International Journal of Psychosocial Rehabilitation, Vol.24, Issue 01, 2020
ISSN: 1475-7192

Effectiveness of Health Educational Program on Mothers' Practices toward care of Children with Squint of Eyes at Ibn Al- Haitham Teaching Eye Hospital in Baghdad City

[1] Zainab Asad Allah Mahday, [2] Dr Suad Hassoon Khudhair

ABSTRACT

Objectives: *The study aims to determine effectiveness of health educational program on mothers' practices toward care of children with squint at Ibn Al- Haitham teaching eyes hospital in Baghdad city.*

Methodology: *A quasi –experimental study design two- group (pre-test, post-test 1 and post-test 2) conducted at Ibn Al- Haitham teaching eyes hospital in Baghdad city during the period from 25 October 2019 to 20 August 2020. And that by collecting (100) samples from mothers participants. This study exposed to the educational program only.*

Results: *Results showed a clear positive impact of the program on mothers' practices towards children with squint. It indicated high significant differences for this group between the pre-test and the post-test in the main aspects that have to do with the mothers' practices about children with squint.*

Recommendations*: the study recommends that the educational lectures should conducted & regularly updated for mothers'toward care of children with squint of eyes for those who coming at hospital always. It also recommended more research studies should conducted on a larger sample & more of hospital in other of Iraqi governorates.*

Keywords: *Health Educational Program, Practices, children with squint.*

[1] *college of nursing, Ministry of Higher Education & Scientific Research, Iraq G-mail: o7708885241@gmail.com*
[2] *Pediatric Nursing Department, College of Nursing, University of Baghdad. Iraq e-mail: suad.noor@yahoo.com*

INTRODUCTION

A squint is a condition in which the eyes do not align properly. One eye turns inwards, upwards, downwards, or out wards, while the other one focuses at one spot. It is estimated to affect around % of the population in the United States. [(1)] Squint is a common disorder of ocular alignment that affects two to four % of children. The most weakling consequence of untreated squint is the development of Amblyopia (permanent loss of best corrected visual acuity in a structurally healthy eye. [(2)] Causes of squint in children can be either primary or secondary (acquired). That recognized risk factors for primary squint include; a family history of squint, premature birth, & a low birth weight. Secondary squint is often associated with neurological pathology such as intracranial tumors, head trauma, infection, and auto- immune disease. [(3)] The treatments for squint and amblyopia are generally effective if the squint is detected & treated early. In these cases, most children will have good vision in each eye in the long-term. If a squint or amblyopia is not picked up before the age of seven to eight years old, it can have a permanent effect on the vision in one eye. Poor vision in one eye can reduce depth perception which can cause difficulties with judging distances also activities such as catching a ball or navigating steps. [(4)] Correction of refractive errors and associated condition like cataract are essential to develop best possible vision in both eyes. Occlusion therapy of normal eye for one to two weeks or longer may help the deviated eye to improve vision by continuous exercises. Orthoptics training for special vision treatment may be needed in failure of development it involved shortening, lengthening, and repositioning of the extraocular muscles. [(5)] Congenital squint means that the child is born with a squint; this type develops within the first six months of life, it is occurs because the actions of the eye muscles are not fully balanced. The one eye turns inward this called congenital esotropia. This is occurring in families, but other occur no family members affected. In some cases the eye turns outwards exotropia, less commonly. [(6)]

Objective of the study

To determine the effectiveness of health educational program on mothers 'practices toward care of children with squint of eyes at Ibn Al- Haitham Teaching eye Hospital in Baghdad city.

METHODOLOGY

Design

A quasi-experimental study design two-study group (pre, post1 & post-test 2) used to instruct this study to determine the effectiveness of health educational program on mothers 'practices toward care of children with squint of eyes.

Setting & Sample of the study

A non-probability (purposive) sample of the study consisted from (100) Mothers who were actually found at Ibn Al-Haitham Teaching eye Hospital selected for the purpose of this study. The sample (100) mothers group, And the sample has made pre- test and post 1and post 2- test in order to evaluate the effectiveness of health educational program on mothers 'practices toward care of children with squint. And the researcher get permission from all mothers who met the inclusion criteria mentioned below. The hospital was chosen for the Following reasons: This hospital provides free health- care to children with squint, and there are a lot of mothers who caregiver with those children in many departments in the hospital and according to the experience of the researcher they need to develop their practice toward squint.

Study Instrument:

The researcher constructs a questionnaire
Format in order to reach the aims of the
Study and consists of (2) parts:
(1) Self-administered questionnaire related
To demographic characteristics of children and mothers such as (age, education level, occupation, and marital status)
(2) Self-administered questionnaire related to mothers 'practices toward care of children with squint. It comprises (51) items that divided in to (6) sections:
Section 1: Consist of (14) items related with mother's practices as general towards squint.
Section 2: Consist of (3) items related with Mothers 'practices towards the infection of eyes.
Section 3: Consist of (10) items related with mother's practices towards the special exercise for eyes squint.
Section 4: Consist of (7) items related with mother's practices towards prevent of the squint.
Section 5: Consist of (5) items related with mother's practices towards care of squint before operation.
Section 6: Consist of (12) items related with mother's practices towards care of squint after operation.

Pilot Study

The pilot study carried out on (10) mothers who excluded later from the final sample size, and have same criteria of original study sample. Mothers 'in the pilot study was conducted at Ibn Al- Haitham Teaching Eyes Hospital in Baghdad city and exposed to the health educational program after pre- test. Finally, post-test introduced to mothers after one month from pre-test for checking the wording of the questionnaire & estimate time needed for answering the questionnaire and information accumulation.

Validity
The validity of the program and the study instruments are determined by the panel of (11) experts, which have (7) years' and more experience in their specialty field to investigate the content of the educational program and questionnaire about practices and care of children with squint

Reliability
Reliability of the questionnaire determined by test-retest approach obtained through evaluating (10) mothers', and the interval period was one month. The result indicates that the questionnaire format is adequately reliable through the computation of Alpha Correlation Coefficient (Cronbach's Alpha) .method was used for determining the reliability. The result of pilot study revealed that the educational programs are clear and understandable for the mothers.

Statistical analysis
The Coefficient Alpha used to determine the reliability of the present study instrument by application of Statistical Package for Social Science Program (SPSS).
Participants have been submitted to pre-test

RESULTS:

Table (1) Distribution of the Study Sample by Their Demographic Characteristics:

Variables (a) for mothers			
		Freq.	%
Age	<19	2	2%
	(20 – 29)	34	34%
	(30 – 39)	27	27%
	(40 -49)	27	27%
	50 and more	10	10%
	Total	100	100.0
Level of education	Illiterate	6	6
	Read only	4	4
	Read and write	10	10
	Primary school	15	15
	Intermediate school	17	17
	Secondary school	17	17
	Diploma	15	15
	Bachelor	13	13
	Other	3	3
	Total	*100*	*100*
Occupation level	employee	32	32.0
	Self- employee	17	17.0
	housewife	51	51.0
	Total	100	100.0
Marital Status	married	69	69.0
	divorced	16	16.0
	widowed	15	15.0
	Total	100	100.0
(b) for Children			
Gender	Male	53	53.0
	Female	47	47.0
	Total	100	100.0
Age	< 1 years	4	4.0
	1 – 3 years	37	37.0
	4 – 6 years	32	32.0
	7 – 9 years	16	16.0
	10– 12 years	8	8.0
	13 ≤ years	3	3.0

	Total	*100*	*100*
Freq. = Type of Squint	Congenital	35	35.0
	Exotropia	12	12.0
	Esotropia	21	21.0
	Hypertropia	16	16.0
	Hypotropia	16	16.0
	Total	100	100.0
another inflicted Child in the Family	Yes	59	59.0
	No	41	41.0
	Total	100	100.0
have other Diseases	None.	37	37
	Down syndrome.	3	3
	Congenital heart disease.	1	1
	Congenital abnormalities.	3	3
	Diabetes mellitus.	1	1
	Muscles atrophy.	1	1
	Premature baby.	5	5
	Cerebral palsy.	10	10
	Medication during pregnancy.	4	4
	Head injury.	3	3
	Respiratory infection.	2	2
	Nerve dysfunction.	1	1
	Renal failure.	2	2
	Total	*100*	*100*

Frequencies, % = Percentages.

Table (1) reveals 34% of this group is within (20-29) years, while 27% within (30-39), (40-49) years. The highest percentage of educational level was referring that mothers are graduated from intermediate and secondary school 17% and 13% was having bachelor degree. While 51% of mothers within occupation level have housewife, and 69% from mothers have highest percentage is married. While 53% of this group is male, while 43% were female, and this group at 37% of age children within (1-3) years. While 35% of this group has congenital squint was highest percentage.

Table (2): Comparison among Three Periods (pre, post-I and post II tests) for mothers' practices toward care of Children with squint for this Group as general practices.

ANOVA= Analysis of Variance, d. f= degree of freedom, p: probability, C.S.: R.S= Relative sufficiency, Asses= Assessment, (P) Poor= 1 – 1.66, (FR) Fair= 1.67 – 2.33, (G) Good= 2.34 – 3

Questionnaire related Practices	**Pre-Test**		**Post-test I**			**Post-test II**		
	M.S	**As**	**M. n**	**R.S**	**As**	**M.S**	**R.S**	**As**
1- I visit the doctor regularly	2.10	Fr	3.00	100	G	3.00	100	G
2- Make sure a child's glasses are appropriate for age.	2.24	Fr	3.00	100	G	3.00	100	G
3- I help my child to wear the glasses	2.26	Fr	3.00	100	G	3.00	100	G
4- Make sure to sleep my child on time and don't let him still waking up.	2.32	Fr	3.00	100	G	3.00	100	G
5- Keep my child away from electronic devices.	2.32	Fr	3.00	100	G	3.00	100	G
6- Keep my child from crowded places	1.65	P	3.00	100	G	3.00	100	G
7-Encourage my child for going to school.	2.29	Fr	3.00	100	G	3.00	100	G
8- Ask my child for help and cope with medical examination.	2.07	Fr	3.00	100	G	3.00	100	G
9- I give my child a rest time when he feels tired or drowsy.	2.15	Fr	3.00	100	G	3.00	100	G
10- Keep my child away from high light and sun light.	2.09	Fr	3.00	100	G	3.00	100	G

11- I help my child when he faces diffi- culty concentration and attention.	2.03	Fr	3.00	100	G	3.00	100	G
12- I help my child to do homework because he needs long time.	2.04	Fr	3.00	100	G	3.00	100	G
13-Watch my child when he feel head ache and eye ache.	2.16	Fr	3.00	100	G	2.34	100	G
14- Help my child when he has diffi- culty with hand writing.	2.34	G	3.00	100	G	2.56	100	G

Table (2) indicated there is significant difference between the mean of pre-test, the mean of post-test I and mean of post-test II for the mothers' practices toward care of children with squint, regarding the general practices toward squint; the mean of items during the pre-test indicates the mothers are fair level among all items except item (6) are poor level and item 14 that reveals good level. The mean scores for item during the post-test 1 and 2 indicate that mothers are good level of practices among all items of the scale sub-domain.

Table (3): Comparison among Three Periods (pre, post-I and post II tests) Assessment of Mothers' Practices toward Exercise for Eyes Squint:

Questionnaire related Practices	**Pre-Test**		**Post-test I**			**Post-test II**		
	M.S	**As**	**M. n**	**R.S**	**As**	**M.S**	**R.S**	**As**
1-I help child with exercise don't need medical glasses.	1.50	P	3.00	100	G	3.00	100	G
2-Do eyes close-up exercise in the case of simple squint	1.42	P	3.00	100	G	3.00	100	G
3-Encourage the child to move the pen to the nose until he can no longer see it as one picture.	1.53	P	3.00	100	G	3.00	100	G
4-Hold the pencil as close to the eyes as the entire image of the pen is visible.	1.52	P	3.00	100	G	3.00	100	G
5-I massage the eye ball over the child's eyelid and it is close with the eyes moving up and down and with counterclockwise.	1.46	P	3.00	100	G	3.00	100	G
6-Close things to the child when he complains of blurred or double vision when reading.	2.40	Fr	3.00	100	G	3.00	100	G
7-Cover the eye before the operation to increase the strength of the other eye and to prevent cheating.	2.02	Fr	3.00	100	G	3.00	100	G
8-Encourage the child to take off the glasses with both hands by holding its arms not the lenses.	2.59	G	3.00	100	G	2.59	86.3	G
9- Ask the teacher to write things down in the notebook when the child is unable to copy from the blackboard.	2.24	Fr	3.00	100	G	2.33	77.6	Fr
10-Encourage the child to distinguish between letters, numbers and similar words when confusing them.	2.28	Fr	3.00	100	G	2.32	77.3	Fr

Table (5): Comparison among Three Periods (pre, post-I and post II tests) on Mothers 'Practices toward Prevention of Eyes Squint

Questions Related To Practices	Pre-Test		Post I Test		Post II Test	
	Mean	Ass	Mean	Ass.	Mean	Ass.
Assessment of mothers' practices toward prevention of eyes squint.						
1-1-Do routine checkup during pregnancy to avoid premature and low birth weight.	2.04	Fr	3.00	G	3.00	G
2- Maintain the provision of the necessary care before and during childbirth to avoid.	2.06	Fr	3.00	G	3.00	G
3- Do a comprehensive examination of the child's eyes especially newborn and pre- school children.	2.03	Fr	3.00	G	3.00	G
4- Always immunize children with vaccines	2.76	G	3.00	G	2.76	G
5- I protect my child from any injury.	1.30	P	3.00	G	3.00	G
6- Watch the child when they climb the stairs if they have eyelid drop.	2.09	Fr	3.00	G	3.00	G
7- Consult an ophthalmologic gist in case of eye redness with squint.	1.40	P	3.00	G	3.00	G
Assessment of Mothers' Practices Preoperative for Eyes Squint.						
1- Follow the doctor's instructions before and after the procedure to spare the child complications postoperative.	2.27	Fr	3.00	G	3.00	G
2- Bring the child to hospital before day of operation to complete the required tests	2.24	Fr	3.00	G	3.00	G
3- Encourage my child for complete psychological rest	2.28	Fr	3.00	G	3.00	G
4- Do warm bath for child before operation	1.58	P	3.00	G	3.00	G
5-Prevent my child from food and drink for at least two hours before the operation.	2.4	Fr	3.00	G	3.00	G
Assessment of Mothers' Practices Postoperative for Eyes Squint.						
1- Keep the eyes covered postoperative.	2.14	Fr	3.00	G	3.00	G
2- Prevent my child from swimming after four hours of operation.	1.93	Fr	3.00	G	3.00	G
3- Keep child to wear glasses after operation	2.31	Fr	3.00	G	3.00	G
4- Keep my child from dust after operation	2.16	Fr	3.00	G	3.00	G
5- Keep the site of operation for my child.	2.07	Fr	3.00	G	3.00	G
6- Treatment a child early to prevent consequences of squint.	2.26	Fr	3.00	G	3.00	G
7- Help a child with daily activities such as	2.63	G	3.00	G	2.63	G
8- I encourage my child to have visual therapy that strengthens the eyes muscles.	1.52	P	3.00	G	3.00	G
9- Keep a child away electronic devices.	1.51	P	3.00	G	3.00	G
10- keep child fasting after 3hours surgery	2.28	Fr	3.00	G	3.00	G
11- Regarding adhesive lenses for treatment some cases of squint.	2.02	Fr	3.00	G	3.00	G
12-Take off lenses from child and wear glasses in case of eye infection.	1.66	P	3.00	G	3.00	G
13-Inform a child to keep lenses &how care	1.62	P	3.00	G	3.00	G
14-Do hand wash with soap and water before handling the lenses	2.33	Fr	3.00	G	2.38	G
15-Clean the lenses' container with hot water and soap one time per week.	1.16	P	3.00	G	3.00	G
16-Avoid using lenses for a child post surge	2.24	Fr	3.00	G	3.00	G
17-Take leave for my child from the school after operation and to avoid complications after the operation	2.24	Fr	3.00	G	3.00	G
Analysis of Variance for Mothers' Practices towards Squint with regard to their Age Group and Education Practices						

Age	df	F	P ≤	Education	df	F	P ≤

Practices			0.05	**Practices**			0.05
General Practices.	99	1.467	(N.S)	**General Practices.**	99	1.936	(N.S)
Practices during Eyes Infection.	99	1.022	(N.S)	**During Eyes Infec**	99	1.616	(N.S)
Practices toward Exercise.	99	1.030	(N.S)	**Practices toward Exercise.**	99	2.306	(S)
Practices toward Prevention.	99	1.592	(N.S)	**Practices toward Prevention.**	99	1.647	(N.S)
Preoperative Practices.	99	2.521	(S)	**Preoperative Prac**	99	.754	(N.S)
Postoperative Practices.	99	1.837	(N.S)	**Postoperative Pract**	99	1.275	(N.S)
Overall Practices.	99	2.957	(S)	**Overall Practices.**	99	1.967	(S).

ANOVA= Analysis of Variance, d.f= degree of freedom, F= F-test, p: probability, C.S.: Comparison, Significant, NS: Non Significant at P < 0.05, Ass. = assessment level of mean score, P=Poor level (1, 16-1.66), Fr=Fair level (1.93-2.32), G=Good high level (2.38-3).

Analysis of Variance for Mothers' Practices Towards Squint with their Occupational Status

Analysis of Variance for Mothers' Practices towards Squint with their Marital Status

Occupation Practices	**df**	**F**	**P ≤** 0.05	**Education Practices**	**df**	**F**	**P ≤** 0.05
General Practices.	99	5.351	(S)	**General Practices.**	99	1.053	(N.S)
Practices during Eyes Infection	99	1.801	(N.S)	**During Eyes Infec**	99	1.687	(N.S)
Practices toward Exercise.	99	7.437	(H.S)	**Practices toward Exercise.**	99	.986	(N.S)
Practices toward Prevention.	99	4.845	(S)	**Practices toward Prevention.**	99	.141	(N.S)
Preoperative Practices.	99	3.537	(S)	**Preoperative Prac**	99	.378	(N.S)
Postoperative Practices.	99	4.861	(S)	**Postoperative Prac**	99	.682	(N.S)
Overall Practices.	99	7.797	(H.S)	**Overall Practices.**	99	.720	(N.S).

H.S: High significant, Practices during infection show no significant, high significant differences with overall practices &toward exercise at p-value ≤ 0.001, while significant differences with pre and postoperative practices at p-value ≤ 0.01 and 0.05 this table reveals that there is no significant Between Mothers' practices towards squint with their marital status, p-value ≤ 0.05.

Table (4) shows that there is no significant difference between the mean of pre-test, post-test I and post-test II of the Mothers' Practices toward care of Children with squint related with age of mothers for all items except preoperative when they are analyzed by ANOVA. While have significant difference between the mean of pre-test, post-test I and post-test II of the Mothers' Practices related with educational level of them for item of practices toward exercise.

Discussion

Table (1) ensures the equality in these groups. The results reveals that majority of participant in these group is 33 (34%) aged (20-29) years, while (27%) aged (30-49) years. this is consistent with a study of Mona S. et al., (2019) in Saudi Arabia, who reported the majority (42.4%) of study sample aged between (20-29) years old. [(7)]
Concern with educational level, the most of The study group has graduates from intermediate and secondary school (17%) of the study. These results supported by the study of Achugwo DC (2016) in Benin City who reported that most of the study sample was graduates from Secondary school about (125) 48% had leaving certificate as their highest level of education. [(8)] Related to occupational level, the majority of the mothers about (51%) have house- wife, The results is similar with a study of Kyung Eun .et al., (2018) in South Korea, who reported that majority (57.54%) of the mothers have high income of the parent are 3704 of the mothers were housewives. [(9)] Regarding to marital status, the majority of the mothers 'are 46(69%) were married. 23(16%) are divorced, while the remaining 16 (15%) were widowed. This show the mothers were widowed have been affected on the care of children. This agreed with the study of Jagadish A et al., (2018) in Goa, Who reported on the mothers were high effects on the child with squint are 48% and was married. [(10)] Concern with gender of children, the majority of children are boys about53 (53%) the highest rate of children. this is consistent with a study of Malak Mansour et al., (2019) in Saudi, who reported the majority of the sample the study conducts participants (40.9 % boys). [(11)] Relating to children age, the results reveal the majority of children in this group is 37(37%) aged (1-3) years. This agreed with the study of Noor H Abady et al., (2019) in Fallujah, who mention the majority of children aged from sixth month- (two) years. [(12)] Regarding the type of squint for children, the majority of children in this group is (35%) typed congenital squint, while (21 %) are esotropia typed, and only (12%) are exotropia type. This results disagrees with study of Amy E Greenberg et al., (2006), who reported the majority of children in this study is esotropia are (36.4%); while the congenital type about (8.1%). [(13)] Related to family have other children affected with squint, the majority in the study is (59%) were affected of squint. While other children are (41%) have not affecting with squint. This lead to the genetics play role in the development of squint. This agree with study of Gail D. E. Maconachie (2013) who reported the family history and related with squint including inheritance patterns(22.0%), and conduct with study to identify known environmental and genetic risk factors for comitant squint. [(14)]

Regarding to other disease with squint, the majority of children is suffering from other diseases are cerebral palsy (10%) were the highest percentage in the study, this disagree with the study of Zainab Mudhfer et al., (2014) in Iraq, who reported the history of seizure, cerebral palsy, and syndromes are not significantly associated with eye and vision problems. [(15)]
Table (2) indicated significant difference between mean of pre-test, post-test I & post-test II in practices of mothers ' toward care of Children with squint on the study, regarding the general practices toward squint; the mean of items during the pre-test indicates fair level among all items except item 6 that reveal poor level and item 14 that reveals good level. The mean scores for item during the post1 & post 2-test indicate the mothers are good level of practices among all items of the scale. This result agrees with study of Vipin Rana et al., (2017), who reported also mothers ' practices have poor toward squint.
Table (3) indicated significant difference between mean of pre, post 1& post-test 2in practices of mothers 'toward care of Children with squint related exercises the mothers have poor practices with exercise for eyes squint for children during pre test and increase with post test2, the items (6, 7, 9, &10) are fair, while item (8) are good. While comparing between mothers practices among post 1 & post test 2 are good level among all items, except the item 9 &10are fair level during the post-test2. There are no studies to support this study based on the researchers **'**point of view.
Table (4) indicate significant difference between mean of pre, post 1& post-test 2in practices of mothers 'toward prevented squint for children all items are fair, except items (5& 7) are poor level. While no significant difference in item (4) are good level. The mean scores for item during the post-test 1 and 2 indicate that mothers are showing good level of practices among all items of the scale sub-domain. This study nearly the same results were reached by Yarnall *et al.* (2013). Moreover, who found the mothers have poor knowledge and practices toward preventive of squint. But presents comparing between mother practices among two period pre & post test2 are showing the mothers have poor level of pre-test are (1.51%) & practices increased to good level during the post-test 1 and 2 (100%) among all mothers. there are no studies to support these results. the researcher **'**based on point of view, these results may related to reading manual guidelines that is available in the mothers at hospital after exposing to the same test of questionnaire related for child eye preoperative or get the instruction from other source than reading.
Regarding to postoperative practices, all mothers 'have significant different among pre, post1, & post2 test between poor to fair, except item (7) are good level. While the mean scores among two period post 1 & post test2 for mothers ' practices toward postoperative of squint have no significant different are good level of practices among all items.
Assessment variance for mothers' practices towards squint regard to their age group are no significant different in all practices, except preoperative practices they are analyzed by ANOVA, poor level (1.16 -1.66), Fair level (1.93-2.32), good high level (2.38-3). While related their educational level are poor (.754) in pre operative & high level (good= 2.3.6) in practice toward exercises. But assessment of mothers' practices towards squint with their occupational status have no significant different in practices infection, and high significant differences with practices exercise at p-value $\leq$ 0.001, while significant differences with pre and postoperative practices at p-value $\leq$ 0.01 and 0.05. This is similar with a study of Kyung Eun .et. al .(2018) in South Korea, who reported there is significant different between mothers '

practices and occupation status. This table reveals there is no significant between mothers' practices towards squint with their marital status, p-value ≤ 0.05.

Recommendation

1- Providing educational program, guide- lines, and handbook, picture, video, and explain some exercise.
2- Educational & training cycles around care of children with squint must developed & implemented at hospital to improve mothers 'practices regarding to children with squint.
3- Educational lectures must regularly do & updated for mothers 'about care of children with squint.
4- Offer educational booklets for mothers' to improve their knowledge & practices.
5- Encourage the mothers to participate in training courses and congresses held by specialists in squint of eyes to update their practices.
6- Further studies should conducted on a large sample & include large number of hospital in Baghdad city, also in the other governorates' in Iraq. Can be carrying out in other settings and places with consideration to wide-range sample characteristics to getting extra results.

REFERENCES

1. Adam Felman. (2017). what's to know about squint, or strabismus? P.p1. Available at: https://www. Medical news today. com/ articles /220429
2. Whaley and Wong. (1985). Squint Definition, by Essential of Pediatric-Nursing/2End edition: P.P.159-522e.
3. Corina O'Dowd. (Dec- 2013) evaluating Squints in children, Update from Australian Family Physician Vol. 42 No (12).
4. Harborough R, Kingsthorpe, Northampton, et al., (2016) The Treatment for Squint, Available at: http://www.shropshiredisability.net/onevision/
5. Pediatric Nursing, (Edition 2end), Nursing Management Childhood of Eye Disease, Nursing Interventions, WY 159, D232P, Acc No (8512): p.p.438. (Parul Datta, 2009).
6. Mary Lowth (2018). Squint in children, visual problems (Blurred Vision) Behavioral vision therapy, this article. Available at: https://moorfieldseyecharity.org.uk/research-and-innovation/what-we-are-funding.
7. Mona S Khojah, Al-Ghamdi, S, Shahad Alaydarous, and Jumanah J Homsi (2019). Knowledge & attitude toward strabismus in Western province, Saudi Arabia, Ophthalmology, Family/ General Practice, Public Health, DOI: 10.7759/cureus.6571: pp.3:12
8. Achugwo, DC. (2016). parental knowledge & attitude to children's eye care Services, original article published by Niger J. Pediatric 2016; 43 (3): F Pp.215-220, DOI: http:/dx.doi.org/10.4314/njp.v43i3.11.
9. Han KE, Baek S-H. (2018). Prevalence and risk factors of strabismus in children and adolescents in South Korea: Korea National Health and Nutrition Examination Survey, 2008–2011, Plops one 13(2): e0191857. Available at: https://doi.org/10.1371/journal.pone.0191857
10. Jagadish A. Cacodcar, Tanvi P. Raiturcar, A study on knowledge, attitude & practices among parents towards children with strabismus in Goa; Indian. J. Clin. Experimental Ophthalmology 2018; Vol. 4 No (4): pp.507-510. Retrieved from: https://www.semanticscholar.org/ paper A-study-on-knowledge%2C-attitude-& -practices-among- Cacodcar
11. Malak M. Alhaddab, et al., (2019). Awareness, Knowledge, and Perception of Amblyopia among Parents Attending Pediatric and Ophthalmology Clinics at Kasch, Riyadh, Article (PDF Available) *in* Inter. J. Adv Res, Vol. 7 No. (11): pp.458-469.
12. Allawi, R. F, Noor Hussain Abady, Al-jumaili, A. Abdul- jabber. (2019). Association between Strabismus and Refractive Errors among Preschool Children in Fallujah, Iraq, by Indian Journal of Public Health Research and Development, May 2019; Vol.10 No (5): p.p.509.
13. Amy E. Greenberg, B.G. Mohney, Nancy N. Diehl, J. P. Burke. (2006). Incidence and Types of Childhood Esotropia: A Population-Based Study, Ophthalmology. Original Article: Vol. 114 Issue (1), Jan 2007; pp.170-174
14. Gail.DE. Maconachie, I. Gottlob, Rebecca J. McLean, Risk Factors & Genetics in Common Comitant Strabismus a Systematic Review of the Literature, Original Invest: JAMA Ophthalmol. 2013; 131(9): pp.1179-1186. Doi: 10.1001/ jamaophthalmol.2013.4001. [Pub med] [Google Scoular]
15. Middle East Journal of Family Medicine, Prevalence of Eye and Vision Abnormalities among a Sample of Children up to five years old who visit Primary Health Care Centers in Baghdad Al-resafa, Zainab M. N, Sanaa J. H. Alkaisi, et al. Vol. 12 Issue (9): October 2014; retrieved from: https://www.researchgate.net/publication/284706454