

Effect of Video Assisted Teaching Guidelines on Knowledge and Anxiety Level among Primigravida Mothers undergoing Caesarian Section

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Abstract

One of the most common procedures among pregnant women is a cesarean section. The worry that pregnant women experience throughout the preparatory stages of operation day, as well as their lack of control over being in a new setting and feeling in danger, causes anxiety and, as a result, instability. **The aim was to** determine the effect of video-assisted teaching guidelines on knowledge regarding anxiety levels among primigravida mothers undergoing caesarian sections. **Subjects and method: Design:** A quasi-experimental research design was utilized to achieve the aim of this study. **Setting:** the research was conducted at the Antenatal Outpatient Clinic at South Valley University Hospital. **Subjects:** A purposive included 139 primigravida mothers who were included in the study within six months. **Three tools were used:** Tool (I) A structured interview questionnaire, Tool (II) Primigravida mothers' knowledge regarding caesarian section (pre/post), and Tool (III) Anxiety Rating Scale (pre/post). **Results:** The majority of primigravida mothers reported that the main source of information regarding their knowledge was nurses. There was a positive significant correlation ($P=0.005$) between primigravida mothers' knowledge scores pre and post-video-assisted teaching guidelines. There were highly significant improvements in primigravida mothers' knowledge regarding the caesarian section post-video-assisted teaching guidelines ($P=0.005$). Statistical highly significant differences and reductions were detected between anxiety levels of primigravida mothers pre and post-video-assisted teaching guidelines. **Conclusion:** The present study concluded that video-assisted structured teaching guidelines had a highly significant positive effect on improving knowledge and reducing anxiety levels among primigravida mothers undergoing caesarian section. **Recommendations:** Educational guidelines about the caesarian section should be taught and discussed in the antenatal care follow-up visits for primigravida mothers.

Keywords: Anxiety Level, Primigravida, Caesarian Section

Introduction:

The term pregnancy, also known as gestation, is the time during which one or more offspring develops inside a woman. Multiple pregnancies involve more than one offspring, such as twins. Pregnancy can occur through sexual intercourse or assisted reproductive technologies. The normal gestational period is nine months and seven days. Generally, normal vaginal deliveries are preferable, but in such complications, the birth of the baby will be done by a certain procedure that will include a cesarean section (Snehalben et al., 2021).

Periodically with an increase in cesarean section, pregnant mothers may develop certain

anxiety before undergoing cesarean section which was normal human behavior. The increase in the caesarian section on maternal request may reflect a true higher prevalence of fear of childbirth, or a greater tendency among women to express their fears and wishes (Hassan, 2018).

Cesarean section (CS), is one of the most common surgeries in obstetrics and gynecology all over the world. Unlike most other procedures, CS is frequently performed on pregnant women who are in good health. To limit the exposure of the newborn to anesthetics and to allow the mothers to observe the delivery, the majority of women choose localized anesthesia rather than anxiolytic or

sedative medicines (**Statistisches Bundesamt, 2019**). Even though information on the physical effects of CS on the mother and newborn is widely available and included in every informed consent, only a few researchers have examined the influence of CS on psychological status (**Edwards & Davies, 2017**).

Mostly, women see CS as a routine procedure and may be neglecting the potential psychological side effects and the discomfort it may cause. Many measurements already showed that preoperative anxiety is associated with reduced satisfaction and worse recovery from CS. A study by Wyatt et al. reported high preoperative anxiety levels in women before an elective CS under regional anesthesia (**Hobson et al., 2017**).

Pre-operative anxiety has a deleterious impact on surgery, anesthesia, and post-operative recovery, and it affects 60-80% of patients scheduled for surgery. It can trigger physiopathological responses including hypertension and dysrhythmia, as well as increasing the need for anesthetics and the danger of "consciousness" during surgery. It's linked to more analgesic use and a longer stay in the hospital in the post-operative period (**Williams & Jones, 2018**). Because the health of both the newborn and the mother is so important, an elective cesarean operation causes more anxiety than any other form of surgery. So, hypothesize that pre-operative anxiety levels play a role in these unfavorable outcomes because of these effects. The most common cause for pregnant women seeking elective cesarean birth is a strong concern of spontaneous vaginal delivery (**McCleane & Cooper, 2020**).

One of the most effective ways to alleviate anxiety among pregnant women undergoing cesarean section is to inform them about the operation so they are aware of it and to provide psychological support during the procedure. Pregnant women's anxiety can be reduced by informing them about what they will experience during cesarean section preparation before the surgery. The purpose of the cesarean section operation, as well as the nature, type, and frequency of probable difficulties, as well as the predicted benefits of the procedure,

should all be thoroughly discussed to the women. Taking into consideration the elements that may reduce compliance, women's education should be tailored to their specific needs, and women should be assisted in maintaining good compliance during the cesarean section (**Williams & Jones, 2018**).

The effects of adding information video or detailed verbal information to pre-procedural information were concluded that providing information with the help of video helped to decrease the patient's anxiety level, and the patient is now ready to undergo another procedure than in cases where control is required (**Williams & Jones, 2018**). Giving patients information reduces anxiety, enhances awareness, promotes cooperation during the procedures, and improves compliance with discharge instructions (**Snehalben et al., 2021**).

Women who were given an information booklet were less apprehensive before the surgery and felt less anxious with the preparation after it was completed. Providing patients with a well-designed brochure with adequate information is an efficient and beneficial intervention for women undergoing cesarean section (**Basnett, et al., 2016**).

Training using the video teaching method would assist mothers in developing and refining their existing skills and knowledge, resulting in better care. Online learning and video-assisted teaching modules have arisen as new ways to provide ongoing education (**Safwat & Khorais, 2018**).

Various teaching strategies are used to improve mothers' knowledge and practice, such as lecturing, demonstration, discussion, self-education, and video-assisted teaching strategies. Video is the technology of electronically capturing, recording, storing, transmitting, and reconstructing a sequence of images representing scenes in motion. Also, it helps to overcome language barriers because illustrations communicate without words (**Balasubramanian et al., 2018**).

Because it uses sight, sound, and motion to give easy clarifications of complicated themes and concerns, the video teaching method promotes moms' learning. It can also provide material in ways that verbal descriptions or

speech alone cannot, and it can operate as a bridge across educational boundaries. Nurses with poor reading skills, on the other hand, will benefit from the movie (Devi et al., 2019). Furthermore, video-assisted surgery is one of the most essential growing technologies for nurses, particularly those who have performed unpleasant procedures. The benefit of video-based education is that the broadcaster's voice can be heard (Hassan, 2018).

Nurses play a major role in providing counseling and guidance to increase the women's responsibility for self-care practices and helping in identifying misconceptions. Also, maternity nurses play an important role in the quality of antenatal care improvement, which provides pregnant women with education, guidelines, and support. At the same time, the nurse plays a crucial role in providing health education and psychiatric health nurse in psychosocial services include assessment, counseling, appropriate referral, and health education (Hassan, 2018).

Significance of the study:

Every woman believes that becoming a mother is the highest honor a woman can achieve in her lifetime. Primigravida mothers are more likely to experience emotional stress because it signifies the beginning of important life changes for women. Caesarian section births have become more popular as a result of the increase in institutional deliveries and increased access to obstetrics care. Therefore, implementing the instructional guideline for pregnant women will help them acquire adequate knowledge and self-care practices regarding minor discomforts and may relieve their anxiety and stressors. As the frequency of caesarian section deliveries climbs day by day, primigravida mothers who are indicated for one will suffer an increase in worry, tension, and stress. Anxiety among mothers has the potential to affect their children at any point in their lives. It is conceivable (Snehalben et al., 2021).

In a prospective longitudinal study, the researcher felt compelled to examine primigravida mothers' pre-procedure concern about caesarian section and to provide them with a video-assisted education program to empower their knowledge, which would

improve their own and their baby's physical health (Hassan, 2018).

As a result of the preceding studies, it appears that primigravida mothers undergoing caesarian section have a lack of knowledge about the surgery, which may lead to the development of pre-procedure anxiety, and my study helps to fill in the gaps. The research primarily focuses on determining the amount of pre-procedure anxiety among primigravida mothers undergoing caesarian section at a few institutions. Anxiety symptoms ranging from low to high levels symptoms could be detected. Furthermore, this research aids in determining whether or not there is a shortage of knowledge, and teaching guidelines should be applied to address the issues that have arisen in their setting (Nekoe, 2019).

The use of video teaching methods in education can provide a simple and novel way to engage mothers in the care of their children today. Video teaching is an effective technique of education that combines theory and practice (Devi et al., 2019).

The study aim:

To determine the effect of video-assisted teaching guidelines on knowledge and anxiety level among primigravida mothers undergoing caesarian section through:

- Assessing the level of knowledge regarding caesarian section among primigravida mothers
- Assessing anxiety level among primigravida mothers undergoing a caesarian section
- Designing and implementing video-assisted structured teaching guidelines on knowledge regarding anxiety level among primigravida mothers undergoing caesarian section based on the primigravida mothers' actual needs.
- Evaluating the effectiveness of video-assisted teaching guidelines on knowledge regarding anxiety level among primigravida mothers undergoing caesarian section.
- Determining the association between pre-test knowledge score with selected demographic variable.
- Determining the association between post-test knowledge score with selected demographic variable.

Research hypothesis:

- Primigravida mothers who will receive video-assisted structured teaching guidelines will have satisfactory knowledge regarding the caesarian section after the guidelines than before the program.
- Primigravida mothers who will receive video-assisted structured teaching guidelines will have lower anxiety levels regarding the caesarian section after the guidelines than before the program.
- There will be a significant difference between pre-test and post-test levels of knowledge score regarding anxiety level of primigravida mothers undergoing a caesarian section
- There will be a significant association between pre-test and post-test level of knowledge score regarding anxiety level of primigravida mothers undergoing and their selected demographic variables.

The following four designs were used to discuss the current study's subjects and methods:

- I. Technical Design
- II. Operational Design
- III. Administrative Design
- IV. Statistical Design

Technical Design:

It includes things like research design, setting, subject, and data collection tools.

Research design:

To achieve the current study's aim, a quasi-experimental research design with a pre-and post-test was adopted. Patients self-select or are randomly assigned to one of many therapy groups in a quasi-experimental study to examine the real effectiveness and safety of non-randomized treatments (Maciejewski, 2020).

Setting:

The current investigation was carried out at South Valley University Hospital's Antenatal Outpatient Clinic. The Antenatal Outpatient Clinics are on the ground floor of the outpatient facility. Sonar, prenatal examination, gynecological examination, and nursing

personnel are all housed in two rooms. There was also a waiting space for women and a lecture room with enough seats, according to the data, where the researchers interviewed the pregnant women who had been recruited for this study. From Saturday through Wednesday, from 9 a.m. to 1 p.m., the antenatal outpatient clinics provide diagnostic and therapeutic services for expectant women. These settings were chosen because they had a higher women's attendance rate; they serve the largest region of the population in Qena city, including rural and urban; and they give free services to women who live in Qena city.

Subjects:**Sample size:**

A purposive sample included 139 primigravida mothers were included in the study within six months who meets the inclusion criteria and available at the time of data collection undergoing caesarian section.

Sample technique:

The study was carried out using a non-probability purposive sampling technique.

Sample size calculation:

The study "Depression and Anxiety Trajectories among Women Who Undergo an Elective Cesarean Section" by **ShuYu et al., (2014)** used a sample of 139 pregnant women and found that this sample was effective. Based on this, the sample size was estimated with a power of 80%, a margin of error of 5%, and a confidence interval of 95%. The determined sample size was 100 people.

Inclusion criteria included:

Primigravida mothers between the ages of 18 and 40 who visited the above-mentioned settings, agreed to participate in the study, and are in the third trimester of pregnancy.

Exclusion criteria included: -

Primigravida mothers with prenatal problems or a chronic medical condition were not allowed to participate and who refuse to participate in the study.

Data collection tool:

Tool (1): A structured interview questionnaire: It was developed by the

researchers after reviewing the related literature and research studies (Basnett, et al., 2016 and Unal et al. 2018), it included five items related to demographic data and obstetric history of the studied Primigravida mothers such as age, educational level, occupation, residence, Gestational age (weeks), the Birth weight of newborn (g), and their source of information.

Tool (II): Primigravida mothers' knowledge regarding caesarian section (pre/post) (Salama and Aly, 2019 and Tamrakar & Nagaseshamma, 2015): It was developed by the researchers to assess primigravida mothers' knowledge regarding the effects of preserved food on their children's health. It included (10) questions in the form of multiple-choice related to the definition of cesarean section, types of cesarean section, indications of cesarean section, complications of cesarean section, and preparation for cesarean section.

The scoring system for primigravida mothers' knowledge: The primigravida mothers' knowledge was verified with a model key response after they completed the interviewing questions. Therefore, correct answers were scored one point, and incorrect or do not know answers were scored zero. The total score varied from 0 to 20 (there were ten questions). Mothers with a total knowledge score of 60 percent or more were regarded to have a satisfactory level of knowledge, while those with a score of less than 60 percent were judged to have an unsatisfactory level of knowledge.

Tool (III): Anxiety Rating Scale (pre/post): (Hamilton, 1959): Hamilton Anxiety Rating Scale (HAM-A):

it was developed by Hamilton (1959), it is a 14 self-reported items to assess anxiety symptoms severity, each item defined by a series of symptoms, and measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety (physical complaints related to anxiety).

Scoring system:

Each item is scored on a scale of 0 (not present) to 4 (severe), with a total score range

of 0–56, where <17 indicates mild severity, 18–24 mild to moderate severity, and 25–30 moderate to severe.

Validity of the tools:

The tool's content validity was determined by a jury of five specialists' academics, two in the field of obstetrics and gynecology nursing and three experts in psychiatric health nursing who reviewed the tools. They were also asked to assess the items in terms of completeness and clarity. No modifications were added to the tools.

Reliability of the tools:

The researchers used reliability to assess the tool's internal consistency. Cronbach's alpha test revealed that the structured interview questionnaire (tool I) had a reliability of 0.92, tool II had a reliability of 0.86, and tool III had a reliability of 0.76.

Procedures of data collection:

The current research was divided into three stages: preparatory, implementation, and evaluation.

1- Preparatory phase:

Books, journals, the internet, periodicals, and magazines were employed, as well as a review of the literature, diverse studies, and theoretical knowledge of the research subject. This also helped with the creation of the testing tools and the creation of the video for the primigravida mothers' teaching guidelines.

Ethical considerations:

The scientific study ethics committees of South Valley University's nursing faculties provided ethical approval. The primigravida mothers gave their written approval in exchange for their assistance. Before beginning the trial, the primigravida moms were informed of the study's goal. They promised to keep the information private and only use it for research purposes. The researchers notified the participants that participation in the study is completely voluntary and that they can withdraw at any time.

A pilot study:

A pilot study of 10% of the primigravida mothers (14 primigravida mothers) was done to

examine the clarity and feasibility of the research method; no changes were made. Mothers who took part in the pilot were not included in the study.

Fieldwork:

- Data was collected over six months, commencing in January 2019 and ending in June 2019. Researchers collected data at the previously described setting twice a week, from 9 a.m. to 1 p.m.
- The Implementation of the study was carried out in three phases (assessment phase, implementation phase, and evaluation phase).

I- Assessment phase:

The researchers explained to primigravida mothers the objectives and expected outcomes of the study before collecting data, then asked them to complete the tools. The average time required for the completion of each tool was around 55-60 minutes. The tools used for collecting data were used as pre and post-guidelines (tool II, and tool III). Pre-testing tools were used to assess the primigravida mothers' knowledge and anxiety level undergoing the caesarian section. The data collection tools were distributed to the studied women twice; (1) pre-test to assess their knowledge and anxiety level before implementing video-assisted teaching guidelines.

II- Implementation Phase:

Each group consisted of 18-19 primigravida mothers throughout three sessions (1st session include pretest and applying booklet, 2nd session for videos assisted caesarian section and 3rd for applying posttest. The theoretical and practical sessions included a demonstration and re-demonstration for each aspect of guidelines using available tools such as assisted structured teaching videos and the researchers' laptops. Sessions were performed in Arabic with some visual aids to ensure that all study subjects were understood. Data were collected by the researchers, a pretest was conducted before video-assisted teaching, followed by administration of video-assisted teaching, and then posttest was assessed.

Evaluating the videos:

The videos were evaluated by five experts in the field of obstetric and gynecological nursing and psychiatric health nursing. The research experts in the field ensured clarity and appropriateness by reviewing the video and contents of the caesarian section.

The general objectives of the video-assisted structured teaching guideline were to improve primigravida mothers' knowledge and anxiety level regarding caesarian section

Specific objectives: At the end of the video-assisted structured teaching guidelines the studied primigravida mothers were able to:

- Define cesarean section
- List signs and symptoms of infected cesarean section
- List types of cesarean section.
- Enumerate indications of cesarean section
- Apply to dress for cesarean section
- List complications of cesarean section
- Discuss preparation for cesarean section

The duration of video sessions for each theoretical and practical session ranged from 40-50 minutes for two days per week. The theoretical video sessions were started from 11:00 AM to 12.00 PM. The theoretical video sessions focused on knowledge about the definition of cesarean section, signs, and symptoms of infected cesarean section, types of cesarean section, indications of cesarean section, complications of cesarean section, and preparation for cesarean section. The practical video sessions were started from 12:00 PM to 1.00 PM. The practical video sessions focused on seeing the actual operating room, apply preparation for cesarean section, and dressing for cesarean section. The videos were introduced to the primigravida mothers using a laptop and data show.

III. Evaluation phase:

Primigravida mothers were re-interviewed to assess their knowledge and anxiety level regarding the caesarian section. The same tools used in the pretest with two assessments were utilized to measure primigravida moms' knowledge and anxiety level regarding the caesarian section. In their third trimester,

primigravida women visited the antenatal clinic for the initial assessment. Before being discharged from the hospital, the second and third exams were done on a postpartum day 1 and week 1.

III. Administrative Design:

The Dean of the Faculty of Nursing at South Valley University, as well as the directors of the South Valley University Hospital's Antenatal Outpatient Clinic, gave their official approval to perform this study via a letter. The purpose of the study was described, and permission to collect research data from the hospital was obtained.

Statistical design:

SPSS for Windows, version 20 was used for data entry and statistical analysis. For qualitative variables, descriptive statistics in the form of frequencies and percentages were used, whereas for quantitative data, mean and SDs were used. The t-test was performed to compare the results of the two means tests. P-values less than 0.05 were considered statistically significant.

Results:

Table (1): Illustrated that 80% of primigravida mothers their age ranged between 18 < 30 years with mean \pm SD, 23.32 \pm 7.24, 42% of them had secondary education, meanwhile, and also, it is pointed out that 77% of primigravida mothers were housewives and (79%) of them were living in rural areas. Regarding gestational age, it was observed that (85%) of primigravida mothers were in 34<36 of the gestational week and 87% of their newborn birth weight was more than 2500 gm.

Figure (1): Demonstrated that 50% of the studied primigravida mothers stated that their main source of information regarding the caesarian section was friends.

Table (2) and **Table (3):** Showed that (83%) of the primigravida mothers had

unsatisfactory knowledge regarding caesarian section pre-video-assisted teaching guidelines implementation which improved post-video-assisted teaching guidelines implementation and become 94% of them had satisfactory knowledge. There was an improvement with a highly statistically significant difference between primigravida mothers' knowledge pre/post-video-assisted teaching guidelines implementation ($P < 0.001$).

Table (4) illustrated that anxiety level was lower post-video-assisted teaching guidelines implementation than pre-video-assisted teaching guidelines implementation with a statistically significant difference $p = 0.001$.

Table (5): Portrayed that a statistically significant relation was detected between knowledge and anxiety pre and post-video-assisted teaching guidelines.

Table (6): Showed that there is no statistically significant association between knowledge and pre-procedural anxiety with demographic variables of the studied primigravida mothers and their age and occupation as the Chi-square value is (3.79), (2.909), and (6.157) respectively which is less than the tabulated value at 0.05 significant levels. Statistically significant association was found between knowledge and pre-procedural anxiety with demographic variables of the studied primigravida mothers and their educational level and residence.

Table (7): Showed that in both the before and after tests, there was a strong negative association between knowledge and anxiety among the investigated primigravida moms undergoing caesarian section, with r values of (-0.21) and (0.003), respectively. This indicates that as knowledge improves, anxiety decreases, and vice versa as knowledge improves, anxiety rises.

Table (1): Distribution of the studied primigravida mothers regarding their demographic characteristics (n=139)

Items	No.	%
Age in years		
18 < 30	111	80
30 – 40	28	20
Mean ±Stander deviation	23.32 ± 7.24	
Educational level		
- Read and write	28	20
-Secondary education	58	42
-University education	53	38
Occupation		
- Working	32	23
- Housewives	107	77
Residence		
- Rural	110	79
- Urban	29	21
Gestational age		
- 34<36	118	85
- 36-38	21	15
Birth weight of newborn		
- 2300 < 2500	18	13
- > 2500	121	87

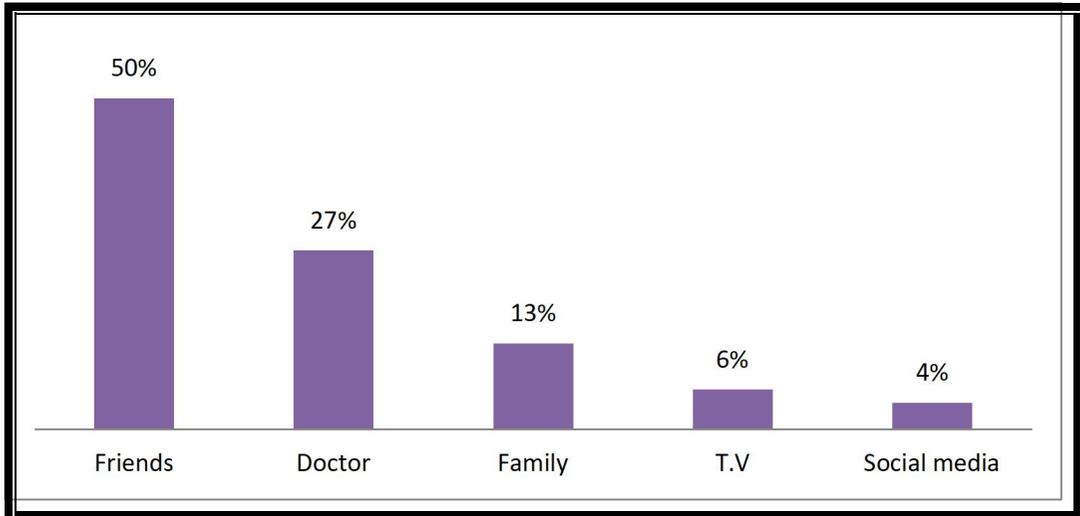
**Figure (1):** Distribution of the studied pregnant women according to their source of knowledge regarding caesarian section (n=139)

Table (2): Distribution of the studied primigravida mothers' knowledge regarding caesarian section pre and post-video-assisted teaching guidelines implementation

Primigravida mothers' knowledge	Pre video-assisted teaching guidelines implementation		Post-video-assisted teaching guidelines implementation		P-value
	No	%	No	%	
Definition of cesarean section	28	20	131	94	<0.001*
Types of cesarean section	67	48	139	100	<0.001*
Indications of cesarean section	44	32	115	83	<0.001*
Complications of cesarean	21	15	118	85	<0.001*
Signs and symptoms of infected cesarean section	18	13	110	79	<0.001*
Preparation for cesarean section	24	17	121	87	<0.001*

*highly significance at 0.001 levels

Table (3): The total knowledge score level of the studied primigravida mothers regarding caesarian section pre and post video-assisted teaching guidelines implementation

Total knowledge	Pre video-assisted teaching guidelines implementation		Post-video-assisted teaching guidelines implementation		T	P-value
	No	%	No	%		
Satisfactory	24	17	131	94	5.023	<0.001*
Unsatisfactory	115	83	8	6		

*highly significance at 0.001 levels

Table (4): Frequency and percentage distribution of anxiety level on Hamilton Anxiety Rating Scale of the studied primigravida mothers pre and post video-assisted teaching guidelines implementation (n=139)

Anxiety level	Pre video-assisted teaching guidelines implementation		Post-video-assisted teaching guidelines implementation		X2	P-value
	No	%	No	%		
No anxiety	0	0	28	20	14.023	0.001*
Mild anxiety	0	0	67	48		
Moderate anxiety	31	22	44	32		
Severe anxiety	61	44	0	0		
Very severe anxiety	47	34	0	0		

*highly Significance at 0.001 levels

Table (5): Effect of video-assisted teaching guidelines on knowledge and anxiety level through unpaired "t" test

Item	Post		Pre		unpaired t-test	Df	t value (p=0.05)	Inference
	Mean	Standard Deviation	Mean	Standard Deviation				
Knowledge	9.43	2.58	4.72	0.88	t=9.493	58	1.66	0.001*
Anxiety	34.26	15.67	57.14	10.05	t=4.308	58	1.65	0.001*

Table (6): Association between knowledge and pre-procedural anxiety with demographic variables of the studied primigravida mothers

Demographic variable	Chi-square value (calculated)	Df	Chi-square value(tabulated) p= 0.05	Inference.
Age	3.79	6	12.59	0.786
Educational level	7.44	2	5.99	0.001*
Occupation	6.157	8	15.51	0.987
Residence	7.23	2	5.54	0.001*

Table (7): Relationship between anxiety and knowledge among of the studied primigravida mothers undergoing a caesarian section

Test	Knowledge		Anxiety		r value	Inference
	Mean	SD	Mean	SD		
PRETEST	4.77	0.94	57.7	16.74	-0.219	Negatively correlated
POST-TEST	9.43	2.56	38.3	3.64	-0.003	Negatively correlated

Discussion:

Results of the present study indicated that the majority of the studied primigravida mothers their ages ranged between 18 < 30 years with a mean \pm SD of 24.23 ± 6.64 . These findings agree with **Snehalben et al., (2021)** conducted a study about " The Impact of a Video-Assisted Structured Teaching Program on Knowledge of Pre-Procedure Anxiety Levels in Primigravida Mothers Having Caesarean Sections at Selected Hospitals in Rajkot, Gujarat" and found that majority of the sample's age is between 21-25 years.

Results of the present study indicated that more than one-third of the studied primigravida mothers were in secondary education. These findings disagree with **Nekoe, (2019)** conducted a study entitled "evaluation of anxiety status of pregnant women"

Results of the present study revealed that the main source of information regarding the caesarian section among half of the studied primigravida mothers was friends. From the researchers' point of view, this indicates that health personnel play a minor role, as well as the places of substandard health services. On the other hand, the results are not matched with **Snehalben et al., (2021)** who found that the majority of samples are having books as a source of information.

Results of the present study revealed that the majority of primigravida mothers were had unsatisfactory knowledge regarding caesarian

section pre-video-assisted teaching guidelines implementation which improved post-video-assisted teaching guidelines implementation. From the researchers' point of view, this demonstrates how well the video-assisted structured teaching guidelines were very effective. This reflected the imperative need to understand the purpose of the video-assisted teaching guidelines regarding improving the knowledge regarding anxiety levels among primigravida mothers undergoing c- section and it will reduce the anxiety level.

These results are in the same line with **Snehalben et al., (2021)** who studied "The Impact of a Video-Assisted Structured Teaching Program on Knowledge of Pre-Procedure Anxiety Levels in Primigravida Mothers Having Caesarean Sections at Selected Hospitals in Rajkot, Gujarat" and reported that the obtained' value for the level of knowledge was 6.71 which mean highly improvement in knowledge with significant at $p < 0.05$ level.

Results of the current study highlighted that had anxiety level was lower post-video-assisted teaching guidelines implementation than pre. This may be related to fear of fetal injury/death, knowledge deficit, loss of control, and lack of support during childbirth. Which, improved after guidelines implementation and from the researchers' point of view, this reflected the positive effect of using video-assisted structured teaching programs in improving knowledge among the studied mothers.

These results are parallel with the study published by **Wiklund et al., (2017)** about "Cesarean section on maternal request: reasons for the request, self-estimated health, expectations, experience of birth and signs of depression among first-time mothers" and found that women requesting CS often reported anxiety.

Similarly, **Lobel, et al., (2017)** conducted a study titled "Psychosocial sequelae of cesarean delivery: Review and analysis of their causes and implications" and observed that mothers may have experienced heightened anxiety as a result of anticipating that surgery would be performed shortly after birth and being concerned about the surgery method, such as anesthesia, the risk of being cut, and the operating room's physical atmosphere.

Also, **Fuglens et al., (2018)** studied "Why do some pregnant women prefer cesarean? The influence of parity, delivery experiences, and fear" and showed that the high anxiety of childbirth during pregnancy was common in women with elective CS.

Results of the current study highlighted that a statistically significant relation was detected between knowledge and anxiety pre and post-video-assisted teaching guidelines. From the researchers' point of view, this reflected the positive effect of using video-assisted structured teaching programs in improving knowledge among the studied primigravida mothers that led to minimizing anxiety levels.

The current study results are supported by the study done by **Hassan, (2018)** who studied "effectiveness of a structured teaching program on anxiety among seropositive pregnant women" and showed that there was a significant association between the effectiveness of video-assisted teaching program and knowledge and pre-procedure anxiety level among primigravida mothers undergoing c- section.

Results of the current study highlighted that a statistically significant association was found between knowledge and pre-procedural anxiety with demographic variables of the studied primigravida mothers and their educational level and residence. The current

study results are similar to the study done by **Snehalben et al., (2021)** and showed that there was a significant relationship between the effects of the video-assisted teaching program and knowledge regarding pre-procedure anxiety levels among primigravida mothers undergoing c- section and their demographic characteristics.

Results of the current study highlighted that before and after tests, there was a strong negative association between knowledge and anxiety among the investigated primigravida moms undergoing caesarian section. This indicates that as knowledge improves, anxiety decreases, and as knowledge decreased anxiety increases. From the researchers' point of view, this association is explained by that improvement in knowledge is reflected in the improvement and decrease in anxiety level. Also, mean when the studied mothers had sufficient knowledge they can practice well. Also, this reflected the success of the video-assisted structured teaching guidelines and their positive effect.

Conclusion:

Based on the current study's findings and hypotheses, it was concluded that there was a significant improvement in knowledge among primigravida mothers regarding the caesarian section and a significant decrease in anxiety level among primigravida mothers regarding the caesarian section. Video-assisted teaching guidelines are found to be effective in decreasing anxiety and enhancing knowledge among primigravida mothers undergoing caesarian section. There was a strong negative association between knowledge and anxiety among the investigated primigravida moms undergoing caesarian section.

Recommendations:

In light of the current study results, the following recommendations are proposed:

- It is very important to apply a teaching program for primigravida mothers regarding the caesarian section during the antenatal period and be should be conducted, discussed, integrated into antenatal care to improve their knowledge and decrease their anxiety level.

- Psychological support should be carried out through routine care to help pregnant women become more adapted and decrease anxiety levels regarding the caesarian section.
- Booklets and brochures containing sufficient knowledge about the caesarian section should be printed and kept in antenatal clinics and given to all pregnant women.
- Future research includes replication of the current study on a large group and another setting for generalization.

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