Effect of an Educational Program on Mothers' Performance Regarding Care of their Children Undergoing Ptosis Surgery

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Abstract

Background: Mothers constitute a fundamental component of the healthcare system supporting children undergoing ptosis surgery, as their role extends well beyond the surgical intervention to include meticulous monitoring of the various stages of postoperative recovery. Through these contributions, mothers significantly enhance the therapeutic outcomes of the procedure and help reduce the likelihood of ptosis recurrence. **Aim of the study was** to evaluate effect of an educational program on mothers' performance regarding care of their children undergoing ptosis surgery. **Setting:** This study was carried out in Ophthalmology Clinics of Benha University Hospital which is affiliated to Ministry of Higher Education and Scientific Research. **Design:** Quasi-experimental research design. **Subjects:** A simple random sample of (140) mothers and their children from 3 to 18 years old undergoing ptosis surgery. **Tools of data collection: Tool I:** A structured interviewing questionnaire used to assess; socio-demographic characteristics of the studied mothers, characteristics of the studied children, medical data of children and mothers' knowledge regarding ptosis and ptosis surgery in children. **Tool II:** Interviewing questionnaire sheet regarding mothers' attitude towards care of their children undergoing ptosis surgery. **Tool III:** Interviewing questionnaire sheet regarding mothers' reported practice regarding care of their children undergoing ptosis surgery **Results:** More than one fifth of the studied mothers had adequate total knowledge level regarding ptosis and ptosis surgery pre educational program which increased to majority & more than three quarters post educational program and at follow-up respectively. Quarter of the studied mothers had positive total attitude towards care of their children undergoing ptosis surgery pre educational program which increased to majority 87.1% & 81.4% post educational program and at follow-up respectively. Less than third of the studied mothers had satisfactory total reported practice regarding care of their children undergoing ptosis surgery pre educational program which increased to majority 88.6% & 84.3% post educational program and at follow-up respectively. **Conclusion:** There were highly statistically significant positive correlation between total knowledge level, total attitude level, and total reported practice level among the studied mothers pre and post educational program and at follow-up. **Recommendations:** Continuous educational program for the mothers caring for their children undergoing ptosis surgery recommended to improve their knowledge, attitude and reported practice regarding care of their children and to achieve appropriate outcomes for a long time.

Key words: Educational program, Mothers, Care, Children, Ptosis Surgery.

Introduction

Ptosis in Greek means falling, it can be also known as blepharoptosis, upper eyelid ptosis or droopy eyelid. It is refers to an abnormally inferior displacement of the upper eyelid margin from the primary position. Moreover, when the upper eyelid extends 3 mm or more from the center of the pupil. It can be categorized according to the age of disease onset into congenital and acquired, or according to laterality into unilateral and bilateral involvement. It could be further classified based on the cause into

neurogenic, myogenic, mechanical, and traumatic **(Crum & Gensure, 2021).**

Congenital ptosis is the most common type of ptosis in childhood, it involves a malposition of one or both upper eyelids present at birth or by 1 year of age. Most common cases of congenital ptosis are attributed to myogenic causes in which there was maldevelopment of levator palpebrae superioris muscle, the primary elevator of the eyelid. The condition can occur in isolation or may be associated with other ocular or systemic conditions. Congenital ptosis is known to be associated with refractive error and abnormal visual development. Children tend to have a larger degree of astigmatism in addition to significant differences in corneal topography between the ptotic and non-ptotic eye. A common indication for early surgical correction of congenital ptosis is the prevention or treatment of amblyopia, which may be due to obstruction of the visual axis and associated significant refractive error **(Ke et al., 2023).**

Acquired ptosis can occur later in life. It occurs when levator muscle or ligaments that normally raise eyelid are weakened by injury or disease, separates away from eyelid or becomes overstretched. Acquired Ptosis usually occur due to excessive eye rubbing or eyelid pulling related to eye irritation or long-term hard or soft contact lenses use. Sometimes, the drooping is a result of damage to the nerves that control eyelid muscles. Some cases of acquired ptosis can go away on their own but some cases may need for surgery **(Beres, 2023).**

Ptosis results from dysfunction of the muscles that control lid retraction, including levator palpebrae superioris (LPS), LPS aponeurosis, and müller's muscle, or the nerve innervates of levator muscle, such as the superior branch of oculomotor nerve and cervical sympathetic system or related to chronic illness such as diabetes mellitus **(Alnosair et al., 2023).**

The main presenting complain of children with ptosis is the visual disturbance related to drooping of the eyelid ranging from mild to severe, which can be unilateral or bilateral along with cosmetic disfigurement, severe redness and dryness of the eyes, severe tearing in the eyes and difficulty seeing, tired or exhausted facial appearance, feeling pain and fatigue around the eyes due to repeatedly raising the eyebrows to be able to see and the child's tendency to tilt his head back to be able to see. Ptosis may accompany with some other problems depending upon the aetiology **(Song et al., 2021).**

A detailed ophthalmologic and neurologic history as well as a physical examination that includes an eye movement examination, head posture, eyelid symmetry, and any related movements (such as jaw-winking) can be used to identify ptosis. Visual acuity test, levator function, and MRD-1 (Margin Reflex Distance-1) are ocular measurements. Bell's phenomenon, lid lag, palpebral fissure height, and lid crease distance are additional factors. Slit-lamp examination, ocular motility, visual field tests, refraction, and, if necessary, neurologic or imaging workup are diagnostic techniques. **(Chen et al., 2025).**

Children with ptosis can be managed by observation; mild cases that do not affect vision can be monitored with routine ocular follow-up. Non-surgical treatments include patching to cure amblyopia, using glasses to address refractive faults, and using ptosis crutches, or eyeglass frames, to support the eyelid. Children with ptosis frequently need surgery to safeguard the visual axis, restore eyelid function, and enhance their looks **(Thacker et al., 2025).**

The timing of surgical treatment is determined by the severity; if the visual axis is obstructed and there is a risk of amblyopia, urgent surgery is recommended in severe instances. In mild cases, if there are no visual hazards, elective surgery may be postponed until the child is 4–5 years old. This will allow for better assessments and lessen psychosocial worries as the child grows more self-aware. A thorough grasp of the anatomy, accurate preoperative evaluation, and meticulous surgical planning are necessary for successful management **(Abdelbaky et al., 2025).**

The several surgical methods, such as the suspension of the frontalis sling: It connects the eyelid to the forehead muscle using a sling (such as a silicone rod or fascia) and works well when levator function is inadequate. Levator advancement and resection (either anteriorly or posteriorly): used to remove or modify the muscle when levator function is fair to good. Müller's modified Fasanella-Servat method and Putterman's muscular conjunctival resection. The surgical strategy is selected based on the child's situation, the degree of ptosis, and the functionality of the levator muscles. Each of these factors has its own indications, advantages, and disadvantages, requiring a customized approach for every surgical candidate **(Shah et al., 2025).**

The impact of pediatric ptosis on visual development and quality of life is the main clinical issue. Stimulus deprivation amblyopia can result from severe ptosis that blocks the visual axis. Even less severe ptosis can cause anisometropia or strabismus, compensatory head postures (such as chin up), asymmetric facial development, and psychosocial effects. It can also cause refractive defects such astigmatism by prolonged eyelid-induced corneal molding. Visual maturation developmental deficits are time-sensitive. To get the best results and reduce potential consequences, prompt correction is therefore essential, as are meticulous preoperative preparation and intraoperative considerations **(Hasbi et al., 2024).**

The severity, kind, timing, surgical method, and existence of additional eye problems all affect the prognosis. If discovered early, the prognosis is usually favorable, particularly when it comes to preventing amblyopia and addressing functional and cosmetic problems. Early identification and treatment are crucial because pediatric ptosis poses special diagnostic and treatment obstacles. Improvements in surgical techniques and diagnostic methods, such as imaging and electrophysiological evaluations, have led to better results. Despite these advancements, prompt intervention is still essential to avoiding long-term vision impairment **(Ben et al., 2025).**

Postoperative care comprises the following: Short-Term Care Use sterile cotton and heated and cooled water to clean the wound. Apply antibiotic ointment (such as chloramphenicol) to the surgical site three times a day for two weeks, and refrain from using soap and rubbing for approximately ten days; Use cold compresses (such as frozen sterile saline or gauze) for approximately 10 minutes every hour during the first day or two to minimize swelling, and apply to the eye every hour while awake until follow-up. Keep your head up (using two or three cushions, for example) to reduce swelling, avoid physically demanding tasks, For roughly two weeks, stay away from head-down postures (such as bending or specific yoga poses), For the first week, refrain from using water or shampoo to the eyelids. For several weeks, refrain from applying makeup and touching your eyes to avoid

discomfort or wound disruption **(Jeong & Park, 2024).**

Extra Precautions: Frost sutures, along with lubricants and antibiotic ointment, may be applied to protect the cornea following surgery and removed after around 48 hours. Lubricating eye drops or ointments assist treat dry eye or exposure keratopathy, and antibiotic-steroid ointment can be used on suture lines and in the eye to avoid dryness. Follow-up Schedule: Check for infection and wound healing at the first follow-up, which should occur two to seven days after surgery. If necessary, modify the sutures. After one to two weeks, the next review will involve removing any non-absorbable sutures, keeping an eye on any bruises or swelling, and determining the position of the eyelids. Additional monitoring at three months for a final evaluation of function, symmetry, and contour **(Li & Chen, 2025).**

Common postoperative problems include bruising and swelling, which peaks between days two and three and then goes away by week two. A small amount of residual swelling may last for a few weeks. Timeline for healing: Cosmetic scars usually fade over a period of weeks to months and are neatly concealed in a skin crease. About 15–20% in certain situations; asymmetry may require additional surgery. Potential side effects that can be treated with lubrication, massage, antibiotics, or revision surgery include exposure keratopathy, granulation, under/overcorrection, and infection. Congenital ptosis typically has very good functional results, especially with prompt surgery **(Berar et al., 2025).**

As the child's primary caregiver, the mother ensures continuity of care, reinforces postoperative instructions, and aids in the child's adaptation and healing—all essential elements for both an immediate recovery and favorable long-term results. The mother's role in postoperative care Give prescription drugs (lubricants, antibiotic ointment) exactly as directed. Provide wound care by gently cleaning the surgical site with sterile cotton and boiled, cooled water to prevent infection, applying cold compresses, keeping the head elevated, and assisting the child in avoiding physical strain and eye rubbing. Keep an eye out for any signs of complications, such as increased redness, discharge, pain, or excessive swelling, and promptly notify the surgeon if they are noticed (**Alshammari et al., 2024).**

Additionally, make sure follow-up appointments are attended, understand potential long-term needs (revision surgery, amblyopia therapy, spectacle correction), offer emotional support, reassure, and cultivate patience as the swelling and full healing may take weeks or months, protect the operated eye during sleep (e.g., moisture shield or artificial tears) if eyelid closure is incomplete, and encourage adherence to amblyopia treatments (e.g., patching, glasses) (**Sun et al., 2025).**

Significance of the study

Ptosis is abnormally low positioned upper eyelid, which can decrease or even occlude the vision completely. Ptosis is classified into congenital or acquired in origin based on the age of presentation. It may be minimal, moderate or severe covering the pupil entirely. Ptosis can affect one or both eyes. Proper management requires recognizing the exact etiology and treats it accordingly, whether surgically or medically, to improve outcome. It poses a significant functional and psychosocial impact on the child and is cosmetically alarming to both the child and the parents **(Yavuz et al., 2023).** According to the statistical report from Benha University Hospital the children diagnosed with ptosis from

September 2024 to September 2025 was 176 cases **(Statistical Center of Benha University Hospital, 2025).**

Aim of the Study

This study aims to evaluate effect of an educational program on mothers' performance regarding care of their children undergoing ptosis surgery: a quasi-experimental study through:

1- Assessing mothers' knowledge, attitude and reported practice regarding care of their children undergoing ptosis surgery.
2- Designing and implementing an educational program for mothers regarding care of their children undergoing ptosis surgery.
3- Evaluating the effect of an educational program on mothers' knowledge, attitude and reported practice regarding care of their children undergoing ptosis surgery.

Research Hypothesis

1- The educational program will improve mothers' knowledge regarding care of their children undergoing ptosis surgery.
2- The educational program will improve mothers' attitude towards care of their children undergoing ptosis surgery.
3- The educational program will improve mothers' reported practice regarding care of their children undergoing ptosis surgery.

Subjects and Method

Subjects and method of the current study were discussed under the following four designs:

I. Technical design
II. Operational design
III. Administrative design
IV. Statistical design

I-Technical Design:

The technical design of the current study included: research design, setting, subjects as well as tools of data collection.

A-Research Design:

A quasi-experimental research design was utilized to carry out this study. Quasi-experimental research design is a methodological framework used to estimate causal relationships between variables or to estimate causal impact of an intervention on the target group (one-group pretest-posttest). The research participants are pretested, given specific intervention and then tested once the study intervention is applied. The most important element is manipulation of the independent variable, which means that something is purposefully changed by the researcher in the environment **(Barker et al., 2024).**

B- Research setting:

This study was conducted in Ophthalmology Clinics of Benha University Hospital which is one of the main Governmental Hospitals in Qalyubia Governorate, affiliated to Ministry of Higher Education and Scientific Research. The ophthalmology clinics of Benha University Hospital is on the ground floor of the ophthalmology building, which consists of two sides. The right side consists of 6 rooms for ultrasound, fundus examination, vision examination, surgical examination and post-operative follow-up, and a classroom for ophthalmologists. The left side consists of two rooms for vision examination and prescription eyeglasses. The setting has a large number of children undergoing ptosis surgery attending for management and follow-up.

C- Research subjects:

A simple random sample of (140) mothers and their children from 3to 18 years old undergoing ptosis surgery were included in this study who attended the previously mentioned setting for follow up and willing to participate in the study.

- Sample size calculation:

The sample size calculated through the Slovin's formula

$$\mathbf{n = \frac{N}{1 + N(e)2}}$$

Where:

n = number of subjects

N = total population (215)

e = margin of error (0.05)

Tools of data collection:-

Three tools were used to collect the data in this study:

Tool (I): A structured interviewing questionnaire: It was developed by the researcher and revised by supervisor staff, based on reviewing related literatures and it was written in a simple clear Arabic language. It consisted of four parts to assess the following:

Part 1: Socio-demographic characteristics related to mothers involved in the study. It included 6 closed ended questions.

Part 3: Medical history of the studied children. It included 8 questions.

Part 4: Mothers' knowledge regarding care of their children undergoing ptosis surgery, it consist of two sub parts;

A) Mothers' knowledge regarding ptosis in children, it included 10 questions.

B) Mothers' knowledge regarding ptosis surgery in children, It included 13 questions.

Scoring system for mothers' knowledge regarding care of their children undergoing ptosis surgery:

Scoring system was graded according to the questions number of questionnaire that equal 23 question. The scoring system for the studied mothers' knowledge regarding care of their children undergoing ptosis surgery was calculated as follows (2) score for complete correct answer, (1) score for incomplete correct answer and (0) for wrong answer or don't know. The score of the knowledge questions was summed-up and the total divided by the number of the questions, which converted into a percent score. The total knowledge scores were calculated and ranged from (0-46) which further categorized:

- **Adequate** → if the total score of knowledge was ≥75% (≥35 point).
- **Average**→ if the total score equals 60% - < 75% (27-34 point).
- **Inadequate** → if the total score was < 60% (<27 point).

Tool (II): Mothers' attitude towards care of their children undergoing ptosis surgery: It was designed by researcher in the form of 3 points Likert scale, based on **(Almogbel et al., 2023).** To assess mothers' attitude towards care of their children undergoing ptosis surgery. It included 28 item.

Scoring system for mothers' attitude regarding care of their children undergoing ptosis surgery:

Scoring system was graded according to the items number of questionnaire that equal 28 item. The scoring system for the mothers' attitude regarding care of their children undergoing ptosis surgery was calculated as (3) scores for Always, (2) scores for Sometimes and (1) for Never. The score of attitude items was summed-up and the total divided by the number of the items, which converted into a percent score. The total attitude scores were calculated and ranged from (0-84) which further categorized:

- **Positive**→ if the total score of attitude was ≥ 60% (>50 point).
- **Negative**→ if the score was < 60% (< 50 point).

Tool (III): Mothers' reported practice regarding care of their children undergoing ptosis surgery: It was designed by researcher adapted from **(Crum & Gensure, 2021) and**

(Gwenhure & Shepherd, 2019). To assess mothers' reported practice towards care of their children undergoing ptosis surgery, It included mother's actual practices regarding their children undergoing ptosis surgery such as; reported practice of hand washing, eye care, wound care, eye drop application, ointment application and oral antibiotic administration.

The practices include six main skills which involves;

Mothers' reported practice of hand washing towards care of their children undergoing ptosis surgery (9 items).

- Mothers' reported practice of eye care towards care of their children undergoing ptosis surgery (17 item).
- Mothers' reported practice of wound care towards care of their children undergoing ptosis surgery (28 item).
- Mothers' reported practice of eye drop application towards care of their children undergoing ptosis surgery (22 item).
- Mothers' reported practice of ointment application towards care of their children undergoing ptosis surgery (17 item).
- Mothers' reported practice of oral antibiotic administration towards care of their children undergoing ptosis surgery (14 item).

Scoring system for mothers' reported practice:

Scoring system was graded according to the steps of practices in questionnaire that equal 107 step. The scoring system for mothers' reported practice was calculated as (1) score for done and (0) for not done. The score of reported practice steps was summed-up and the total divided by the number of the steps, which converted into a percent score. The total mothers' reported practice scores were calculated and ranged from (0-107) which further categorized:

- **Satisfactory**→ if the total score of lifestyle pattern was ≥ 75% (≥80 point).
- **Unsatisfactory**→ if the score was < 75% (< 80 point).

Content validity of the tool:

The tools validity was done by three members Faculty's Staff Nursing-Benha University; Two Experts from the Pediatric Nursing Specialties & One Community Health Nursing Specialties who reviewed the tools for clarity, relevance, comprehensiveness, applicability and easiness for implementation and according to their opinion minor modifications were carried out, which involves re-arrange some questionnaire items and add some items.

Reliability of the tool:

Reliability of the tool was applied by the researcher for testing the internal consistency of the tool, by administration of the same tools to the same subjects under similar condition on one or more occasion. Answers from repeated testing were compared (test-re-test reliability). The reliability was done by Cronbachs Alpha coefficient test which revealed that each of the three tools consisted of relatively homogenous items as indicated by the moderate to high reliability of each tool. The internal consistency of the knowledge was 0.93, attitude was 0.85, while reported practice were 0.89.

II- Operational design:

The operational design included: preparatory phase, tools validity and reliability, pilot study, ethical and legal considerations, and field work.

Preparatory phase:

Preparation of the study design and data collection tools was based on extensive review of the current and past available national and international references related to the research title, using a journal, textbooks and internet search to contrast the tools. This was necessary

for the researcher to be acquainted with and oriented about aspects of the research problem as well as to assist in the development of data collection tools. Also prepared handout for studied mothers that included all items about ptosis surgery.

Ethical considerations:

Written approval consent from the Scientific Research Ethical Committee, Faculty of Nursing, Benha University was obtained. Also approval and informed written consent has been obtained from all studied mothers before conducting the study and given them a brief orientation to the purpose and nature of the study. Mothers were also reassured that all information gathered would be confidentially and used only for the purpose of the study. No names were required on the forms to ensure anonymity and confidentiality. The mothers had right to withdraw from the study at any time without giving any reasons. Ethics, values, beliefs and culture were respected. The data collected were stored in confidential manner.

Pilot study:

A pilot study was carried out to ascertain the clarity and applicability of the study tools representing 10% of total study subjects. The pilot study was conducted on 14 mother. The pilot study was aimed to test the content, clarity, applicability and simplicity of the tool using the interviewing questionnaire as a pre-test sheet. The estimation of the time needed to fill the questionnaire about 30-45 minutes. No modifications were done, so the pilot study sample was included in the study main subjects.

An educational program development included four phases:

Based on the results which obtained from the interviewing questionnaire, as well literature review, educational program developed by researcher. It was implemented immediately after pre-test. The researcher implemented the educational program through four phases as the following:

Phase I Assessment phase: The assessment phase incorporates interviews with the mothers and their children involved in the study to collect baseline data. During the initial visit to the clinics, the researcher interviewed each mother individually, starting by introducing herself to the mothers, providing brief explanation about the current study and its outcomes, and took their written approval to participate in the study prior to data collection, and their phone numbers were taken for the purpose of facilitating communication, interaction, motivation, support during the study period and follow up. A pre-test was conducted for the mothers, in this phase, the researcher used **Tool I** to assess sociodemographic characteristics of the studied mothers and characteristics of their children, and medical data of children was obtained from medical hospital records. Additionally, this tool used to assess mothers' knowledge regarding care of their children undergoing ptosis surgery. The researcher used **Tool II** to assess attitude of the studied mothers. While the researcher used **Tool III** to assess reported practice of the studied mothers. Each mother took around 30-45 minutes to fill and complete the questionnaires.

Phase (II) Planning phase: Based on baseline data obtained from the assessment phase and relevant literature reviews, the researcher designed goals and objectives of the educational program according to studied mothers actual needs. In this phase, the researcher designed the educational program which written in a simple clear Arabic language and consisted of seven sessions 3 theoretical sessions and 4 practical sessions. It was constructed, revised, and

modified to improve mothers' knowledge, attitude and practice regarding care of their children undergoing ptosis surgery. Moreover, the researcher used the different methods of teaching as lecture, group discussion, brain storming, presentation, demonstration and re-demonstration. Different media was used for data presentation as colorful handouts; data show, laptop, power point colored posters, illustrated booklet and brochure and real equipment such as; doll, clean & sterile gloves, betadine, normal saline solution, dry cotton balls, towel, basin of warm water, sterile gauze bandages, adhesive tape, cup of water, prescribed medication as oral antibiotic, eye drops and ointment, to help proper understanding of the content.

Statement of general and specific objectives of educational program:

General objective:

The general objective was to evaluate the effect of an educational program on mothers' knowledge, attitude and reported practice regarding care of their children undergoing ptosis surgery.

Specific objectives:

At the end of this educational program implementation, the studied mothers should be able to:

1. Identify components of the eye and its functions.
2. Define ptosis in children.
3. List causes and precipitating factors for ptosis in children.
4. Recognize the types of ptosis in children.
5. Mention signs and symptoms of ptosis in children.
6. Recognize the diagnostic tests of ptosis in children.
7. Enumerate the complications of ptosis.
8. Discuss management of ptosis in children.
9. Explain preventive measures of ptosis.
10. Recognize misconceptions about eye health
11. Utilize tips to maintain healthy eyes.
12. Interpret mothers' attitude regarding ptosis.
13. Demonstrate steps of hand washing procedures.
14. Perform eye care steps.
15. Apply eye drop application steps.
16. Apply eye ointment application steps.
17. Apply wound care steps.
18. Apply mouth drug administration steps.

Phase (III) Implementation phase:

The actual field work of the current study took about twelve months starting from the beginning of July 2024 to the end of June 2025 in the previously mentioned setting according to policy of the study setting. The researcher came to the study setting three days weekly Tuesday, Wednesday and Thursday of each week (from 9:00 AM to 1:00 PM Tuesdays and Thursdays & from 1:00 PM to 5:00 PM Wednesdays), because these days coincide with appointments of mothers and their children undergoing ptosis surgery, which represent the day before surgery, the day of surgery, and the follow-up days after ptosis surgery and also these days suitable for the researcher's appointments. The researcher implemented educational program through seven sessions of 3:30 to 5 hours 3 theoretical sessions and 4 practical sessions; 1:30 to 2 hours theoretical and 2 to 3 hours practical, each theoretical session took about 30:40 minutes to complete, while the practical sessions took about 30:45 minutes to implement including periods of discussion, and the average number of mothers were 2-4 mothers/day. Each session started by summary about the previous session and objectives of the new topics. Direct reinforcement in the form, a copy of the educational program was given as a gift for each mother to use it as

future reference. Discussion, motivation and reinforcement during sessions were used to enhance learning. All the mothers were cooperative with the researcher, as at the end of each session, mother participated in a discussion to correct any misunderstanding. Also, they were informed about the time of next session. Through the period of post educational program and follow-up, the researcher contacted with the studied mothers through WhatsApp and telephone calls for responding to the studied mother's inquiries related to caring for their children.

The theoretical part included the following:

The first session: At the beginning of the first session, the researcher welcomed and introduced herself to the mothers, an orientation to the educational program and its process were presented included; components of the eye and its functions, ptosis in children, definition, causes and precipitating factors, types, signs and symptoms of ptosis in children, taking into consideration the use of simple language according to the educational level.

The second session: Covered diagnostic measures of ptosis, complications of ptosis and management of ptosis.

The third session: Covered preventive measures of ptosis, lifestyle recommended for the child to follow after ptosis surgery, the mother's misconceptions about eye health for children undergoing ptosis surgery, tips for maintaining healthy eyes and attitude to have better values and feeling regarding ptosis.

The practical part included the following:

The fourth session: Covered practices about hand washing.

The fifth session: Covered practices about eye care, eye drop and ointment application.

The six sessions: Covered practices about wound care.

The seventh session: Covered practices about oral antibiotic administration with a brief summary about the previous practices.

Phase (IV): Evaluation of the educational program:

After implementation of the educational program, the researcher applied the post-test immediately and then after one month of the program to evaluate knowledge, attitude and reported practice of studied mothers regarding care of their children undergoing ptosis surgery. Evaluation of the educational program was done by using the post-test questionnaire which was the same formats of pre-test in order to compare the change in the knowledge, attitude and reported practice of studied mothers. The educational program achieved research hypothesis, that improved knowledge, attitude and reported practice of mothers caring for their children undergoing ptosis surgery.

III- Administrative design:

An official letter was issued and permission was obtained from Dean of Faculty of Nursing, Benha University concerned the title, objectives, tools, the study technique and an official approval was obtained from administrators of the previous mentioned study setting to carry out the study. A clear explanation was given about the nature, importance and expected outcomes of the study.

IV- Statistical design:

All data collected were organized, tabulated and analyzed using appropriate statistical test. Data were analyzed by using Statistical Package for Social Science (SPSS) version 21 which was applied to calculate frequencies and percentage for qualitative descriptive data, mean and standard deviation was used for quantitative data, as well as test statistical significance and associations by using Chi- square test (x^2) and

matrix correlation to detect the relation between the variables (P value).

Significance levels were considered as follows:

- Highly statistically significant $P < 0.001$**
- Statistically significant $P < 0.05$*
- Not significant $P > 0.05$

Results:

Table (1): Shows that; more than half 51.4% of the studied mothers were aged 30 < 40 years with mean±SD was **32.4±8.2.** Regarding educational level; less than third 28.6% of the studied mothers had primary education, almost two thirds 65.7% of them didn't work, slightly less than three fifth 59.3% of them had enough income, more than half 52.9% of them were married, and more than three fifth 62.9% were lived in rural areas.

Table (2): Reveals that; more than half 53.6% of the studied children were aged 3 < 6 years with mean±SD was **6.66±2.71.** Regarding gender; more than half 56.4% of the studied children were males, approximately two fifth 42.1% of them had second ranking between their brothers/sisters, more than half 53.6% of them had nursery school, three fifth 60% of them had a degree of kinship between the parents and half 50% of them was first degree kinship.

Table (3): Illustrates that; more than half 55% of the studied children were aged 3<6 years when diagnosed with ptosis, more than half 52.9% of them had left and right sides of eye affected by ptosis. Regarding diagnostic tests two thirds 66.4% of them had been performed marginal reflex distance to diagnose the child's condition, two thirds 67.1% of them had family members suffer from ptosis, approximately two fifth 46.8% of them were their brother/sister, and two thirds 66.4% of them didn't have eyelid surgeries been performed before.

Figure (1): Clarifies that; approximately two fifth 42.1% of studied children had bilateral congenital ptosis. While, more than fifth 22.9% of them had unilateral acquired ptosis.

Figure (2): Portrays that; more than one fifth 20.7% of the studied mothers had adequate total knowledge level regarding ptosis and ptosis surgery pre a video-assisted nursing educational intervention which increased to majority 83.6% & more than three quarters 77.9% post a video-assisted nursing educational intervention and at follow-up respectively. Less than third 30% of the studied mothers had average total knowledge level regarding ptosis and ptosis surgery pre a video-assisted nursing educational intervention which decreased to tenth 10% & more than tenth 12.9% post a video-assisted nursing educational intervention and at follow-up respectively. Slightly less than half 49.3% of the studied mothers had inadequate total knowledge level regarding ptosis and ptosis surgery pre a video-assisted nursing educational intervention compared to minority 6.4% & 9.2% post a video-assisted nursing educational intervention and at follow-up respectively.

Figure (3): Represents that; quarter 25.7% of the studied mothers had positive total attitude towards care of their children undergoing ptosis surgery pre a video-assisted nursing educational intervention which increased to majority 87.1% & 81.4% post a video-assisted nursing educational intervention and at follow-up respectively. Slightly less than three quarters 74.3% of the studied mothers had negative total attitude towards care of their children undergoing ptosis surgery pre a video-assisted nursing educational intervention which decreased to less than fifth 12.9% & 18.6% post a video-assisted nursing educational intervention and at follow-up respectively.

Figure (4): Clarifies that; less than third 27.9% of the studied mothers had satisfactory total reported practice regarding care of their children

undergoing ptosis surgery pre a video-assisted nursing educational intervention which increased to majority 88.6% & 84.3% post a video-assisted nursing educational intervention and at follow-up respectively. More than two thirds 72.1% of the studied mothers had unsatisfactory total reported practice regarding care of their children undergoing ptosis surgery pre a video-assisted nursing educational intervention which decreased less than fifth 11.4% & 15.7% post educat a video-assisted nursing educational intervention and at follow-up respectively.

Table (4): Illustrates that; there were highly statistically significant positive correlation between total knowledge level, total attitude level, and total reported practice level among the studied mothers pre and post educational program and at follow-up (P<0.001).

Table (1): Distribution of the studied mothers regarding their socio-demographic characteristics (n=140)

Socio-demographic characteristics of the studied mothers	No.	%
Age/years		
>20 years	15	10.7
20<30 years	33	23.6
30<40 years	72	**51.4**
≥ 40 years	20	14.3
Min-Max	**18-45**	
Mean ±SD	**32.4±8.2**	
Educational level		
Can't read and write	11	7.9
Read and write	17	12.1
Primary education	40	**28.6**
Preparatory education	13	9.3
Secondary school education	24	17.1
Bachelor's	35	25.0
Job status		
Working	48	34.3
Does not work	92	**65.7**
Income		
Enough and save	26	18.6
Enough	83	**59.3**
Not enough	31	22.1
Current marital status		
Married	74	**52.9**
Divorced	37	26.4
Widowed	29	20.7
Place of residence		
Rural	88	**62.9**
Urban	52	37.1

Table (2): Distribution of the studied children regarding their Characteristics (n=140)

Personal characteristics of the studied children	No.	%
Age/years		
3<6 years	75	**53.6**
6<9 years	36	25.7
9<12 years	22	15.7
12< 15years	5	3.6
15≤18 years	2	1.4
Min-Max	**3-14**	
Mean ±SD	**6.66±2.71**	
Gender		
Male	79	**56.4**
Female	61	43.6
Childs' rank in his family		
First	32	22.9
Second	59	**42.1**
Third	28	20.0
Fourth or more	21	15.0
Educational level		
Nursery school	75	**53.6**
Primary school	58	41.4
Preparatory school	7	5.0
Secondary school	0	0.0
Is there a degree of kinship between the parents		
Yes	84	**60.0**
No	56	40.0
If there is a degree of kinship between the parents, what is the type of kinship? (n=84)		
First degree kinship	42	**50.0**
Second degree kinship	25	29.8
Third degree kinship	17	20.2

Table (3): Distribution of the studied children regarding their medical history (n=140)

Childs' medical history	No.	%
Child's age in years when diagnosed with ptosis		
> 3years	14	10.0
3<6 years	77	**55.0**
6<9 years	22	15.7
9<12 years	19	13.6
12< 15years	5	3.6
15≤18 years	3	2.1
Side is affected by ptosis		
Right side	45	32.1
left side	21	15.0
Both sides (Left & right)	74	**52.9**
****Tests were done to diagnose the child's condition**		
Marginal reflex distance	93	**66.4**
Slit lamp test	18	12.9
Evaluation of the child's visual acuity	25	17.9
Eye movement examination	11	7.9
Field of vision test	6	4.2
Did any of the family members suffer from ptosis		
Yes	94	**67.1**
No	46	32.9
If the answer is yes, what is the degree of kinship with the child (n=94)		
Father	15	16.0
Mother	22	23.4
Brother/sister	44	**46.8**
Aunt/ uncle	6	6.4
Grandfather/grandmother	7	7.4
Have eyelid surgeries been performed before		
Yes	47	33.6
No	93	**66.4**
If eyelid surgeries were performed before, what type of surgery was performed (n=47)		
Ptosis surgery	25	**53.2**
Eyelid retraction	13	27.7
Eyelid reconstruction	9	19.1

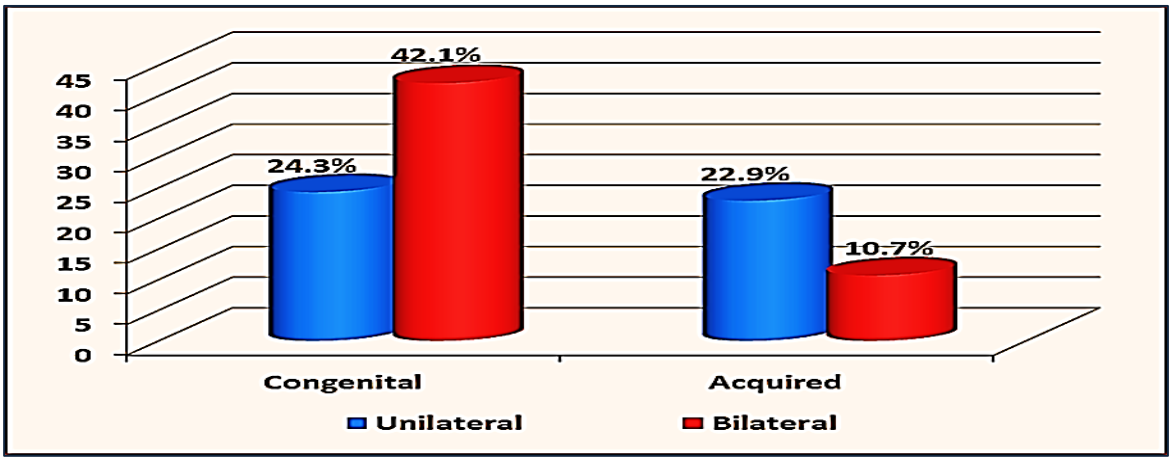

Figure (1): Percentage distribution of the studied children regarding their type of ptosis (n=140).

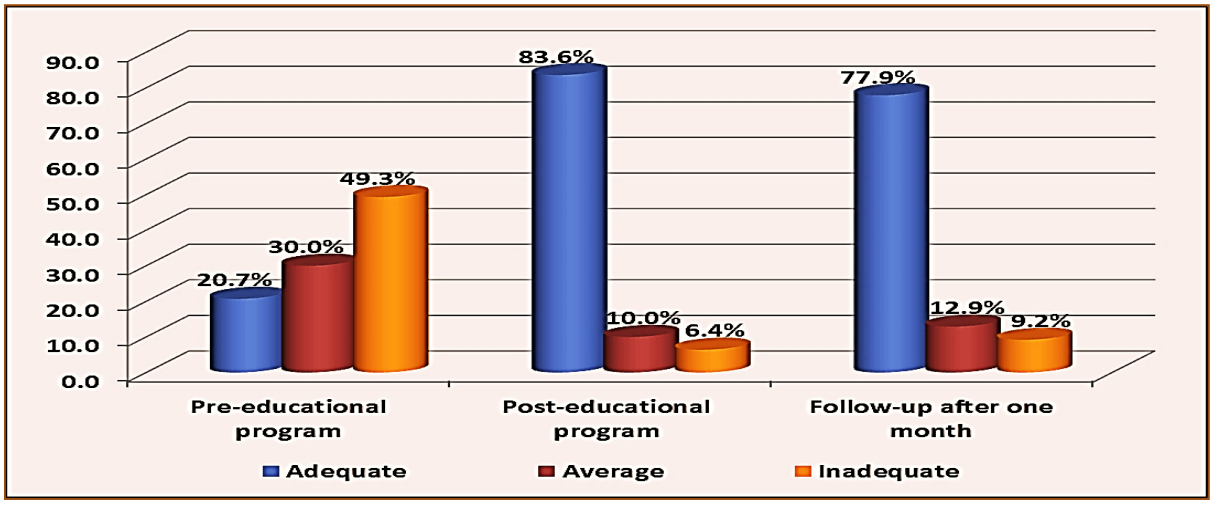

Figure (2): Percentage distribution of the studied mothers' total knowledge level regarding ptosis and ptosis surgery throughout educational program phases (n=140).

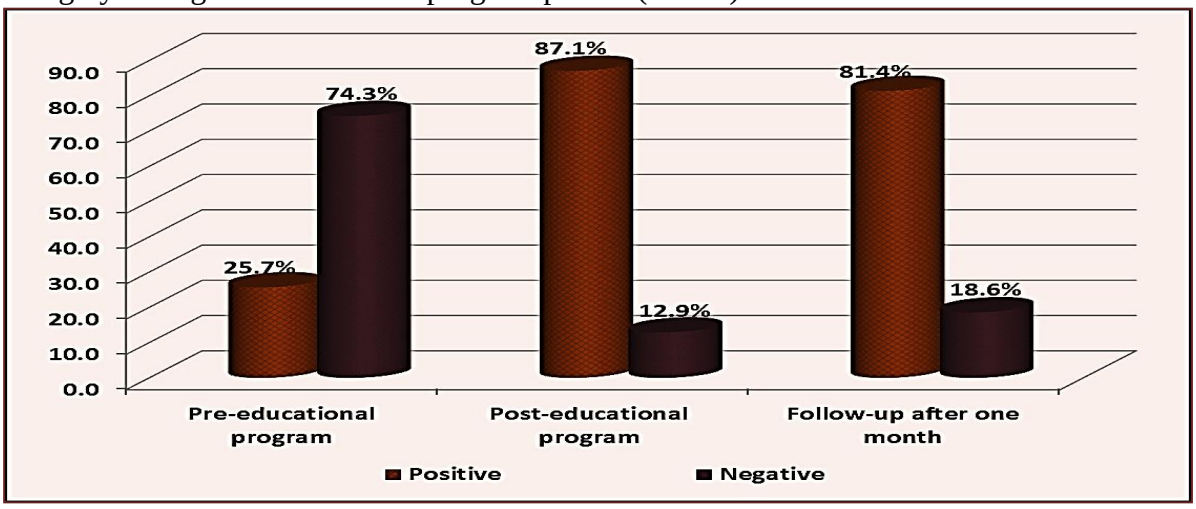

Figure (3): Percentage distribution of the studied mothers' total attitude towards care of their children undergoing ptosis surgery throughout educational program phases (n=140).

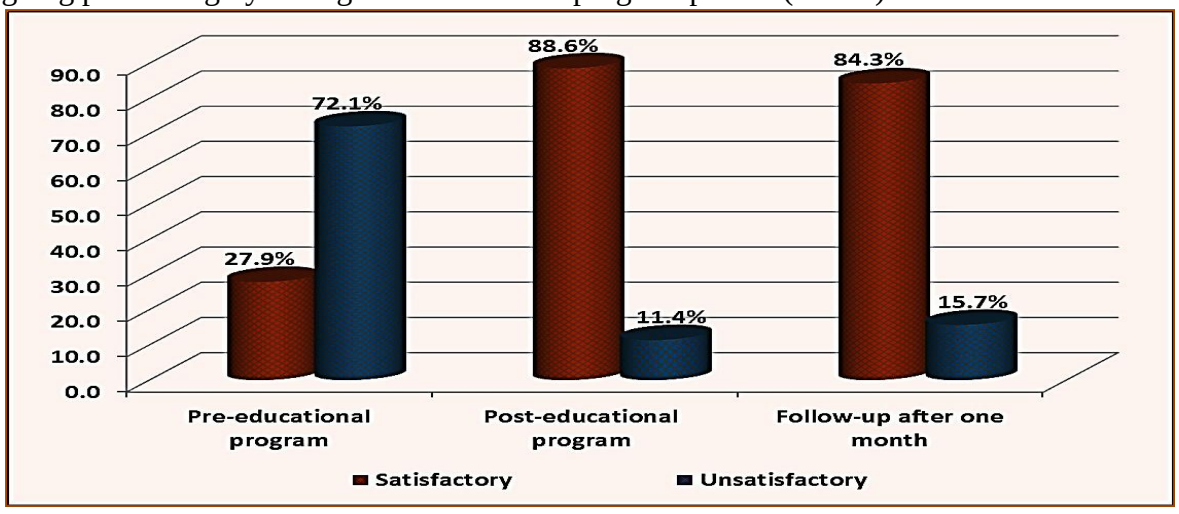

Figure (4): Percentage distribution of the studied mothers' total reported practice regarding care of their children undergoing ptosis surgery throughout educational program phases (n=140).

Table (4): Correlation between total knowledge level, total attitude level, and total reported practice level among the studied mothers pre and post educational program and at follow-up (n=140).

Items		Total knowledge level		Total attitude level		Total reported practice	
		r	p-value	r	p-value	r	p-value
Pre educational program	Total knowledge level	1	-	0.65	.000**	0.71	.000**
	Total attitude level	0.65	.000**	1	-	0.75	.000**
	Total reported practices	0.71	.000**	0.75	.000**	1	-
Post educational program	Total knowledge level	1	-	0.85	.000**	0.92	.000**
	Total attitude level	0.85	.000**	1	-	0.69	.000**
	Total reported practices	0.92	.000**	0.69	.000**	1	-
Follow-up	Total knowledge level	1	-	0.82	.000**	0.93	.000**
	Total attitude level	0.82	.000**	1	-	0.68	.000**
	Total reported practices	0.93	.000**	0.68	.000**	1	-

Discussion

Early treatment of ptosis is essential to prevent development of visual defects such as amblyopia, refractive errors and astigmatism. Pediatric ptosis surgery is a critical intervention aimed at correcting drooping eyelids in children, it can often involve multiple surgical procedures and the exact type of procedure used depends on the levator function and the amount of ptosis. These procedures can be done separately or as a combined single procedure **(Khan et al., 2023).**

The post-operative care given by parents, especially mothers, is crucial to the effectiveness of such surgeries, which go well beyond the operating room. In order to avoid difficulties and guarantee the best possible recovery, mothers' performance and competence in handling post-surgical care are crucial. Programs designed to improve mothers' knowledge and abilities in post-operative care have demonstrated promise in enhancing their performance and, as a result, the recuperation of their children. **(Wang, 2023)**.

The structured educational interventions play a significant role in empowering mothers to provide effective post-surgical care, thereby improving the overall success of pediatric ptosis surgeries. Nurses play a key role in educating mothers about post-operative care, addressing their concerns, and reinforcing proper techniques for monitoring and managing their children's recovery. Nurses are also responsible for providing hands-on demonstrations, distributing written resources, and conducting follow-up visits to ensure that the mothers' knowledge is effectively applied in practice **(Mohamed et al., 2024)**.

By offering continuous education and support, nurses empower mothers to confidently care for their children, thus reducing the risk of complications and improving the overall success of the surgery **(Banerjee et al., 2025)**. Therefore**,** the present study aimed to evaluate effect of an educational program on mothers' performance regarding care of their children undergoing ptosis surgery.

Regarding personal characteristics of the studied mothers, the current study revealed that more than half of the studied mothers were aged from 30 to less than 40 years old with mean ±SD was 32.4±8.2 years. This may be due to the fact that mothers within this age range often fall within the peak childbearing and caregiving period, making them more likely to be involved in medical decisions regarding their children's health.

This result was supported by **Hasbi et al., (2024)** whose study in Malaysia was entitled "Evaluation of the Effect of Surgery on Psychosocial Function and Quality of Life in Children with Simple Congenital Ptosis and Their Parents," as they found that the largest proportion of the studied mothers aged 31–40 years old. In contrast, a study conducted by **Almogbel et al., (2023)** under the title "Parents' awareness and attitude toward pediatrics eye diseases in Makkah, Saudi Arabia: a cross-sectional study" reported that the highest percentage of the studied mothers aged from 36 to 45 years old.

Moreover, the present study reflected that almost two thirds of the studied mothers didn't work. This can be explained by a combination of socio-economic and cultural determinants that affect mothers' participation in the workforce. Mothers may choose not to work or may be unable to work due to family responsibilities, such as caring for young children or managing household duties. In the same scene, **Abd Elhady et al., (2023)** who studied "Knowledge and Practices of Mothers regarding their Children with Eye Trauma" in Egypt, found that a significant proportion of mother were housewives. On the other hand, a study performed by **Khattak et al., (2023),** under the title "Knowledge, Practice and Attitude of Mothers for Ophthalmic Problems in Children in Rural Areas-A Cross-Sectional Study: Ophthalmic Problems in Children in Rural Areas," in Pakistan, reported that less than half of the studied mothers were not working.

Additionally, the current study clarified that slightly less than three fifth of the studied mothers had enough income. This may be due to the fact that a substantial proportion of the mothers in the study had sufficient financial resources, allowing them to afford the medical costs associated with their children's ptosis surgery. This result reflects a certain level of economic stability or access to financial support, enabling these mothers to prioritize their children's healthcare needs.

This result was in accordance with a study conducted by **Almogbel et al., (2023)** who noticed that slightly more than half of the studied participants had sufficient monthly income. In the opposite side, a study performed by **Khan et al., (2023)** about "Awareness of parents regarding eye diseases and eye care needs among children of Tehsil Babuzai, District Swat," in Pakistan, found that about three fifths of the studied respondents had not enough monthly income.

Furthermore, the current study indicated that more than half of the studied mothers were married and more than three fifth of them were lived in rural areas. In the same line, a study conducted by **Alshammari et al., (2024)** about "Levels of awareness regarding pediatric eye diseases among Saudi parents from the Hail and Al-Qassim regions, Saudi Arabia," reported that majority of the studied subjects were married. This finding was congruent with a study carried out by **El-Maghawry et al., (2022)** who performed a study entitled "Effect of Designed Guidelines for Mothers regarding Care of their Children with Ophthalmological Trauma," in Egypt and observed that around two thirds of the studied mothers were married and were rural residents, respectively.

As for personal characteristics of the studied children, the present study displayed that more than half of the studied children were aged from 3 to less than 6 years old with mean ±SD was 6.66±2.71 years. This may be attributed to the fact that ptosis surgery is typically performed during early childhood, especially when the condition begins to affect the child's vision or ability to engage with their surroundings. Also, this age is a common period for diagnosing and treating ptosis, as any visual impairment during these formative years can hinder a child's development and learning.

Aligned with this finding, a study performed by **Paulos et al., (2024)** under the title "Management of congenital blepharoptosis in pediatric patients," in Chile, found that the average age of the studied children was 7.7 years old ± SD 4.7 years. In contrast, a study conducted by **Ghiam et al., (2023),** published as "Surgical outcomes after frontalis suspension using expanded polytetrafluoroethylene sling for congenital ptosis," in USA reported that the mean age of the studied participants was 2.3 years (standard deviation: 2.2 years).

Additionally, the present study clarified that more than half of the studied children were males. This may be attributed to the fact that ptosis is more commonly observed in males, as some studies suggest that congenital ptosis tends to be more prevalent in boys. The anatomical and genetic factors influencing eyelid development may contribute to this gender difference, leading to higher incidence of ptosis in male children.

This finding matched with a study in China carried out by **Ma et al., (2022)** which is titled "Application of e-PTFE frontalis suspension in the treatment of congenital ptosis in children," and found that more than half of the studied children were males. Conversely, a study conducted by **Hasbi et al., (2024)** entitled "Evaluation of the Effect of Surgery on Psychosocial Function and Quality of Life in Children with Simple Congenital Ptosis and Their Parents," found that more than half of the studied children were females.

Furthermore, the present study portrayed that approximately two fifths of the studied children were the second ranking between their brothers/sisters, and more than half of them were at nursery school. In the same line, **Sayed et al., (2021)** who carried out a study published as "Effect of Health Educational Program on Mothers' Knowledge and Practices Regarding Care of Children with Trachoma," in Egypt, found that more than half of children were between two to four in the family ranking and more than two thirds of them had nursery education. Likewise, a study conducted by **Mohamed et al., (2024)** which is called "Effect of Instructional Guidelines on Mothers' Knowledge and Practice regarding Conjunctivitis among Children in Ophthalmology Outpatient Clinic," noticed that more than two thirds of children were the second child and were at preschool, respectively.

Moreover, the current study indicated that three fifth of the studied children had a degree of kinship between the parents and half of them was first degree kinship. This may be due to the genetic factors that contribute to the development of ptosis, which can be more prevalent in families with a closer degree of kinship. This result was compatible with **Khalili et al., (2022)** who conducted a study under the title "Consanguinity and Increased Risk of Congenital Ptosis: A Case–Control Study from Southern Iran," which emphasized that more than half of parents of the cases with congenital ptosis were relatives and the highest percentage of them were first cousin.

Also, this result was partially agreed with a study carried out by **Aishwarya et al., (2024)** entitled "Study on various ocular congenital anomalies and its association with consanguineous marriage," which found that parents' consanguinity was present in more than more of the studied cases and among these cases with consanguineous parents, half of them had 2nd-degree consanguinity.

As regard medical history of the studied children, the present study showed that more than half of the studied children were aged from 3 to less than 6 years old when diagnosed with ptosis. This may be reflect the fact that ptosis is often diagnosed in early childhood when visual development and sensory processing are critical. The age range of 3 to less than 6 years old corresponds to a developmental period when any visual impairment, as ptosis, becomes more noticeable and potentially disruptive to a child's learning and interaction with their environment.

Parallel with this result, a study carried out by **Sun et al., (2025)** under the title "Ocular biological characteristics and refractive errors in children with unilateral congenital ptosis," reported that mean age at diagnosis was 4.7 (.09 – 18.9) years old. On contrary, a study conducted by **Ripa et al., (2022)** which is named "Association of Eyelid Disorders and Ocular Motility Disorders in Pediatric Age: an Epidemiologic Analysis. A Multicenter Retrospective Study," reported that the mean age children when they were diagnosed with ptosis was 2 [1 – 6] years old.

Additionally, the current study represented that approximately two fifths of the studied children had bilateral congenital ptosis. This may be due to the fact that bilateral congenital ptosis is a common presentation of the condition. Also, this result could reflect the hereditary nature of the condition, where both sides of the face are equally impacted.

In this context, **Assadi et al., (2021)** carried out a study published as "Effect of congenital ptosis correction on corneal topography-A prospective study," in India and declared that the largest portion of children had bilateral congenital ptosis. This result was incongruent with a study carried out by **Prabha & Padma, (2023),** who conducted a study entitled "Congenital ptosis-A clinical and demographic study in a tertiary eye care hospital," in India and reported that less than three quarters of the studied respondents were unilateral and involvement of Left eye was predominant at rate of about three fifths.

Furthermore, the current study showed that about two thirds of the studied children had been performed marginal reflex distance to diagnose the child's condition. This may be due to marginal reflex distance (MRD) being a standard, quick, and non-invasive measurement that objectively quantifies eyelid position relative to the corneal light reflex, making it ideal for pediatric ptosis assessment.

In this concern, a study in China, conducted by **Ji et al., (2025),** entitled "Efficacy and Safety of Conjoint Fascial Sheath (CFS) Suspension in the Treatment of Blepharoptosis: A Systematic Review and Meta-analysis," affirmed that change in marginal reflex distance was used for most of the studied participants as a primary endpoint, which is reinforcing its central role in diagnosis and follow-up. Consistently, a study in China conducted by **Liu et al., (2022)** which is called "Refractive error characteristics and influence on ocular parameters in patients with unilateral congenital ptosis," stated that marginal reflex distance is described as the primary clinical measurement to quantify ptosis and to grade severity.

Moreover, the current study represented about two thirds of the studied children had family members suffered from ptosis, and more than two fifths of them were their brother/sister. This may stem from the hereditary nature of many congenital ptosis cases, where autosomal inheritance with variable expressivity leads to clustering within families and particularly among first-degree relatives. In the same line, a study carried out by **Ripa et al., (2022)** noticed that three fifths of the studied cases had ptosis family history and the highest portion of them had brother or sister with ptosis. Also, this result contradicted with a study performed by **Prabha & Padma, (2023)** who found that family history of congenital ptosis was present in only less than one fifth of cases.

In addition, the current study demonstrated that about two thirds of the studied children hadn't eyelid surgeries been performed before. This may be due to common clinical practice to delay ptosis surgery until a child is old enough for safer anesthesia, stable measurements, and clearer assessment of levator function. In addition, parental hesitancy, limited access to pediatric oculoplastic services, financial barriers, and waiting lists can postpone intervention. These may be factors that make it likely that a substantial proportion of children had not undergone any prior eyelid surgery.

This result agreed with a study in China conducted by **Ma et al., (2022)** entitled "Application of e-PTFE frontalis suspension in the treatment of congenital ptosis in children," and noted that most of the studied children not having had previous eyelid procedures. On contrary, **Diab et al, (2023)** who carried out a study in Egypt published under the title "Combined levator and frontalis muscle advancement flaps for recurrent severe congenital ptosis," report substantial prior eyelid surgery among the studied patients.

As regards the studied mothers' total knowledge level regarding ptosis and ptosis surgery throughout educational program phases, the present study indicated that slightly more than one fifth of the studied mothers had adequate total knowledge level pre-educational program, which increased to the majority and more than three quarters post educational program and at follow-up, respectively. Similarly, slightly less than half of them had inadequate total knowledge level pre-educational program compared to a minority post educational program and at follow-up, respectively.

This may be due to the effectiveness of the educational program in providing comprehensive and well-structured information about ptosis and its surgical management, which significantly enhanced the mothers' overall knowledge. The continued improvement at the follow-up phase reflects both the immediate learning impact and the long-term retention of information, which could be attributed to the clarity of the educational content, the use of simple and understandable language, and the mothers' strong motivation to learn in order to better support their children's health and recovery. Similarly, the study by **Khan et al. (2023),** titled "Awareness of parents regarding eye diseases and eye care needs among children of Tehsil Babuzai, District Swat," found that less than half of the mothers surveyed possessed adequate knowledge about childhood eye diseases.

Likewise, a study in China, performed by **Wang, (2023),** entitled "Analysis of the Impact of Nursing Interventions on Treatment Compliance in Children with Congenital Ptosis after Surgery," reported that immediate post-intervention scores showed significant improvement in knowledge.

Applying comprehensive nursing interventions can improve knowledge, reduce the incidence of complications, improve treatment compliance, and enhance their quality of life. This result was supported by **Anulao, (2023),** who studied the "Impact of a Preoperative Education Video on Parent Satisfaction in Pediatric Ophthalmology," in the USA, and declared that preoperative video education can positively impact understanding and knowledge among parents of pediatric ophthalmology patients.

Pertaining to the studied mothers' total attitude towards the care of their children undergoing ptosis surgery throughout educational program phases, the present study highlighted that about one quarter of the studied mothers had a positive total attitude at pre- educational program, which increased to a majority of them at post educational program and at follow-up, respectively. As well, slightly less than three quarters of them had a negative total attitude at pre- educational program, which decreased to less than a fifth at post educational program and at follow-up, respectively.

This may be attributed to the effect of educational program that effectively addressed the mothers' knowledge gaps, concerns, and emotional readiness regarding ptosis surgery and postoperative care. Also, this result indicates that information provided during the educational sessions had a lasting impact on how the mothers viewed their role in supporting their children through surgery and recovery. This suggests that when mothers are well-informed, they are likely to develop a more confident and supportive attitude towards the care required during the surgical process. This result was congruent with the finding of the study conducted by **Alhemaidi et al., (2025)** which is titled "The Prevalence and Parental Awareness, Perception, and Attitudes towards Eye Diseases in Children Under 18 years old, in Saudi Arabia," which reported that one quarter of the studied parents had a positive attitude toward their children's eye diseases.

This result was consistent with a study conducted by **Alkalash et al., (2023)** called "Knowledge, attitude, and practice of parents regarding children's eye care in Al-Qunfudah Governorate, Saudi Arabia," which found that a positive attitude about child eye care among the participants was observed in less than half of them. Also, a study in Turkey conducted by **Şenol et al., (2024)** entitled "'Preoperative information helps my child and I experience less anxiety and fear': A grounded study examining parents' opinions and expectations," affirmed that when caregivers receive clear, structured education, they feel better prepared, anxiety drops, and attitudes toward care become more favorable, often sustaining beyond discharge. Improved caregiver understanding also tends to boost adherence to the child's treatment plan, which reinforces positive attitudes.

As for the studied mothers' total reported practice regarding care of their children undergoing ptosis surgery, the current study indicated that less than third of them had satisfactory total reported practice at pre-educational program, which increased to majority of them at post an educational program and at follow-up, respectively. As well, more than two thirds of them had unsatisfactory total reported practice at pre- educational program, which decreased to less than fifth of them at post an educational program and at follow-up, respectively. This may stem from the educational program providing clear, hands-on training and simple take-home instructions that turned key postoperative tasks into easy, repeatable routines.

In this respect, this result was compatible with a study conducted by **Samy et al., (2022)** which is titled "Effect of educational program regarding eye infection care on mothers' performance and their children outcomes" who stated that there was a highly statistically significant improvement in mothers' all practice items, including hand washing and right administration of eye medications, immediately and after one week of program implementation compared to before implementation. Moreover, this result was similar to **Abd-El Naby et al., (2025)** who in their study "Health Educational Program for Mothers regarding Care of their Children with Retinoblastoma" found that less than half of the studied mothers had satisfactory total practices level pre-program implementation and then this percentage improved to majority of them post-program implementation.

Concerning the correlation between total knowledge level, total attitude level, and total reported practice level among the studied mothers, the present study displayed that there was a highly statistically significant positive correlation between total knowledge level, total attitude level, and total reported practice level among the studied mothers pre and post educational program and at follow-up. This may be attributed to the interdependent relationship between knowledge, attitude, and practice in the context of health education. As mothers gain accurate and comprehensive knowledge about ptosis and its care through the educational program, their attitudes naturally become more positive, confident, and proactive. This shift in attitude likely motivates them to apply what they have learned, resulting in improved caregiving practices.

This result was supported by **Mohamed et al., (2024)** in their study entitled "Effect of Instructional Guidelines on Mothers' Knowledge and Practice regarding Conjunctivitis among Children in Ophthalmology Outpatient Clinic," which declared that the mothers under study's total knowledge and practice scores regarding their children with conjunctivitis were positively and significantly correlated at pre and post the instructional guidelines. Also, this finding was compatible with the results of a study by **Khattak et al., (2023)** under the title "Knowledge, Practice and Attitude of Mothers for Ophthalmic Problems in Children in Rural Areas-A Cross-Sectional Study" who observed that parents' knowledge of ophthalmic problems significantly correlated with their attitude and practice. Additionally, parents' attitude was significantly correlated with their practice.

This result was in accordance with the study carried out by **Abd El-Kader & Mohammed, (2021)** titled "Effect Of An Educational Intervention On Mothers' Knowledge, Attitude And Practice About Proper Antibiotic Use In A Selected Family Health Center," which pointed out that mothers who joined the educational sessions became more aware post-educational sessions than before, they demonstrated proper practice and positive change in the attitude. On the other hand, a study by **Abd-El Naby et al., (2025)** published as "Health Educational Program for Mothers regarding Care of their Children with Retinoblastoma" showed that there was a statistically insignificant correlation between studied mothers' total knowledge score, total practices score, and total attitude score at pre-program implementation, while there was a highly statistically significant correlation between studied mothers' total knowledge score, total practices score, and total attitude score at post-program implementation.

Conclusion

The educational program had a positive effect on improvement of the mothers' knowledge, attitude and reported practice regarding care of their children undergoing ptosis surgery. More than one fifth of the studied mothers had adequate total knowledge level regarding ptosis and ptosis surgery pre educational program which increased to majority & more than three quarters post educational program and at follow-up respectively. Meanwhile, quarter of the studied mothers had positive total attitude towards care of their children undergoing ptosis surgery pre educational program which increased to majority post educational program and at follow-up. Regarding studied mothers' total reported practice level, less than third of the studied mothers had satisfactory total reported practice regarding care of their children undergoing ptosis surgery pre educational program which increased to majority post educational program and at follow-up. There were highly statistically significant positive correlation between total knowledge level, total attitude level, and total reported practice level among the studied mothers pre and post educational program and at follow-up.

Recommendations

1. Designing and implementing a preoperative educational program for mothers about effect of ptosis surgery on quality of life and psychosocial function of their children to decrease mothers' anxiety and improve coping mechanisms of mothers during their children surgical journey.
2. Continuous educational program for the mothers caring for their children undergoing ptosis surgery recommended to improve their knowledge, attitude and reported practice regarding care of their children and to achieve appropriate outcomes for a long time.
3. Appropriate counseling and educational guidelines should be provided for mothers caring for their children undergoing ptosis surgery to improve their awareness regarding any health problems that possibly might occur and ways of prevention.
4. Conducting a structured nursing intervention program for increasing the mothers' awareness regarding the essential lifestyle pattern modifications following the ptosis surgery that helps them to achieve more sustainable health outcomes.
5. Replicating the current study with a larger probability sample is advised to ensure generalizability and wider use of the designed method.

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