comparing the child's social functioning with his/her comparable peers. A positive functioning is deduced with a high scale score.

The second part is concerned with the child's emotional and behavioral difficulties. It includes 118 statements covering all supposed emotional and behavioral problems (eight "cross-informant" syndromes). Each statement scored against three points scale. Not true is giving (0), somewhat or sometimes is giving (1), and very true or often true is giving (2).

Scoring system

Three competence scales encompassed child activities, social relationships, and school performance. The other scales encompassed the eight "cross-informant" syndromes: withdrawal, somatic complaints, anxiety and depression, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior. Withdrawal, somatic complaints, anxiety, or depression express the presence of internalizing behavioral problems that could be a reason for self-distress, such as sadness and feeling lonely. While delinquent and aggressive behaviors indicated the presence of externalizing behavioral problems that could be a reason for distress with others, such as constant arguing, disobedience).

As the CBCL/4-18 is a multidimensional scale, its total score could be categorized to differentiate between the clinical cases of behavioral disorders, borderline cases, and healthy children. Raw score distribution of the eight cross-informant syndromes could also be categorized to indicate behavioral deviation. A score below the 96th percentile indicates behavioral problems that fall within the normal behavioral range. A score between 96th and 98th percentile considered a borderline behavioral range, and more than 98th percentile consider evident for clinical deviation. Cronbach's alpha coefficient test in this study was 0.85.

The researchers' tool reliability of the study scale has been done using the test re-test method of measuring internal consistency. The tool is administered to the parent twice or more on different similar occasions. Parent response from repeated testing is analyzed using Cronbach's alpha coefficient test. Content validity was also measured for the study tools by a panel of five experts in pediatric nursing, psychiatric nursing, and psychiatric medicine; then, based on their comments, the tools were modified.

4.5. Procedures

Official approval was granted from the vice minister of education in the Minia governorate after explaining the nature and objectives of the study. This letter introduced the manager of the school, who facilitated the process of data collection. The study tools were selected after reviewing the current and past related literature on the various aspects of the study. Then, the tools were modified according to the jury's opinion. Data collected in the settings mentioned above from the beginning of November 2017 until the end of April 2018. Before starting to collect data, the researchers introduced themselves to all persons at school (manager of

the school, teachers, psychological specialist, social specialist, parents, and children). Permission was requested from each parent to participate in the study. The researchers collected data by interviewing parents two days/week at official school time from 8 am to12 pm. The time spent filling the questionnaire ranged from 20 to 30 minutes according to the needed explanation. All interviews with parents were carried out at a psychological specialist office. Most of the personal data related to children and their parents were achieved from their sheets with the assistance of the psychological specialist. Measures were taken to protect the ethical rights of subjects and voluntary participation in the study gained.

A pilot study was conducted on (10%) 10 parents with visually impaired children at primary, preparatory, and secondary of El Nour School for blindness in Minia governorate. A pilot study was conducted to test the clarity, relevancy, and time needed to complete the tools. The pilot study was also conducted to test the feasibility of the study process. Based on the outcome of the pilot study, a necessary modification, jury acceptance of the final form was obtained before starting the fieldwork.

Ethical consideration: A written initial approval from the Faculty of Nursing, Minia University, obtained from the Faculty of Nursing's ethical research committee. Oral permission for voluntary participation was obtained from parents of visually impaired children. The researchers explained the purpose of the study for each participant. The researchers introduced themselves to all persons at school (manager of the school, teachers, psychological specialist, social specialist, and parents). The participants assured that the collected data is anonymous, confidential, and used only for research purposes. They also reported that participation is optional and withdrawal at any time is their right, and there is no risk for their participation. Code numbers were created and kept by the researcher for each participant.

4.5. Limitation of the study

Regarding the method used in this study to collect data, it has to consider those behavioral problems did not come directly from the children themselves but from questioning their parents. Thus, children's self-report data should be used in further studies.

4.6. Data analysis

The collected data were coded, categorized, and analyzed using the Statistical Package for the Social Science (SPSS) version (20). Quantitative data expressed as frequency and percentage. Numerical data described by the mean and standard deviation (mean & SD). For relational statistics, ANOVA test and Pearson correlation test were used. Probability (p-value) was considered significant at P. value<0.05. Also, linear regression analysis was performed to examine the factors affecting the total behavior syndrome score.

5. Results

Table 1 shows the frequency distribution of the studied children according to their socio-demographic characteristics. About two-thirds of children aged 12- 18 years. More than two-thirds of them were males, and more than three-fourths of them lived in rural areas. More than half of them (57.4%) accommodated at school. Regarding the school stage, 55.4% of the studied children were at the primary level. Near half of them were third birth orders or more. More than half of them (54.5%) had partial visual impairment regarding the degree of visual impairment**.**

Table 2 indicates the frequency distribution of the parents' characteristics of studied children. Near half of the fathersof studied children had secondary education (47.5%), and about one-third of them had free work (33.7%). Regarding mothers' education, 54.5% of them cannot read and write, and 94.1% of them were housewives, and more than two-thirds of them (71.3%) had a consanguineous marriage.

Table 3 illustrates the frequency distribution of social competence subscales (social relationships, school performance, and activities scores) among studied children. An equal percentage of children have a social problem or borderline social problem with their relationships, 13.9% for each. About 17 % of them have borderline problems in school performance. Near one-third of them, 27.7%, have borderline problems regarding their activities. About one-quarter of them have either a total borderline problem with their social competencies.

Table 4 presents the frequency distribution of behavioral syndromes levels among studied children. 21.8% of studied children had borderline withdrawal, while 12.9% of them had borderline somatic complaints. Moreover, 13.9% ofthem had borderline anxious/ depressed syndrome. Also, 14.9% of them had aggressive clinical behavior. Clinical withdrawal represents the more frequent behavioral problem among the studied children, followed by aggressive clinical behavior, 15.8%, and 14.9%, respectively.

Table 5 illustrates the frequency distribution of behavioral problem levels among studied children. Near equal percent of studied children had clinical internalizing and externalizing problems, 16.8% and 17.8%, respectively. Table 6 shows the correlation between behavioral syndromes scores and social relationships, school performance, and activities behavior levels. There is a highly significant correlation between total behavioral syndromes score and social competencies (social relationship, school performance, and activities behavior) among the studied children, P=0.0001.

Table 7 clarifies the relationship between age groups and child behavior scores among studied children. There is a statistically significant relationship between total social relationship, school performance, and activities score and age with increased social problems among children aged 6- ≤ Twelve years (45.5%). A significant relationship between total behavior syndromes score and age of studied children with 29.4% of children aged 12- 18 years had a borderline total behavior problem. At the same time, there is nosignificant relationship between age and internalizing and externalizing problems of children.

Table 8 demonstrates linear regression analysis of factors affecting the total behavior syndromes score of the studied sample. This table found that the most significant factors affecting behavior syndromes score were social competencies regarding (social relationships, school performance, and activities score), age of children, and their school stages.

Table (1): Frequency distribution of the studied children according to socio-demographic characteristics (n=101).

Socio-demographic characteristics	No	%
Age groups		
6-less than 12 years	33	32.7
12-18 years	68	67.3
Mean ± SD	13.4±3.3	
Gender		
Male	69	68.3
Female	32	31.7
Residence		
Urban	22	21.8
Rural	79	78.2
Accommodation		
At home	43	42.6
At school	58	57.4
School stage		
Primary	56	55.4
Preparatory	23	22.8
Secondary	22	21.8
Birth order		
First	33	32.7
Second	19	18.8
Third and more	49	48.5
Degree of visual impairment		
Low vision	55	54.5
Blindness	46	45.5

Table (2): Frequency distribution of the parents' characteristics of the studied children (n=101).

Parents' characteristics	No	%
Father's educational level		
Cannot read and write	39	38.6%
Primary	3	3%
Preparatory	6	5.9%
Secondary	48	47.5%
University and above	6	5.9%
Father's job		
Farmer	30	29.7%
Employee	20	19.8%
Manual	17	16.9%
Free work	34	33.7%
Mother's educational level		
Cannot read and write	55	54.5%
Primary	1	1.0%
Preparatory	11	10.9%
Secondary	32	31.6%
University and above	2	2.0%
Mother's job		
Housewife	95	94.1%
Worked	6	6%
Consanguinity		
Yes	72	71.3%
No	29	28.7%

Table (3): Frequency distribution of social competence subscales among studied children (n=101).

Social competence subscales	Levels	No	%
Social relationships	Normal	73	72.3
	Borderline problems	14	13.9
	Social relationship problems	14	13.9
School performance	Normal	74	73.3
	Borderline problems	17	16.9
	School performance problems	10	9.9
Activities	Normal	61	60.4
	Borderline problems	28	27.7
	Activities problems	12	11.9
Total social competence score	Normal	50	49.5
	Borderline problems	25	24.8
	Competence problems	26	25.7

Table (4): Frequency distribution of behavior syndromes levels among studied children (n=101).

Behavior syndromes	Levels	No	%
Withdrawn	Normal	63	62.4
	Borderline	22	21.8
	Clinical	16	15.8
Somatic complaints	Normal	76	75.2
	Borderline	13	12.9
	Clinical	12	11.9
Anxious/depressed	Normal	79	78.2
	Borderline	14	13.9
	Clinical	8	7.9
Social problem	Normal	76	75.2
	Borderline	12	11.9
	Clinical	13	12.9
Thought problem	Normal	77	76.2
	Borderline	11	10.9
	Clinical	13	12.9
Attention problem	Normal	74	73.3
	Borderline	17	16.8
	Clinical	10	9.9
Delinquent behavior	Normal	77	76.2
	Borderline	13	12.9
	Clinical	11	10.9
Aggressive behavior	Normal	73	72.3
	Borderline	13	12.9
	Clinical	15	14.9
Total behavior syndromes score	Normal	67	66.3
	Borderline	23	22.8
	Clinical	11	10.9

Table (5): Frequency distribution of behavioral problems levels among studied children (n=101)

Behavioral problems	Levels	No	%
Internalizing problems	Normal	73	72.3
	Borderline	11	10.9
	Clinical	17	16.8
Externalizing problems	Normal	68	67.3
	Borderline	15	14.9
	Clinical	18	17.8

Table (6): Correlation between behavioral syndromes scores and social competence subscales (n=101).

Behavior syndromes		Social relationships	School performance	Activities
Withdrawn	r	-0.55	-0.39	-0.37
	p	0.0001	0.001	0.001
Somatic complaints	r	-0.47	-0.26	-0.29
	p	0.0001	0.007	0.002
Anxious/depressed	r	-0.56	-0.31	-0.37
	p	0.0001	0.001	0.0001
Social problem	r	-0.49	-0.48	-0.40
	p	0.0001	0.0001	0.0001
Thought problem	r	-0.36	-0.22	-0.20
	p	0.001	0.02	0.04
Attention problem	r	-0.55	-0.31	-0.31
	p	0.0001	0.001	0.001
Delinquent behavior	r	-0.32	-0.01	0.09
	p	0.0001	0.8	0.3
Aggressive behavior	r	-0.39	-0.24	-0.07
	p	0.0001	0.01	0.4
Total behavior syndromes score	r		-0.46	
	P		0.0001	

Table (7): Relationship between age groups and child behavior scores among studied children (n=101).

Child behavior scores	Levels	6-<12 yrs. (N=33)		12-18 yrs. (N=68)		P-value
		No.	%	No.	%	
Total social competence score	Normal	10	30.3	40	58.8	0.004
	Borderline	8	24.2	17	25	
	Social problem	15	45.5	11	16.2	
Total behavior syndromes score	Normal	27	81.8	40	58.8	0.04
	Borderline	3	9.1	20	29.4	
	behavior problem	3	9.1	8	11.8	
Internalizing problems	Normal	25	75	56	82.4	0.7
	Borderline	3	9.1	5	7.4	
	Clinical	5	15.2	7	10.3	
Externalizing problems	Normal	26	78.8	56	82.4	0.9
	Borderline	3	9.1	5	7.4	
	Clinical	4	12.1	7	10.3	

Table (8): linear regression analysis of factors affecting the total behavior syndromes score of the studied sample (n=101).

Data	Beta Coefficients	Sig.
Total social competence (social relationships, schoolperformance, and activities score)	0.44	0.0001
Age	2.3	0.001
School stage	10.6	0.001
Gender	0.46	0.8
Residence	2.62	0.2
Birth order	0.007	0.9
Accommodation	0.10	0.9
Father's educational level	0.93	0.2
Father's job	0.25	0.5
Mother's educational level	0.14	0.8
Mother's job	1.10	0.5

6. Discussion

Vision powers all aspects of a persons' life; therefore, it controls the progression of both social skills and competencies. Visual impairment and its consequences of poor social development can result in behavioral problems defined in the literature as emotional or interpersonal maladjustment *(Heyl & Hintermair, 2015)*. A study did by *Runtic, BilicPric, and Alimovic (2015)* emphasized that behavioral and emotional problems appeared very frequently in visually impaired children compared to their sighted peers. The study aimed to assess behavioral problems among visually impaired children studying at special schools for blindness and assess the association between behavioral problems scores and selected demographic variables of studied children.

Regarding social relationship problems, about 14% of the studied children have borderline social relationship problems, and the same percentage already has social relationship problems. This finding may be attributed to a

lack of strategies as; group activities that encourage positive interaction and social skills training, which can be used to provide emotional support to visually impaired children, help them acquire adequate social skills, and prevent social problems (e.g., social isolation). Moreover, those group of disabled children shows the difficulty in initiating and maintaining face-to-face and eye contact. They also have problems in body language that influence social skills development and make the children have poor social competence.

This finding agrees with *Celeste and Grum (2010),* who reported a similar finding that visually impaired children exhibited atypical social relationships, social participation, and separable social behaviors. These results acknowledged the risk of inadequate social competencies in youth with visual impairment.

Impaired vision affects not only children's behavior and social skills but also school performance. The present study finds that less than a fifth of the studied children has borderline school performance problems, and about 10% already have school performance problems. This result may be related to social relationship problems that are affecting children's academic performance. Also, the limited number of specialized teachers in the school was considered another contributing factor. The current study results agreed with *Kovarski, Faucher, Orssaud, and Carlu (2019),* who reported that vital links between the presence of visual impairments and poor academic performance were found among the study participants in the two types of analysis, bivariate and multivariate.

The present study finds that about one-quarter of visually impaired children had either problem or borderline problem regarding all eight behavioral syndromes (withdrawn, somatic complaints, anxiety/ depression, social problem, thought, attention, delinquent behavior, and aggressive behavior. This finding may be related to the lack of intervention programs that focus on continuous evaluation and early discovering of disturbing behaviors among visually impaired children. Besides, the absence of educational support programs that take behavioral problems into account as early as possible.

This result is consistent with that of *Dermlr et al. (2014),* who reported a statistically significant lower score in CBCL subscales regarding anxiety, depression, withdrawal, and attention problems, with a statistically significant lower total CBCL scores in adolescent and children with congenital blindness compared to their comparable peers. While it was not the case when comparing the externalizing/internalizing problems subscales regarding aggressive behavior, thought problems, somatic complaints, social problems, delinquent behavior subscales. Also, A*limovic and Dom (2013)* reported similar results when comparing visually impaired children with a typical development group. There were significantly different results.

A similar result was also reported by *Riaz, Aveena, Naveed, and Nalia (2015),* who stated that blind children had a higher incidence of behavioral problems that negatively reflect their relationships with seeing and hearing peers. Emotion regulation in combined schools is burdensome, and they always thought that they are different. Moreover, *Alimovic and Dom (2013)* found that children with intellectual plus visual disabilities are more prone to behavioral problems than their peers with a single disability and, of course, compared to healthy children. They also added that visually impaired children who have no intellectual disability are more prone to somatic complain when compared to sighted children.

However, this was not the case with children with sensory impairment. *Maes and Grietens (2004)* found that sensory disabled children do not reveal more behavioral problems than healthy children at the regular primary schools according to their parent's perspective. This finding may be due to *Maes and Grietens's* study depending only on the parent perspective. If they consider the teachers' perspective, the results might differ, as the teachers' perspective could be different and situation-specific.

The current study finds that about a tenth of visually impaired children have borderline internalizing problems, and less than a fifth of them must internalize clinical problems. Moreover, about 15 % of them have borderline externalizing problems, and nearly one-fifth of them have to externalize clinical problems. These findings were nearly consistent with those of *Maes and Grietens (2004),* who indicated that visually impaired adolescents had more externalizing behavioral problems than their sighted peers. A previous study conducted by *Haugen, Bredrup, and Rødahl (2016)* reported an opposite finding that is more than half of the studied visually impaired adolescents progressed into psychiatric, cognitive, behavioral, personality, or developmental disorders, in addition to poor adjustment and mental retardation.

The present study illustrates a highly significant correlation between total behavioral syndromes score and social relationship, school performance, and activities of studied children. This finding may be due to vision loss, which disables children from the accurate and constant perception of the social environment. At the same time, they are more frequently exposed to negative social experiences. Moreover, untreated social problems with such a group of visually impaired children become stable over time are associated with lower academic performance and problems in their behavior.

This finding agrees with those of *Sedmak (2009),* who found a correlation between problem behaviors and academic achievement. The same author also reported that visually impaired children with higher academic achievement had fewer behavioral problems compared to their sighted peers. After conducting several studies, *Sharum, Farahman, and Fathermeh (2012)* added a consistent finding of reporting a relationship between social competencies and behavioral problems. Moreover, *Vahedi, Meshkini, Mohajernezhadfard, and Tubs (2013)* conclude a similar finding when reporting a better social functioning and academic achievement in assertive, friendly, and cooperative children. Besides, better social functioning appears linked to fewer behavioral problems in visually impaired children.

Concerning the relation between age groups and child behavior scores, it was observed from the current study

findings that social relationship, school performance, and activities problems were significantly higher in children whose age group from 6-≤12 years compared to the age group from 12-18 years. This finding may be due to those children of older age who may have social and school experience, enabling them to behave better than the primary school age group. Also, the preparatory and secondary visually impaired students have accustomed to the school activities than primary school students who are visually impaired. Furthermore, behavior problems among primary visually impaired students different from behavior problems of the preparatory and secondary school age group.

The present study results report that the most significant factors affecting behavior syndromes score were social competencies (social relationships, school performance, and activities score), age of children, and their school stages. This finding was in agreement with *Maes and Grietens (2004),* who reported that sensory disability was the most significant factor in social problems. A conflicting finding was reported by *Suresh, Jadab, and Prof (2013),* who revealed a non-significant relationship between academic accomplishment and social adjustment of visually impaired children. *Türkay et al. (2014)* also reported a lower behavioral problem score in children and adolescents with blindness.

7. Conclusion

The current study's findings could conclude that visually impaired children had problems in the total social competence score and all its subscales. About one-third of them had borderline and clinical problems regarding the total score of behavioral syndromes. Also, internalized and externalized problems had reported. There was a significant relationship between total social competence score with younger age (6- ≤ 12 years). A significant relationship was revealed between the total behavior syndromes score, age of studied children, and the school stage.

8. Recommendations

- Further intervention studies are necessary, including parents' classes about the behavioral problems of visually impaired children and methods to limit their effect on children's lives. Also, educational support programs take behavioral problems into account as early as possible.
- Systematic approaches are needed to empower children and other persons with visual impairment to improve different forms of behavioral and emotional problems. Besides, orientation and training for those children to promote their social competencies will provide them with adequate social skills to compensate for their disabilities.
- Further studies consider children their perspectives to their encountered problems and so from their teacher's perspectives.

9. References

Abaoud, A. & Almalki, S. (2015). Characteristics of students with emotional/behavioral disorders: Perspectives of general education teachers in Saudi Arabia. *Psychology, 6*(5), 8. https://doi.org/10.4236/psych.2015.65050

Achenbach, T. (1991). Manual for child behavior checklist/ 4-18 and 1991 profile. Burlington, VT: University of Vermont, Dept. of Psychiatry. Cited by Geddes, J., Murrell, A., and Bauguss, J.(2010). Childhood Learning: An Examination of Ability and Attitudes toward School. *Creative Education,* 1 (3), 27.

Agran, M., Hang, S. & Blankenship, K. (2007). Promoting the self-determination of students with visual impairment: Reducing the gap between knowledge and practice. *Journal of Visual Impairment & Blindness*, *101*(8), 453-464. https://doi.org/10.1177/0145482X0710100802.

Alimovic, S. & Dom, M. (2013). Emotional and behavioral problems in children with visual impairment, intellectual and multiple disabilities. *Journal of Intellectual Disability Research. 57*(2), 153- 160. https://doi.org/10.1111/j.1365-2788.2012.01562.x.

BilicPrcic, A. (2007). Social Skills of the Damaged Vision. Doctoral Thesis. The University of Zagreb. Faculty of Education and Rehabilitation Sciences. Department of visual impairments.

Bloom, E., Karagiannakis, A. & Toste, J. R. (2007). Severity of academic achievement and social skills deficits. *Candian Journal of Education*, *30*(3), 911-930.

Brambring, M. (2005). Development: Divergent development in blind and sighted children in four developmental areas. *Journal of Developmental Psychology and Educational Psychology*, *37*(4), 173-183. https://doi.org/10.1177/0145482X0710101205.

Celeste, M. & Grum, D. (2010). Social integration of children with visual impairment: A developmental model. *Elementary Education Online*, *9*(1), 11-22.

DeCarlo, D., Woo, S., & Woo, G. (2006). *Patients with low vision*. In: Benjamin WJ, editor. Borish's clinical refraction. 2nd ed. Philadelphia: Elsevier. Pp. 1591– 1618.

Dermlr, T. Bolat, N., Yavuz, M. Karacetin, G., Dogangun, B., & Kayaalp, L. (2014). Attachment characteristics and behavioral problems in children and adolescents with congenital blindness. *Archives of Neuropsychiatry*, *51*(2), 116-121. https://doi.org/10.4274/npa.y6702

Hallemani, S., Kale, M. & Gholap, M. (2014). Level of stress and coping strategies adopted by adolescents with visual impairment. *International Journal of Science and Research*, *3*(7), 1182-1187.

Haugen, O, Bredrup, C, Rødahl, E. (2016). Visual impairment in children and adolescents in Norway. *Tidsskr Nor Laegeforen, 136*(11), 996-1000. https://doi.org/10.4045/tidsskr.15.1243.

Heyl, V. & Hintermair, M. (2015). Executive function and behavioral problems in students with visual impairments at mainstream and special schools. *Journal of Visual Impairment & Blindness*. *July-August,* 251-263. https://doi.org/10.1177/0145482X1510900402.

Kavitha, V., Manumali, M., Praveen, K., & Heralgi, M. (2015). Low vision aid-A ray of hope for irreversible visual loss in the pediatric age group. *Taiwan J*

Ophthalmol., 5(2), 63-67.
https://doi.org/10.1016/j.tjo.2015.02.002

Kovarski, C., Faucher, C., Orssaud, C., & Carlu, C., Porter, S. (2019). Effect of *Visual impairments on Academic Performance.* https://visionimpactinstitute.org/wp-content/uploads/2015/04/effect-of-visual-impairments- on-academic-performance-English.pdf. Accessed at6/4/2019.

Kumar, D., Sarabhai, K., Rastogi, C., & Behere, P. (1999). Psychological characteristics of literate blinds. *Indian Journal Med Sci*, *53*(7), 310-315.

Langeveld, J., Gundersen, G., & Svartdal, F. (2012). Social competence as a mediating factor in reduction of behavioral problems. *Scandinavian Journal of Educational Research*, *56(*4) 1-19. https://doi.org/10.1080/00313831.2011.594614

Maes, B. & Grietens, H. (2004). Parent-reported problems behavior among children with sensory disabilities attending elementary regular schools. *Journal of Developmental and Physical Disabilities*, *16*(4), 361-375. https://doi.org/10.1007/s10882-004-0692-9

Pinquart, M. & Pfeiffer, J. (2012). Psychological adjustment in adolescents with vision impairment. *International Journal of Disability, Development, and Education*, *59*(2), 145-155. https://doi.org/10.1080/1034912X.2012.676416

Riaz-Akram, M., Aveena, H., Naveed, M., & Nalia, B. (2015). Behavioral Problems and Emotion Regulation in Blind and Normal Children. *Pakistan Journal of Medical Research*, *54*(4), 105-108.

Runjic, T., BilicPric, A., & Alimovic, A. (2015). The relationship between social skills and behavioralproblems in children with visual impairment. *Croatian Journal of Rehabilitation Research*, *51*(2), 64-76.

Sedmak, Z. (2009). Undesirable behaviors of children with impaired vision. Master's thesis. The University of Zagreb. Faculty of Education and Rehabilitation Sciences. Department of visual impairments.

Shahrum, V., Farahman, F. & Fathermeh, F. (2012). Social competence and behavioral problems in preschool children. *Iranian Journal of Psychiatry*, *7*(*3*), 126-134.

Suresh, R., Jadab, D., & Prof. J. (2013). Adjustment and academic achievement of visually handicapped school children in Assam. *International Journal of Science and Research* (IJSR), *6*(14), 1228-1235.

Türkay, D., Nurullah, B., Mesut, Y., Gül, K., Burak, D., & Levent, K. (2014). Attachment characteristics and behavioral problems in children and adolescents with congenital blindness. *Archives of Neuropsychiatry*, *51*(2), 116-121. https://doi.org/10.4274/npa.y6702.

Vahedi, P., Meshkini, A., Mohajernezhadfard, Z. & Tubs, R. (2013). Post-craniotomy blindness in the supine: Unlikely or ignored? *Asian J Neurosurg*, *8*(1), 36-41. https://doi.org/10.4103/1793-5482.110278.

Wagbatsoma, V., & Okajie, O. (2004). Psychosocial effects of river blindness in a rural community in Nigeria. *J R Soc Health*, *124*(3), 134-136. https://doi.org/10.1177/146642400412400315

World Health Organization (2012). The International Classification of Impairments, Disabilities, and Handicaps: Blindness. World Health Organization. (HTTP:// www.who.int/topics/blindness/en) (Accessed August 14, 2012).

Yamamah, G, Talaat, A, & Mostafa, Y. (2015). Prevalence of visual impairment and refractive errors in children of South Sinai, Egypt. *Ophthalmic epidemiology, 22*(4), 246-252. https://doi.org/10.3109/09286586.2015.1056811.