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Prevention of Home Accident Among children with Retinoblastoma

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Abstract: **Accidents are common among children with retinoblastoma, although these accidents were not adequately managed by community. Aim: prevention of home accident among children with retinoblastoma. Design: A quasi experimental design. Setting: at cancer children hospital 57357and parent home. Sampling: A purposeful samples of 100 parents according to specific criteria Tools: three tools were used for data collection. First tool: was an interviewing Questionnaire, (a) Socio – demographic characteristics (b) child health need and problem (c) parent knowledge about retinoblastoma (d) parent knowledge and practice according to prevention of home accident. Second tool: Home environment observation check list for assessing the children home safety. Third tool: medical record analysis regarding diagnosis. Results: The most of parent had satisfactory 'knowledge about prevention of home accident among their children with retinoblastoma, the most of parent had correct practices related prevention of home accident among their children with retinoblastoma, There is improvement of safe home environmental measure post education program around three quarter were safe home. Conclusion: The developed educational intervention led to significant improvements in parents' knowledge, practices, health need and safe of home environment children post educational intervention. The study concluded that the around two third of them were achieved health needs in post education program. The most of parents had unsatisfactory knowledge about retinoblastoma. This improved to satisfactory knowledge for majority of parents respectively post program implementation. More than three quarters of them their knowledge became satisfactory post program. The educational program produced improvement in parents' knowledge related to first aid, there were noticed improvement of parents' total knowledge and practices through program Recommendations: Implement health education regarding prevention of home accident among child with retinoblastoma, instruction of prevention of home accident, First aid training should be provided to parents as an essential need.**

Keywords: **children with retinoblastoma,, education program, level of prevention.**

1. INTRODUCTION

Home accident means unfortunate happening that occurs as an event that occurs incidentally causally or by chance in home may be due to mechanical, thermal, electrical, and chemical and usually results in physical harm, injury damage or loss. Accidental injuries are a major health problem in children specially who suffering from disability by different type. Accident the most common cause of death in children under five years of age. **(Maisauo, A. 2014).**

Most of these accidents are preventable through increased awareness of parent about practice which minimize home accident among their children having retinoblastoma, also improvements in the home environment and modification of safety measure in home. Accidental injuries to infants and young children are often serious, but are largely preventable with appropriate information and safe practices **(Ashwill & Droske, 2014).**

Causes of home injuries are included the house condition such as the house floor is too smooth, unsafe balcony, untidy objects, in houses, electric equipment, hot or burn objects and other issues like chemicals, spoiled food, well or water container without covers, animals specially dogs without muzzles, sharp objects etc. some factors like number of children of the family or family economic conditions related to an increasing rate of home injury. The largest proportion of accidents is falls from stairs or steps with over 60 per cent of deaths resulting from accidents on stairs. Fifteen per cent of falls are from a chair or out of bed **(Kliegman, R, et al, 2012).**

Retinoblastoma: a malignant tumor of the retina that develops during childhood is a rare form of cancer that rapidly develops from the immature cells of a retina, is derived from retinal germ cells, and is associated with a chromosomal abnormality. Cancer that forms in the tissues of the retina. Retinoblastoma usually occurs in children younger than 5 years, it may be hereditary or nonhereditary (sporadic) in other cases, it is caused by a congenital mutation. This cancer, they may lose their vision in the affected eye(s) or need to have the eye remove **(Morin et al., 2011)**.

The most common symptom of retinoblastoma is leukocoria. Leukocoria results when the pupil reflects a white color rather than the normal black or red color that is seen on a flash photograph. It is often most obvious in flash photographs; since the pupil is exposed to a lot of light and the duration of the exposure is so short, the pupil does not have time to constrict, Children with retinoblastoma may also experience red, painful, and irritated eyes, inflamed tissue around the eye, enlarged pupils, and possibly different-colored eyes **(Mbulaiteye, J. et al., 2014).**

The priority of retinoblastoma treatment is to preserve the life of the child, then to preserve vision, and then to minimize complications or side effects of treatment. The exact course of treatment will depend on the individual case and will be decided by the ophthalmologist and the pediatric oncologist. Children with involvement of both eyes at diagnosis usually require multimodality therapy (chemotherapy, local therapies, surgery).Screening for retinoblastoma should be part of a "well baby" screening for newborns during the first three months of life The earlier the diagnosis, the more likely that an eye can be salvaged and vision maintained **(Mbulaiteye, J. etal,2014).**

The Community health Nurses play an important role in prevention of home accidents for children with Retinoblastoma can also influence child's care and safety by incorporating the practical guidelines of prevention tools for parent to improving knowledge and practice toward prevention of home accident while, promoting an intervention when accident happen as first aid done for deal with home accidents due to retinoblastoma. and prevent complication happen after home accident, as well as making referrals to the hospital, also the Community health Nurses are in key position in education families about how to promote home safety, eliminating hazard before exposure occur, and screening for environmental hazards **(Menacker, S.J. 2013).**

Children suffering from retinoblastoma are most at risk from a home accident the age 1-5 years age group... Most of home accidents are preventable through increased awareness, improvements in the home environment because children are often absorbed in their own immediate interests they can be oblivious to their surroundings. Children only have a limited perception of the environment because of their lack of experience or development and their disease. Children are not aware of the consequences of the many new situations that encounter daily. Beside children are having visual disability due to retinoblastoma **(WHO, 2016).**

In Egypt, retinoblastoma child present more frequently with advanced disease. Age standardized rates by site and gender in Egyptian children under age 5years was 3 per million while in the US it was 5.6 per million. Considering an expected retinoblastoma incidence of 1 per 15, 000–16, 600 live births and an annual increase of population by 2.1 million, we can infer that the number of new retinoblastoma patients in Egypt ranges between 120 and 140 child with retinoblastoma annually (WHO, 2015).

It could be roughly estimated that cancer children hospital Egypt (CCHE) receives annually around 40–50% of the total retinoblastoma children in the Egypt.

Globally, about 100 in one million births develop retinoblastoma, and it is estimated that around 9,000 children are newly affected each year. Due to global population distribution, 90% of these children live in developing countries. At the Hospital receive about 150 retinoblastoma cancer patients a year, and these represent 5% of all cancer cases accepted by the Hospital during the year. **(CCHE 2018).**

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The main types of accidents in the home among children with retinoblastoma are falls, fires and burns, suffocation, choking, poisoning, cuts and lacerations. Accidents are one of the five leading causes of death in industrialized and developing countries. Injuries arising from home accidents are increasing community health problems. Also every year many children are injured or killed are as a result of accidental poisoning,, burns, and bits. Sometimes these accidents are caused in the home. Also accident is the leading cause of death and is a major reason for hospital admission and long term of disability **(Mahalakshmy et al., 2013).**

The Parents can play an important role as team members of the health care delivery team of their children suffering from retinoblastoma. Parents has three essential roles which are; protect their children from harm, promoting emotional as well as physical health, enforcing boundaries to ensure their children's safety and optimizing their children's development. Parents are usually the primary decision makers on matters affecting their children's health. Moreover, Parents function as role models for their children and therefore, Parents own hygienic habits are very meaningful. In addition, Parents ' characteristics and beliefs may be an important consideration in attempts made to improve their children's health care (**Tuck, M.K. 2014).**

Primary prevention aims to prevent accident or injury before it ever occurs. This is done by preventing exposures to hazards that cause disease or injury, altering unhealthy or unsafe behaviors that can lead to disease or injury, and increasing resistance to disease or injury should exposure occur. Legislation and enforcement to control the use of hazardous products (e.g. asbestos) or to mandate safe and healthy practices (e.g. use of seatbelts and bike helmets) education about healthy and safe habits (e.g. eating well, exercising regularly, not smoking), immunization against infectious diseases **(Judith & Cheric, 2014)**

Secondary prevention aims to reduce the impact of an accident or injury that has already occurred. This is done by detecting and treating accident or injury as soon as possible to halt or slow its progress, encouraging personal strategies to prevent re-injury or recurrence, and implementing programs to return children to original health and function to prevent long-term problems. Examples include: first aid which the parent applying after injury the community health nurse design education program for the parent to deal with their child after injury to improve their knowledge and practice, also follow and evaluate the first aid which done after injury by parent **(Higgins&Katz, 2014).**

Tertiary prevention aims to often the impact of an ongoing illness or injury that has lasting effects. This is done by helping parents manage long-term, often-complex health problems and injuries (e.g. chronic diseases, permanent impairments) in order to improve as much as possible their ability to function, their quality of life and their life expectancy. Examples include: rehabilitation programs, support groups that allow members to share strategies for living well, vocational rehabilitation programs to retrain for normal life they have recovered as much as possible Tertiary prevention focuses on child who are already affected by an injury **(Catherine, E., et al. 2015).**

Significant of the study:

Children suffering from retinoblastoma are most at risk from a home accident the age 0-5 year's age group... Most of these accidents are preventable through increased awareness, improvements in the home environment and greater product safety. Children have accidents; because children are often absorbed in their own immediate interests they can be oblivious to their surroundings. They only have a limited perception of the environment because of their lack of experience or development and their disease. They are not aware of the consequences of the many new situations that they encounter daily. Beside they are having visual disability due to retinoblastoma **(WHO, 2016).**

The largest number of home accident accidents happens in the living or dining room, but the most serious accidents happen in the kitchen and on the stairs. 'Every year more than 67,000 children experience an accident in the kitchen and 43,000 of these are aged fewer than five. Children under the age of five years old have the most accidents at home and boys are more likely to have accidents than girls. Retinoblastoma could occur unilaterally or bilaterally for that the child suffering from vision impairment. **(Sheila Merrill, 2015).**

Modifying and repairing the home can help prevent accidents and make most homes safer for children. Research suggests that one-third to one-half of home accidents can be prevented by such modification or repair. Adapting or modifying the home environment of children may be required in order to mitigate identified hazards and facilitate greater participation in daily activities, exercises to enhance mobility (particularly balance, strength, and gait training), and promotion of the safe performance of daily activities. ***(National Institute on Aging, 2016).***

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AIM OF THE STUDY

Evaluate the prevention of home accident among children with retinoblastoma

2. SUBJECTS AND METHODS

Research design:

A quasi experimental design was used

Setting: The study was conducted in children cancer hospital Egypt 57357 outpatient. The researcher did home visit to observe environmental safety measure in home through standardized checklist.

Sampling: A purposeful samples of parent with the children suffering from retinoblastoma was used from the pre mentioned setting, with a total number of around 10% of total number of parent who attended the holding area with their child were followed up till December2017 study sample 100 parent and take the agreement from statistical department in the setting ***Data collection tools***:

The first tool: An interview Questionnaire

This tool was written simple Arabic to assess parents and their children with retinoblastoma, it included the following parts:

Part I: It is concerned with demographic data of the children with retinoblastoma disease that included, sex, age...). & demographic data of the parents that included age, educational level, and occupation…).

Part II: Concerned with past medical history for parents and their children with retinoblastoma

Part III: it was concerned with health problems for children with retinoblastoma.

Part IV: Concerned with health needs for children with retinoblastoma

Scoring system:

(A) Achieved …… 2.

(B) Sometimes achieved ….. 1.

(C) Never achieved ……. zero.

The total score was classified as follows:

Achievement:< 60%.

Non-achievement (> 60 %)

Part V: parent's knowledge regarding children with retinoblastoma:

Scoring system:

(A) Correct answer …… 1,

(B) Incorrect answer …0

The total score was classified as follows:

"Satisfactory knowledge "scored < 50%.

“Unsatisfactory knowledge "scored > 50%.

Part VI: parent's knowledge regarding preventive home accident:

Scoring system

(A) Correct answer …… 1,

(B) Incorrect answer …0

The total score was classified as follows:

"Satisfactory knowledge "scored < 50%.

"Unsatisfactory knowledge "scored > 50%.

Part VII: Assess parent practice as reported about preventive home accident among their children with retinoblastoma.

Scoring system:

(A) Inadequate Practices …… 0,

(B) Adequate Practices ….. 1

The total score was classified as follows:

"Adequate practices "scored < 50%.

"Inadequate practices "scored > 50%.

Second tool: Assessment of environmental safety measure in home through standardized observation checklist of safe home environment

Scoring system:

(A) Unsafe …… 0,

(B) Safe ….. 1

Was classified into two categories as follow:

"Safety environment "scored < 60%.

"Unsafely environment" scored > 60%.

Third Tool:

Medical Record analysis in order to identify (degree of disease, health problem etc…).

Statistical analysis:

Results were tabulated and statistically analyzed using standard computer program using Microsoft office Excel 2016 and SPSS V.21 program for Microsoft windows 10

Two types of statistics were done:

Descriptive statistics: that included the following

▪ the description of data was in the form of mean, SD for quantitative data, frequency and proportion for qualitative data.

▪ the mean is the sum of all observations by the number of observation. While the standard deviation is measures the degree of scatter of individual varieties around their mean.

Analytical statistics: that included the following test:-

▪ Chi-Squared ($\chi 2$): It is used to compare between two groups or more regarding one qualitative variable.

Ethical Consideration:

The ethical research considerations in this study include the following:

-The research approval was obtained from Scientific Research Ethical committee in Faculty of Nursing at Ain Shams University before starting the study.

Approvals were obtained from administrators of the Children's Cancer Hospital in Egypt (57357). It has been approved by the Scientific Medical Advisory Committee (SMAC) and Internal Reviser Board (IRB).

-The researcher clarified the objective and aim of the study to the participants included in the study.

-The researcher assures maintaining anonymity and confidentiality of the subject data.

-A written consent was obtained from participants after explaining the purpose of study.

-Each participants had right to withdraw from the study at any time.

Operational design:

The operational design includes preparatory phase, Pilot study and field work.

A-Preparatory phase:

It includes reviewing current and past, local and international related literature and theoretical knowledge of various aspects of the study using books, articles, internet, periodicals and magazines to develop tools for data collection related to educational strategies. The developed tools were examined by experts to test their reliability to the study. Researcher made needed modification on tools of data collection after their revising by experts

B. Pilot Study

A pilot study was carried out on 10 from parents have children with retinoblastoma from the sample to test the applicability of the tools, techniques. The obtained results from pilot study helped in the necessary modification of the tools.

C. Field Work:

After an approval was taken from the scientific medical advisory committee and internal Reviser Board of the mentioned study setting, the interview was conducted individually for each participant to collect the required data After An informed written consent was taken from each parent •study was carried out from the beginning of Marsh 2018 till the end of September 2018in cancer children Hospital Egypt, outpatient (recovery unit), interviewed in unit's 3days per week (Sundays, Mondays, and Wednesday) in the shift from 8:00am, to4:00pm._Tools of data collection will be taking approximately 20-30 min and did home visit for assess safe home environment.

Program Construction*:*

Education program construction conducted in four phases:

First phases: preparatory Phase: a review of recent, current, national and international related literature in various aspects of the problem and to develop the study tools.

Second phase: At the beginning of the assessment phase, the program was used the pervious mentioned tools for data collection.

Third Phase: the planning and implementation phase: The education program was designed and developed by the investigator based on the results obtained from the study tools and was revised and modified according to supervisors. Before implementing the program, field visits were done to explain the nature and purpose of the study to the parents regarding children with retinoblastoma, as well to discuss the plan of work to ensure their cooperation. This content implemented to parents regarding children with retinoblastoma to objectives, the program were design to ensuring its practical nature, addressing knowledge, practices skills necessary to parent's teaching through Retinoblastoma, hence to improve knowledge and practice of their children by prevent of home accident which done due to the age and their disease.

The Objective of the Program:

The study aimed to evaluate the prevention of home accident among children with retinoblastoma.

The program content included the following:

1-Acquire the retinoblastoma. (Concept, types, causes, signs and symptoms, diagnostic test, complications)

2-Enumerate the child health need and problems.

3-Identify the home accident (Concept, types, causes,

4-Mention the home accident prevention (fracture, chocking, bleeding, wound, burn ….)

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5-Demonstrate the first aid applies in home for child to deal with home accident among children with retinoblastoma.

6-Develop the measuring safe environment in home to prevent home accident among children with retinoblastoma.

The program duration differs from one parent to the other according to their state of everyone. Each session started by a summary about the previous session and the objectives of the new one, taken into consideration the use simple language to suit the level of parents with children. Also given consideration educational level, and cognitive abilities.

At the end of each session, discussion with parents regarding children with retinoblastoma questions to correct any misunderstand; parents were informed about the content and time the next session.

Fourth Phase: Program evaluation phase

Evaluation was based on acquired knowledge and practices to evaluate health education program through pre and post-test.

Teaching method:

Methods were used in teaching the program content included the following: lectures/ group discussion, Videos, Poster, aid a demonstration poster, power point, and booklet or hand out were distributed as appropriate to all parents regarding children with retinoblastoma (sample).

3. RESULT

Table (1): Distribution of study sample according to their socio-demographic characteristics (n=100).

Items		No	%
Mothers' age n=64	20-<30 years	32	51.0
	30-<40 years	24	38.0
	40 < 50 years	8	11.0
Mean age = **32.33± 4,601**			
Mothers' educational level	Illiterate	13	20.1
	Read / write	15	23.2
	Diploma.	26	40.1
	Bachelor	10	15.6
Mothers job	House wife	34	53.9
	Employee	30	46.1
Fathers' age n=36	20-<30 years	7	19.0
	30-<40 years	18	50.0
	40 < 50 years	11	30.0
Mean age = **36.13±5.9**			
Fathers' educational level	Illiterate	6	16.0
	Read / write	8	22.0
	Diploma.	12	33.0
	Bachelor	10	27.0
Fathers' job	Employee	21	58.8
	Free job	15	41.2
Residence	Rural	60	60.0
	Urban	40	40.0
Family income	Sufficient	53	53.0
	Insufficient	47	47.0
Family size	3:4	58	58.0
	4+	42	42.0

Table (1) shows that the mean age of the mothers' was 32.33± 4,601 years while mean age of the fathers' was 36.13±5.9 years. 39% of parent were considered illiterate, 53.9% of mother were house wife and only 46.3% of them were employees,. As regards family residence for 60% of family live in rural area and 40% of them live in urban with insufficient family income for 47% and 58% of them from 3 to4 family members.

Table (2): Distribution of study sample according to their knowledge about retinoblastoma pre and post program implementation (n=100).

knowledge about retinoblastoma	Pre program				Post program				Chi-square χ^2 P value
	Satisfactory knowledge		Unsatisfactory knowledge		Satisfactory knowledge		Unsatisfactory knowledge		
	No	%	No	%	No	%	No	%	
Anatomy of eye	27	27.0	73	73.0	84	84.0	16	16.0	15.593 0.000***
Meaning of retinoblastoma	34	34.0	66	66.0	68	68.0	32	32.0	23.129 0.000***
Causes of retinoblastoma	8	8.0	92	92.0	54	54.0	46	46.0	49.462 0.000***
The symptoms of retinoblastoma	9	9.0	91	91.0	55	55.0	45	45.0	48.621 0.000***
Diagnostic procedures	11	11.0	89	89.0	77	77.0	23	23.0	88.393 0.000***
Complications of retinoblastoma	18	18.0	82	82.0	54	54.0	46	46.0	73.973 0.000***
The artificial eye	52	52.0	48	48.0	81	81.0	19	19.0	18.876 0.000***
Time of replacing of artificial eye	31	31.0	69	69.0	59	59.0	41	41.0	15.838 0.000***
The benefits of the prosthetic eye	5	5.0	95	95.0	79	79.0	21	21.0	112.397 0.000***
The care of the artificial eye	15	15.0	85	85.0	74	74.0	26	26.0	70.473 0.000***
The most danger symptoms to go to the hospital when it occurs	6	6.0	94	94.0	77	77.0	23	23.0	103.82 0.000***
Total knowledge	2	2.0	98	98.0	87	87.0	13	13.0	146.27 0.000***

*** Highly statistical significant relation*** Highly statistical significant relation

Table (2) presents that around 92.0% of parents had unsatisfactory knowledge about causes, of retinoblastoma and the symptoms of it for 91.0% of them and its complications for all of them 82% preprogram implementation which improved to satisfactory knowledge for 54% and 55% respectively post program implementation. Also there were 81% of parents and 79% of them their knowledge became satisfactory post program implementation about the prosthetic eye and its benefits. The total knowledge of children's parents improved post program implementation to be 87% with highly statistical significant relation between pre and post program implementation X^2 146.27 and p value < 0.0001.

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Table (3): Distribution of study sample according to their knowledge about prevention of home accidents pre and post program implementation (n=100).

knowledge about prevention of home accidents	Pre program				Post program				Chi-square χ^2 P value
	Satisfactory knowledge		Unsatisfactory knowledge		Satisfactory knowledge		Unsatisfactory knowledge		
	No	%	No	%	No	%	No	%	
Definition of home accidents	70	70.0	30	30.0	88	88.0	12	12.0	9.765 0.001**
The risk factors of home accidents	29	29.0	71	71.0	94	94.0	6	6.0	89.22 0.000***
The types of injuries at home	7	7.0	93	93.0	55	54.0	45	45.0	53.857 0.000***
The common places lead to accidents	14	14.0	86	86.0	64	64.0	36	36.0	52.543 0.000***
preventive of falling	47	47.0	53	53.0	92	92.0	8	8.0	47.765 0.000***
preventive of burns	22	22.0	78	78.0	88	88.0	12	12.0	124.051 0.000***
preventive of choking	47	47.0	53	53.0	80	80.0	20	20.0	23.493 0.000***
preventive of drowning	49	49.0	51	51.0	80	80.0	20	20.0	20.985 0.000***
preventive of poisoning	58	58.0	42	42.0	83	83.0	17	17.0	15.026 0.000***
The child is high risk for home accidents	83	83.0	17	17.0	92	92.0	8	8.0	3.703 0.054*
Total knowledge	42.6	42.6	57/4	57.4	73.8	73.8	26.2	26.2	8.36 0.004*

Table (3) shows that knowledge about prevention of home accidents for children with retinoblastoma there were 93.0% of parents had unsatisfactory knowledge about the types of injuries at home accidents preprogram implementation which improved to satisfactory knowledge for 55% post program implementation. Also there were 92%, 88% of parents their knowledge became satisfactory post program implementation about the preventive measures of falling and burn accidents, The total knowledge of children's parents improved post program implementation to be 73.8% with highly statistical significant relation between pre and post program implementation X 2 39.019 and p value < 0.0001.

Table (4): Distribution of study sample' according to healthy adequate first aid practices of home accident for children with retinoblastoma pre and post program implementation (n=100).

Items	Preprogram		*Post program		Chi	P Value	Significant level
	No.	%	No.	%			
eye injury	47	47.0	79	79.0	8.13	0.004	0.05
Wound	30.7	30.7	68.5	68.5	14.40	0.000	0.05
Fracture	33.3	33.3	65.3	65.3	10.39	0.001	0.05
poisoning	41	41.0	73.7	73.7	9.32	0.002	0.05
Suffocation	28.4	28.4	72.2	72.2	19.07	0.000	0.05
head injury	37	37.0	70	70.0	10.18	0.001	0.05
Epistaxis	31.4	31.4	63.6	63.6	10.91	0.001	0.05

bleeding	34.8	34.8	71.6	71.6	12.73	0.000	0.05
Burn	35.7	35.7	66.5	66.5	9.28	0.002	0.05
Bleeding from mouth	28	28.0	68	68.0	16.67	0.000	0.05
Total	34.73	34.73	69.8	69.8	11.77	0.001	0.05

Table (4) reflects that 69% of the parents' have adequate practices regarding prevention of home accident among children with retinoblastoma significantly increased after the program for all kinds of practices. with statistical significant relation between pre and post program implementation (P<0.0001).

Figure (1): Distribution of study sample of parents 'according to their total knowledge about retinoblastoma pre and post program implementation

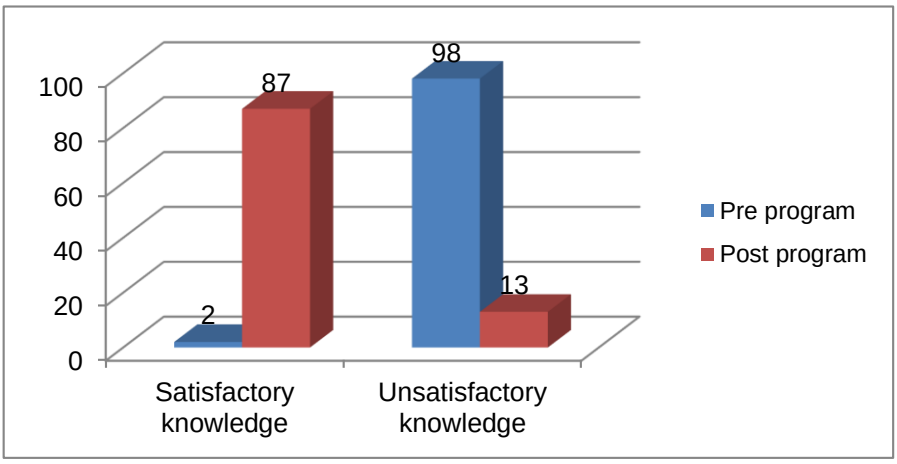

Figure (1) **shows that The total knowledge of study sample of parents improved post program implementation to be 87% with highly statistical significant relation between pre and post program implementation X2 146.27 and p value < 0.0001.**

Figure (2): Distribution of study sample of parents' 'according to their total knowledge about prevention of home accidents pre and post program implementation (n=100).

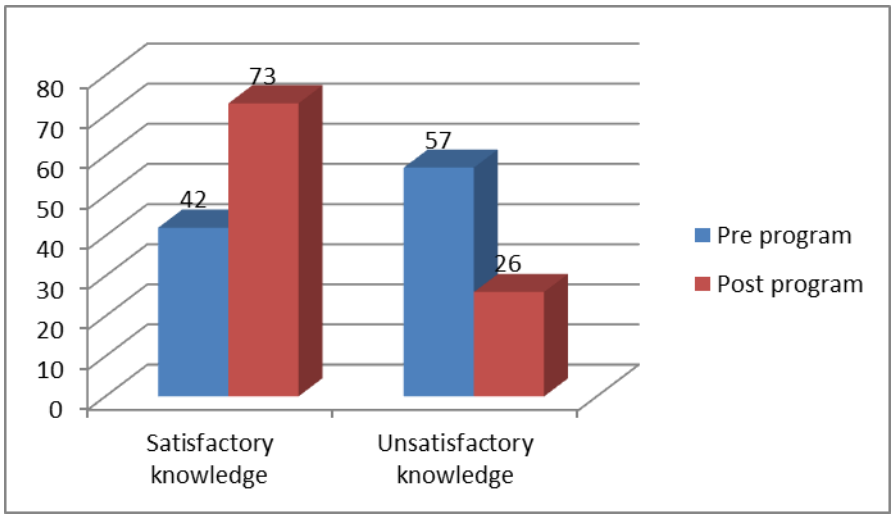

Figure (2) **shows that The total knowledge of children's parents improved post program implementation to be 73% with highly statistical significant relation between pre and post program implementation X 2 39.019 and p value < 0.0001.**

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Figure (3): Distribution of study sample of parents' healthy Adequate first aid practices of home accident among children with retinoblastoma pre and post program implementation (n=100).

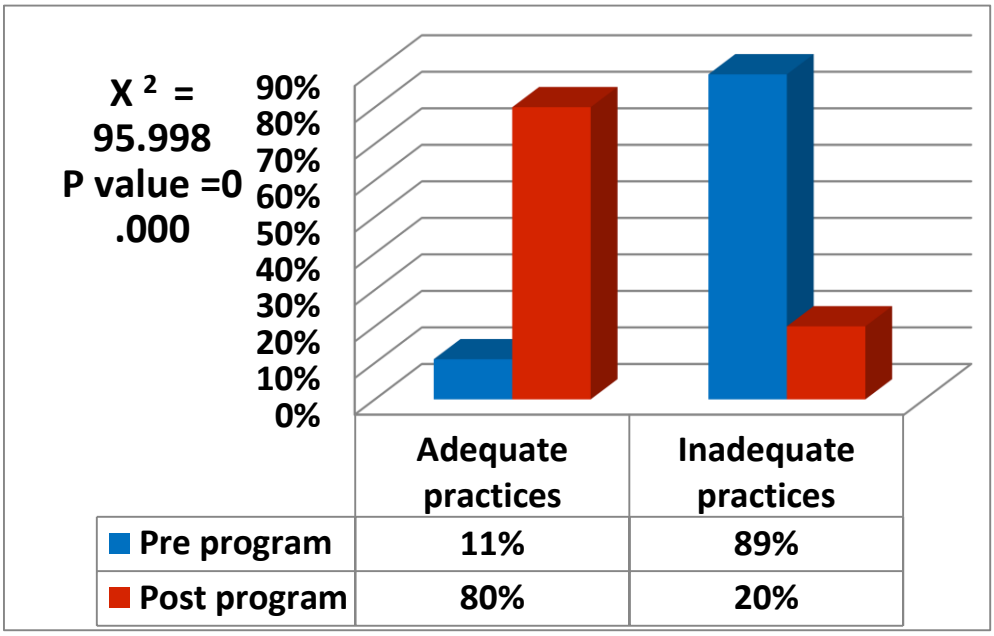

*Figure (3)*illustrates that there were noticed improvement of parents' total practices through program implementation from inadequate practices for 89% preprogram implementation to adequate practices for 80 % post program with highly statistical significant relation X^2 95.998 and p value < 0.0001.

Figure (4): Distribution of study simple according to their home safe environmental pre and post program (n=100).

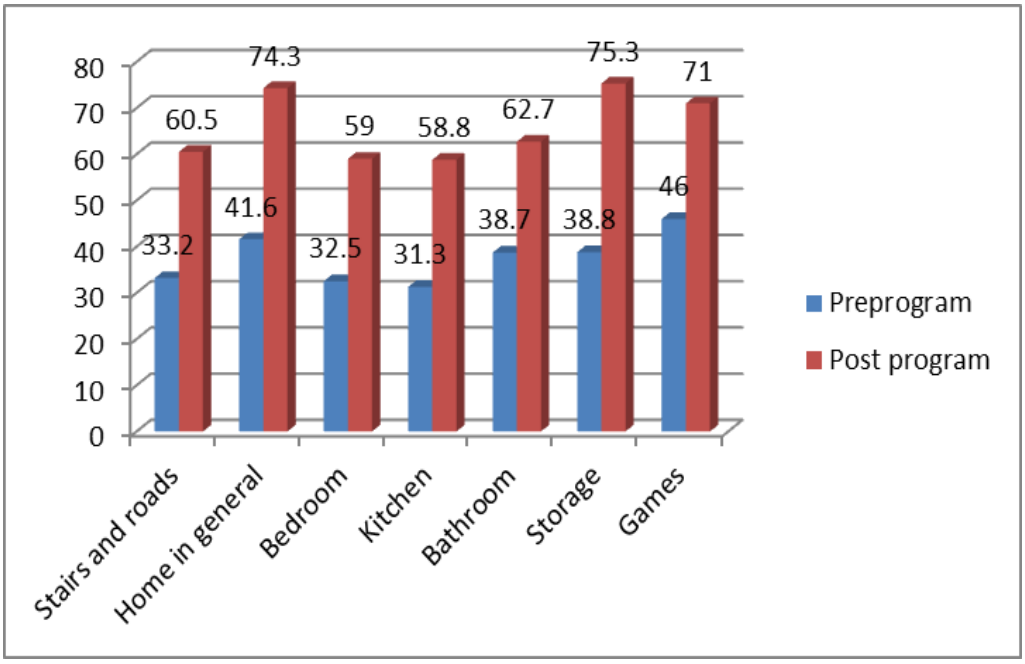

Figure (4) show that the home environmental safety measures there were the total safety measures present in stairs and road 60.5%., 74.3% in the house as general, 59.2% in the bedroom, 58.2% in the kitchen 62.7 % in the bathroom and 75.3% the in storage. 71% in the choice the games. And show that there were statistical significant relation between pre and post program implementation (P<0.0001).

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Table (3): The relation between parents' total knowledge preprogram and total practices pre and post program implementation (n=100).

Total Practices		Total knowledge Preprogram		Total	X^2	P Value
		Satisfactory knowledge	Unsatisfactory knowledge			
Preprogram	Adequate practices	7.0	4.0	10.0	22.931	0.000*** HS
	Inadequate Practices	8.0	81.0	90.0		
Total		15.0	85.0	100.0		
Post program	Adequate practices	74.0	6.0	80.0	4.88	0.027** S
	Inadequate practices	17.0	3.0	20.0		
Total		91.0	9.0	100.0		

Table (5) indicates that there were statistical relation between parents' total knowledge preprogram and total practices preprogram implementation was highly statistically significant (P<0.001) and statistical relation parents' total knowledge post program and total practices post program implementation

Table (6): The relation between parents' total practice and safe home environment pre and post program implementation (n=100).

Safe home Environment		Total practice Preprogram		Total	X^2	P Value
		Adequate practices	Inadequate practices			
Preprogram	Safe home Environment	8	19	27	15.84	0.00***
	Unsafe home environment	2	71	73		
total		10	90	100		
Post program	Safe Environment	59	16	75	0.33	0.56
	Unsafe environment	21	4	25		
Total		80	20	100.0		

Table (6) indicates that there were statistical relation between parents' total practice and safe home environment preprogram implementation was highly statistically significant (P<0.001) but post program implementation was in statistically significant (P>0.05).

Table (7): The relation between parents' total knowledge and environment pre and post program implementation (n=100)

Environment		Total knowledge Preprogram		Total	X 2	P Value
		Satisfactory knowledge	Unsatisfactory knowledge			
Preprogram	Safe home Environment	12	15	27	25.15	0.00***
	Unsafe home environment	3	70	73		
Total		15.0	85.0	100.0		
Post program	Safe home Environment	71	4	75	4.92	0.03**
	Unsafe home environment	20	5	25		
Total		91.0	9.0	100.0		

Table (7) indicates that there were statistical relation between parents' total knowledge and home environment preprogram implementation was highly statistically significant (P<0.001) and also post program implementation (P<0.05).

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4. DISCUSSION

The accident is a major cause of morbidity and mortality worldwide. Parents need to have sufficient information and strategies that can help them come to terms with having a child with retinoblastoma so that they, in turn, can help their children cope more effectively. Families especially require reliable information about accessing services to meet their children's needs communicating with health professionals, interacting and finding support in the community **(England et al., 2015).** The result of the current study compared with recent literature and other related studies.

Socio -demographic characteristics of parents.

As regards parents socio-demographic characteristics (table 1), the present study shows that above half of the studied mother's age ranged between 20-30 years. And shows that around half of the studied father's age ranged between 30-40 years This finding agreed with **Grace (2013),** who studied " Mother's Education, Age and Knowledge about Home Accident Prevention among Children in Ilesa Metropolitan City: A Relational Approach". Found that 80% of the respondents were between 26-30years. This may be due to in rural setting, this the age of reproduction and this finding contradicted with **(Hussein, 2011)** in Egypt who found that less than 50% of mothers were in age group of 20 – 29 years.

According to education level, the present study illustrated that the around one third of the studied parent were illiterate, and approximately around half of them had a primary education, as well, one quartier of them had of them have highly education (collage). Expectedly, the low educational level of the parent were had its impact on their understanding of the child condition, and should be taken into account in conducting any education program. This was no supported by the study conducted by **Ibrihem and Salem (2010),** who found in their study about Drug Compliance in cancer Children in IRAQI that the 84% of the parent of cancer children were of low education. Furthermore, **Nadkarni et al., (2011),** found in their study about Quality of life in children with cancer in India, that, the 85% of the mothers of children were illiterate. Also **Eseigbe et al., (2015)** found in their study about Perspectives of parent on Childhood in Kaduna, Northern Nigeria, that, slightly more than 66% of the parent had a primary education

The knowledge of the parents toward retinoblastoma.

Regarding to the parents' knowledge Table (2) about retinoblastoma show that the majority of parents had unsatisfactory knowledge about causes, symptoms, Complications of retinoblastoma. The most of them had unsatisfactory knowledge about the benefits and The care of the artificial eye, These results were in an accordance with results of Myrel et al (2013) who studied eye cancer in pediatrics in France and described that most of the studied sample knew the definition, causes and complications of retinoblastoma in the childhood.

Regarding to the parents knowledge preprogram implementation improved to satisfactory knowledge for around half respectively post program implementation. Also there were the majority of parents knowledge became satisfactory post program implementation about the artificial eye care and its benefits. It might be due to the rules applicable in the Children's Cancer Hospital (57357) which states that the child and his family should know the diagnosis, treatment protocol and side-effects of chemotherapy which is supported with the distribute These findings were not in an accordance with the findings of Ali (2014) study. In Baghdad on the parents' knowledge concerning children undergoing stated that there was knowledge about retinoblastoma e deficit of parents in some aspects related to type of treatment. This disagreement might be due to the keen effort of the Children's Cancer Hospital (57357) to increase the awareness of children and their families.

Figure (1) Regarding to The total knowledge of children's parents improved post program implementation to be highly statistical significant relation between pre and post program implementation X 2 146.27 and p value > 0.0001This finding was in an accordance with the report of **Yıldırım, N. (2015).** " 1-4 Year Term Kids Home Accident Risk and Determination of the Activity-Based Social Learning In Ankara who studied the family role in care of cancer patients and mentioned in a similar study that most of the parent had poor knowledge regarding retinoblastoma.

Knowledge about prevention of home accident:

Regarding to parents' knowledge about prevention of home accidents for their children with retinoblastoma Table (3)there were three quartier of parents had unsatisfactory knowledge about the types of injuries at home accidents preprogram

implementation which improved to satisfactory knowledge for half of sample post program implementation. Also there were the majority of parents knowledge became satisfactory post program implementation about the preventive measures of falling and burn accidents and all of them there The total knowledge of children's parents improved post program implementation to be the majority with highly statistical significant relation between pre and post program implementation. Also the study sample show Several misconceptions were identified among the parents before program implementation that near two thirds of parents who had satisfactory knowledge regarding accident prevention, **figure (2)** There was statistical significant differences between pre and post supportive strategy in relation to parent' and this disagree with **wafee 2015** in Egypt. These findings were higher than the present study because of different methodology and different age structure) these might be related to the need of parent to have knowledge and safety practices The study's results revealed that there was significant differences between pre and post supportive strategy in parent ' knowledge.

Practices regarding prevention of home accident:

Table (4); regards the parent practice towered care of eye injury the study sample reflects that near three quarter of the parents' practices improved to be adequate practices post program implementation toward first aid of eye injury such as cover the injured eye of the child and clean the injured eye of the child with water and advise him never move in order to stop the bleeding for around three quarter of parent, with highly statistical significant relation between pre and post program implementation ($P<0.0001$) figure3 . This result disagrees **Sparrow (2010)** who studies Childhood Home Injuries A Nursing Student Approach to Preventing Childhood Home Injuries report that about half of the participants could deal with child after bleeding with correct techniques, this due lack of training regarding eye injury in the rural setting.

Also the parent practice towered care of wound the study sample reflects that the parents' practices improved to be adequate practices post program implementation toward first aid of wound such as Clean the wound with a disinfectant, explore the cause of the wound and remove the foreign body if found, and cover the wound with clean and sterile bandages for near three quarter of parent, more than half had adequate practices regarding wound care respectively with highly statistical significant relation between pre and post program implementation.

Assessment of safe home environment to prevent home accident.

Figure 4 The study indicates that the home environmental safety measures between children with retinoblastoma according to their home safe environmental post program there were the two third in stairs and road. Three quarter in the house as general, more than half in the bedroom, around, two third in the kitchen, two third in the bathroom and three quarter the in storage. Around three quarter in the choice the games. Meanwhile Show that there were more than two thirty were safe home environment and there was statistical significant relation between pre and post program implementation with the points of view of the results are in agreement with studies Study by **Alasya, E., (2012).** "The Incidence of Home Accidents among Children Aged 1-6 Years and the Practices of Mothers with Home Accidents". In Australia agreement with the study as reported that in general, extrinsic risk factors for falls are prevalent in the homes and hazard such as floor rugs, mats, stopovers, and steps. Moreover domestic environmental hazards (e.g. poor lighting, uneven floor surfaces, and absence of grab bars in the bathroom) may increase the prevalence of home accident by more than fifty percent the home safety is an important issue,

This result disagrees with **Mohammed (2013)** who studies attendance of home accident among children with vision disability in Qaver Esam El-Gharbia Governorate report that the majority of the study sample have unsafe environment. And also this result disagrees with **Afkar, M.R. (2013).** "Supportive Strategies Regarding Accidents Prevention for Mothers of Children Under Five Years Old".

The current study showed that low percentage of safety measures found in the kitchen, bedroom, bathroom, storage and the stairs pre education program, The current study shows that the main place that child suffering for home accident in the bath room and the kitchen With the points of view of many researchers as **Cartor, et al (2007)** in Australa agreement with this study that the homes inspected had at least one hazard and more than one third had more than five hazards. The bathroom was identified as the most hazardous room

In fact the educational program didn't help to manage the safe environment completely but at least the results demonstrated its success in correcting such of these misconceptions, improving parent-concept of home safety. Also the educational program helped the parent to identify variable community resources needed for the child with retinoblastoma. The parents recognize that it's very important to inform the proved the safety measure about these home accident that probably attributed to deal with their child to prevent home accident, in addition to be communicating with community services and encouraging educational attainment. Moreover the reduction of home accident frequency, and control complication post program implementation has a significant impact on alleviating and improvement practice and knowledge.

Correlations among the study variables:

The finding of the present study revealed in Table (5) indicates that there were statistical relation between parents' total knowledge pre-program and total practices pre-program implementation was highly statistically significant (P<0.001) and statistical relation parents' total knowledge post program and total practices post program implementation This finding confirmed two facts, first the parents' knowledge and practices were improved by health education. Second increasing parents' knowledge would certainly lead to improvement in their practices in caring of their child with retinoblastoma to prevent home accident and deal with the injury by first aid practice. This finding was in accordance with **wafee 2015 in Egypt** who found in her study about education program for parent and children with retinoblastoma that training program had a improve impact on parents' knowledge, which was reflected on their practices. On other hand, results of the present study illustrated **Table (6)** indicates that there were statistical relation between parents' total practice and safe home environment pre-program implementation was highly statistically significant (P<0.001) but post program implementation was in statistically significant (P>0.05)., these means that the elevation of the parents' scores of practices and safe home environment associated with reduction of home accident frequency of the children and vice versa. Consequently, reduction of home accident frequency improves quality of life. This in turn can promote outcomes for their children with retinoblastoma. These finding highlighted the importance of training program for parents to improve their practices and improve safe home environment. These were supported by **Hirfanoglu et al., (2009)**

In relation to effect of education program on parents 'knowledge and safe home environment preprogram implementation, the current study clarified that there was highly statistically significant (P<0.001) and also post program implementation (P<0.05). Related to caring of their children with retinoblastoma (**Table 7)**. This result attributed to the parents' knowledge would be improved leading to improve safe home environment. This is agreement with a study conducted in Iran by Fathizadehetal (2012) the importance of child care has led to new arrangements and strategies planned to care children with retinoblastoma. Also This finding was in agreement with **Erkal, S., (2010**)." Identification of the number of home accidents per year involving children in the 0-6 age group and the measures taken by mothers to prevent home accidets".in Turkish who recommended that a parent learns the measure by integrating the other senses, adapting procedures and practice to improve safe home.

5. CONCLUSION

The total knowledge about retinoblastoma. Of parents improved post program implementation with highly statistical significant relation between pre and post program implementation X 2 146.27 and p value > 0.0001.

The total knowledge about prevention of home accident among children with retinoblastoma improved post program implementation with highly statistical significant relation between pre and post program implementation the majority of parents respectively post program implementation. While post program implementation, the educational program produced improvement in parents' knowledge related to first aid with clear highly statistical significant relation.

Also showed improvement in parents' practices related to prevention of home accident among their children with retinoblastoma with a highly statistically significant difference. That there were noticed improvement of parents' total practices through program implementation from inadequate practices to adequate practices for post program with highly statistical significant relation. Also There is improvement of safe home environmental measure post education program around two third were safe home.

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6. RECOMMENDATION

1. Implement health education sessions through mother classes programs regarding prevention of home accident among child with retinoblastoma.

2. Booklets, and simplified teaching materials should be available for parents regarding care of children with retinoblastoma.

3. First aid training should be provided to parents as an essential need in emergency of home accidents.

4. Further researches about care of children with retinoblastoma

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