
Upgrading Mothers' Knowledge, Practice and Confidence Regarding Emergency Care of Their Children with Traumatic Dental Injuries

Samya Mohamed Ahmed Hegazy¹ & Amal Abo El-Azm Abd El-Rahman Younis²

¹. Assistant Professor of Pediatric Nursing, Faculty of Nursing, Tanta University, Egypt.

². Lecturer of Pediatric Nursing, Faculty of Nursing, Tanta University, Egypt.

Abstract:

Background : Traumatic dental injuries continue to be one of the most serious issues with children's oral Health and can be extremely painful and upsetting. It may frequently occur at any place and time. Prognosis of an avulsed tooth is depending on the parents' awareness of suitable emergency measures. So parents must enhance their knowledge, practice and confidence in dealing with it. **Aim:** Upgrade mothers' knowledge, practice and confidence regarding emergency care of their children with traumatic dental injuries. **Research design:** A quasi-experimental design was used. **Setting:** It was conducted at pediatric dental care unit at Tanta University Hospital. **Sample:** A convenience sampling of 60 mothers and their children with traumatic dental injuries. **Tools:** Three tools were used: **Tool I:** A structured interview questionnaire. **Tool II:** Self-reported Practices of the studied mothers towards emergency care of their children with traumatic dental injuries. **Tool III:** Confidence of the studied mothers towards emergency care of their children with traumatic dental injuries. **Results:** There was a significant improvement in mothers' knowledge, practices and confidence immediately and one month after implementation of the educational intervention. There was a statistical significant positive correlation between knowledge and practice, before and immediate after educational intervention. **Conclusion:** Mothers' knowledge, practices and confidence were improved after implementation of the educational intervention. **Recommendation:** Continuous health education program for mothers and their children should be provided frequently and consistently regarding traumatic injuries and its emergency care.

Keywords: Confidence, Emergency care, Knowledge, Practices & Traumatic dental injuries.

Introduction

Children are especially vulnerable to many traumatic injuries as they go through different stages of growth and development. These injuries may happen at home, public places and in schools (Mendoza et al., 2015). Traumatic dental injuries continue to be one of the most serious issues for children's oral health. According to previous studies, twenty percent of school-age children have a history of traumatic mouth injuries. Therefore, they are considered the main pediatric health issues that can influence children's everyday functioning and quality of life. (Petti et al., 2018 & Villasenin et al., 2022). Dental injuries may lead to tooth loss, alteration in growth of a child's face, more pain, distress, Psychological and emotional impacts, diminished self-confidence. In addition to the biological complications of dental injuries, the cost of treatment may create an additional economic burden on the family and disturb their quality of life. Delayed treatment or improper intervention may impose an additional cost for the corrective therapeutic intervention (Alshammary et al., 2022).

Traumatic dental injuries mean injury of the oral structures, which may lead to abnormalities in the pulp and periodontal tissues and need for efficient

treatment and urgent care. (Francisco et al., 2015). Avulsion is a significant dental injury which means total removal of a tooth from its socket. The success of replantation depends on timing, utilizing a suitable medium to keep the tooth until replantation, and managing the tooth without touching the root surface. (Salem et al., 2022).

Every dental trauma injury is unique and the treatment options will vary from child to child and largely dependent on type and site of the damaged tooth. Parents have an important role in maintenance of their children's oral health especially mothers. knowledge regarding the proper emergency care for dental injuries is an important issue that mothers need to know (Razeghi et al., 2020). In addition to enhance the prognosis of traumatic teeth, knowledge of the immediate and emergency care of traumatic dental injuries is crucial. (Levin et al., 2012). Restoring of avulsed teeth immediately to its anatomical location is the proper treatment; maintain viable periodontal ligament fibers and maintaining the function and integrity. Therefore, the prognosis of a traumatized tooth can be improved with the right intervention. The greater the chance of success during tooth extraction, the shorter the tooth restoring in the socket. Increase the time between the trauma and the

tooth's repositioning increases the risk of problems and negatively affects the prognosis. (Tewari et al., 2021). Therefore, the knowledge and skills of those caring for children in close proximity like mothers must be improved. If mothers are aware of the appropriate first-aid measures to take in the event of a trauma, they have a significant role in the prognosis of their children's avulsed permanent teeth. (Raouf et al., 2012). So the present study aimed to upgrading mothers' knowledge, practice and confidence regarding emergency care of their children with traumatic dental injuries.

Significance of the study:

Children and teenagers experience traumatic dental injuries frequently, which poses health and social issues with increased occurrence rates and is associated with numerous risks. So it required an efficient planning and interventions in order to prevent their incidence. (Namdev et al., 2018 & Aghdash et al., 2015). The epidemiological prevalence shows that around 40% of children under the age of 7 visit the dentist for the first time as a result of dental trauma, which affects roughly 30% of children with trauma. (Khanbodaghi et al 2019 & Alshammary et al., 2022). Mothers are the first line care giver to the child at the injury time. Consequently, and for better prognosis of children traumatic dental injuries, the present study aimed to upgrade mothers' knowledge, practice and confidence regarding emergency care of their children with traumatic dental injuries.

Aim of the study

The aim of the study is to upgrade mothers' knowledge, practices and confidence regarding emergency care of their children with traumatic dental injuries.

This was fulfilled by the following objectives:

- 1- Assess mothers' knowledge, reported practice and confidence regarding emergency care of their children with traumatic dental injuries.
- 2- Design an educational intervention about emergency care of children with traumatic dental injuries
- 3- Apply an educational intervention about emergency care of children with traumatic dental injuries
- 4- Evaluate the effect of the educational intervention on mothers' knowledge, reported practice and confidence regarding emergency care of their children with traumatic dental injuries.

Research Hypotheses:

- After the implementation of the educational intervention, mothers' knowledge and practices regarding emergency care of their children with

traumatic dental injuries are expected to be improved

- After the implementation of an educational intervention, mothers' confidence regarding emergency care of their children with traumatic dental injuries is expected to be improved.

Subjects and Method

Research design:

A quasi-experimental research design was used in order to achieve the aim of the study.

Setting:

The study was conducted at pediatric dental care unit at Tanta University Hospital.

Subjects:

A convenience sample of 60 mothers and their children with traumatic dental injuries. It was estimated according the following criteria, power of test 95% and confidence error level 5% type I error 0.05.

The Steven thimpson's equation (Daniel, 1999): sample size was calculated using

$$n = \frac{NXP(1 - P)}{N - 1X(d^2/z^2) + P(1 - P)}$$

Inclusion criteria for children:

- Age from 2-12years
- Free from any mouth congenital anomalies

Tools: four tools were utilized in the present study for collections of data:

Tool I: A structured interview questionnaire: It was designed by the researchers after review of the recent related literatures (Petti et al., 2018). It consists of three parts:

Part 1: Characteristics of studied mothers: such as age, marital status, level of education, occupation, residence, previous dental trauma first aid training program and history of previous dental trauma at home.

Part 2: Characteristics of studied children: such as Age, Sex and birth order.

Part 3: knowledge of studied mothers regarding traumatic dental injuries and emergency care: It was used to assess mothers' knowledge about traumatic dental injuries and emergency care (pre, immediate and after one month). It was included multiple choice(10) questions about Definition of dental trauma, Causes, definition of tooth replantation, time of tooth replantation, who is the right person to conduct replantation, time for replantation and time for seeking professional help.

Scoring system for mothers' knowledge:

Scores of each question ranged from 0-2. A score of 2 was given for complete answers, score of 1 was given

for incomplete answer and a score of zero was given for wrong or didn't know answered questions. Total scores of mothers' knowledge were classified as the following: low knowledge was considered <60 %, moderate knowledge was considered from 60-<75 % and high knowledge was considered from 75- 100 %

Tool II: Self-reported Practices of the studied mothers towards emergency care of their children with traumatic dental injuries: It was designed by the researchers after reviewing recent related literature (Razeghi et al., 2020). It was calculated as the following: a score of 1 was given for correct practice and a score of 0 was given for incorrect practice. Total scores of mothers' reported practices were calculated and classified as follows: unsatisfactory practice was considered <60% and satisfactory practice was considered \geq 60%.

Tool III: Confidence of the studied mothers towards emergency care of their children with traumatic dental injuries. It was designed by the researchers after reviewing recent related literature (Khanbodaghi et al., 2019). The researcher used three point Likert –type scale that range from strongly agree to disagree. Disagree was scored 1, agree was scored 2 and strongly agree was scored 3. Total score of confidence was classified as follows: from 70-100% was considered confident and less than 70% was considered not confident.

Method

- The study was carried after an official permission made by the relevant authorities.
- **Ethical Consideration Approval** from Faculty of Nursing's Ethical Committee at Tanta University was obtained with code number 197-1-2023. Oral consent was gained from mothers who also had the choice to leave the study whenever they wanted. Mothers' privacy was also taken into consideration. Official permission from pediatric dental care unit at Tanta University Hospital administrators was obtained to conduct the study
- **The tools' content validity and reliability:** the content validity of the study tools was assured by a panel of experts in pediatric nursing and specialists in pediatric dental health and content validity index was 96%. Reliability of the developed tools was tested for the internal consistency by using Cronbach's alpha. The required changes were made by rearranging the questions and restating some of the items.
- Six mothers joined in the **pilot study** to assess applicability and clarity. They were excluded from the study.
- Three phases were included in the data collection process:

Assessment Phase:

- It was conducted by the researchers to collect baseline information from each study participant. (Tool I part I, II)
- Mothers were interviewed individually by researchers to fill the questionnaire sheet to assess their knowledge, reported practice and confidence about emergency care of their children with traumatic dental injuries by using tool I part three and tool II & III before, immediate and after one month of implementation the educational intervention.
- The researchers interviewed mothers individually or in groups to fulfill the questionnaire forms.

Implementation Phase which included two phases: preparatory and intervention:

Preparatory phase:

The educational intervention was designed based on review of other related studies and researches. All the objectives behind the session's application were covered in the content.

Intervention phase:

Four sessions were used to deliver the educational intervention. The educational intervention's objective and content were explained to mothers at the beginning of the first session in simple Arabic language, and several teaching methods (lectures, demonstrations, group discussions, and multimedia resources) were utilized to help mothers understand. The following subjects were covered during the following sessions.

First session: It was related to definition of dental trauma, causes, definition of tooth replantation and time of tooth replantation.

Second session: It focused on how recovery time from trauma is essential for transplantation, right person to conduct replantation, what must be done if the avulsed tooth become dirty, the first place mothers would contact in case of dental trauma and urgency to seek professional help.

Third session: It was related to practices of the studied mothers regarding emergency care of their children with traumatic dental injuries.

Fourth session: It was concerned with how to be confident in emergency situation and how deal efficiently with children with traumatic dental injuries.

Evaluation phase:

The effects of the educational intervention on mothers' knowledge, practice, and confidence were assessed by comparing the test results from before and after. Three times this evaluation was conducted: before the intervention's implementation, immediately following it, and then one month after.

Statistical analysis

Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp) Qualitative data were described using number and percent. The Kolmogorov-Smirnov test was used to verify the normality of distribution. Quantitative data were described using range (minimum and maximum), mean, standard deviation, median and interquartile range. Significance of the obtained results was judged at the 5% level. The used tests were Friedman test, Cochran's test, Repeated-measures ANOVA and Pearson coefficient.

Results

Table (1): Percentage distribution of the studied mothers according to their characteristics (n = 60)

Part 1: characteristics of studied mothers	No.	%
Age		
Less than 20	0	0.0
20-<30 years	37	61.7
30-<40 years	16	26.7
40 years and more	7	11.7
Marital status		
Married	48	80.0
Divorced	6	10.0
Widow	6	10.0
Level of Education		
Illiterate	13	21.7
Read and write	10	16.7
Primary	4	6.7
Preparatory	4	6.7
Secondary	2	3.3
University	25	41.7
Diploma	2	3.3
Occupation		
Working	23	38.3
Not working	37	61.7
Number of children in the family		
One	24	40.0
Two	32	53.3
Three	4	6.7
Residence		
Urban	26	43.3
Rural	34	56.7
Previous dental trauma first aid training program		
Yes	6	10.0
No	54	90.0
Source of knowledge about dental trauma care		
T.V	7	11.7
Internet	31	51.7
Doctor / Nurse	15	25.0
Friends and Neighbors	4	6.7
Books and newspapers	3	5.0
History of previous dental trauma at home		
Yes	32	53.3
No	28	46.7

Table (2): Distribution of studied children regarding to their characteristics (n = 60)

Part 2: Characteristics of studied children	No.	%
Sex		
Male	41	68.3
Female	19	31.7
Age		
Min. – Max.	2.0 – 12.0	
Mean ± SD.	4.82 ± 2.73	
Median	4.0	
Birth order		
First	46	76.7
Second	11	18.3
Third	3	5.0

SD: Standard deviation

Table (3): Total score of studied mothers' level of Knowledge about traumatic dental injuries and emergency care on pre, immediately post and after 1month (n = 60)

Part 3: Level of Mother's Knowledge about traumatic dental injury and emergency care	pre		Immediate post		After 1month		Test of Sig.	p
	No.	%	No.	%	No.	%		
Low (<60%)	52	86.7	0	0.0	0	0.0	Fr=118.0*	<0.001*
Moderate (60-<75%)	7	11.7	0	0.0	0	0.0		
High (75-100%)	1	1.7	60	100.0	60	100.0		
Sig. bet. periods	p ₁ <0.001 ,p ₂ <0.001 ,p ₃ =1.000							
Total score (0 – 20)							F=1097.751*	<0.001*
Min. – Max.	5.0 – 16.0		18.0 – 20.0		16.0 – 20.0			
Mean ± SD.	9.03 ± 2.28		19.75 ± 0.60		18.93 ± 1.19			
Median	9.0		20.0		19.0			
% score								
Min. – Max.	25.0 – 80.0		90.0 – 100.0		80.0 – 100.0			
Mean ± SD.	45.17 ± 11.39		98.75 ± 3.0		94.67 ± 5.96			
Median	45.0		100.0		95.0			
Sig. bet. periods	p ₁ <0.001 ,p ₂ <0.001 ,p ₃ <0.001							

SD: Standard deviation

Fr: Friedman test, Sig. bet. periods was done using Post Hoc Test (Dunn's)

F: F test (ANOVA) with repeated measures, Sig. bet. periods was done using Post Hoc Test Bonferroni

p: p value for comparing between the studied periods

p₁: p value for comparing between Pre and Immediate post

p₂: p value for comparing between Pre and after 1month

p₃: p value for comparing between immediate post and after 1month

*: Statistically significant at p ≤ 0.05

Table (4): Total score of studied mothers' level of reported practices regarding emergency care of their children with traumatic dental injuries pre, immediately post and after one month (n = 60)

Reported Practices of the studied mothers' level of emergency care of their children with dental trauma	pre		Immediate post		After 1month		Test of Sig.	p
	No.	%	No.	%	No.	%		
Unsatisfactory (<60%)	58	96.7	0	0.0	3	5.0	Q=110.310*	<0.001*
Satisfactory (≥60%)	2	3.3	60	100.0	57	95.0		
Sig. bet. periods	p ₁ <0.001 ,p ₂ <0.001 ,p ₃ =0.629							
Total score (0 – 12)							F=650.909*	<0.001*
Min. – Max.	0.0 – 9.0		11.0 – 12.0		5.0 – 12.0			
Mean ± SD.	3.47 ± 1.86		11.80 ± 0.40		10.68 ± 1.50			
Median	3.0		12.0		11.0			
% score								
Min. – Max.	0.0 – 75.0		91.67 – 100.0		41.67 – 100.0			
Mean ± SD.	28.89 ± 15.53		98.33 ± 3.36		89.03 ± 12.51			
Median	25.0		100.0		91.67			
Sig. bet. periods	p ₁ <0.001 ,p ₂ <0.001 ,p ₃ <0.001							

SD: Standard deviation

F: F test (ANOVA) with repeated measures, Sig. bet. periods was done using Post Hoc Test Bonferroni

Q: Cochran's test, Sig. bet. periods was done using Post Hoc Test (Dunn's)

p: p value for comparing between the studied periods

p₁: p value for comparing between Pre and Immediate post

p₂: p value for comparing between Pre and after 1month

p₃: p value for comparing between immediate post and after 1month

*: Statistically significant at p ≤ 0.05

Table (5): Total score of studied mothers' level of confidence regarding traumatic dental injuries and emergency care pre, immediately post and after one month (n = 60)

Level of Confidence of mothers regarding emergency care of traumatic dental injuries	Before		Immediately post		After 1month		Test of Sig.	p
	No.	%	No.	%	No.	%		
Not confident (<70%)	60	100.0	6	10.0	12	20.0	Q= 90.621*	<0.001*
Confident (≥70-100%)	0	0.0	54	90.0	48	80.0		
Sig. bet. periods	p ₁ <0.001*, p ₂ <0.001*, p ₃ =0.335							
Total score (12 – 36)								
Min. – Max.	13.0 – 28.0		23.0 – 33.0		23.00 – 33.00		F= 316.390*	<0.001*
Mean ± SD.	21.20 ± 2.52		29.20 ± 1.61		28.60 ± 2.12			
Median	21.0		29.0		29.0			
% score								
Min. – Max.	4.17 – 66.67		45.83 – 87.50		45.83 – 87.50			
Mean ± SD.	38.33 ± 10.51		71.67 ± 6.72		69.17 ± 8.85			
Median	37.50		70.83		70.83			
Sig. bet. periods	p ₁ <0.001*, p ₂ <0.001*, p ₃ =0.078							

SD: Standard deviation

F: F test (ANOVA) with repeated measures, Sig. bet. Periods was done using Post Hoc Test Bonferroni

Q: Cochran's test, Sig. bet. Periods was done using Post Hoc Test (Dunn's)

p: p value for comparing between the studied periods

p₁: p value for comparing between Pre and Immediate post

p₂: p value for comparing between Pre and after 1month

p₃: p value for comparing between immediate post and after 1month

*: Statistically significant at p ≤ 0.05

Table (6): Correlation between knowledge, practice and confidence of mothers toward emergency care of their children with traumatic dental injuries (n = 60)

	Pre		Immediate post		After 1month	
	r	p	r	p	r	p
Knowledge Vs. Practices	0.491	<0.001*	0.840	<0.001*	0.168	0.199
Knowledge Vs. Confidence	0.371	0.004*	0.368	0.004*	0.491	<0.001*
Practices Vs. Confidence	0.355	0.005*	0.349	0.006*	0.284	0.028*

r: Pearson coefficient

*: Statistically significant at p ≤ 0.05

Table (1): Shows percentage distribution of studied mothers regarding to their socio-demographic characteristics. It was found that more than half of mothers who participated in the study (61.7%) aged 20 to less than 30. About half of mothers have university degrees in relation to their education. This table illustrates that (61.7%) of the mothers were not working. It was evident that 53.3% of the mothers in the study had two children in their family. Regarding mothers' residence, more than half of them (56.7%) are from rural area. It was found that 90.0 % of them had no Previous dental trauma first aid training program. It was cleared that, more than half of them (51.7%) take their knowledge about dental trauma care from Internet.

Table (2): Indicates distribution of studied children regarding their characteristics. It was noticed that more than two thirds of them (68.3 %) were male. Regarding their age, it was found that the average age

of these children was 4 and more than two thirds of them (76.7%) were the first child in the family.

Table (3): Demonstrates the total score of mothers' level of knowledge about traumatic dental injuries and emergency care pre, immediately post and one month after educational intervention implementation. It cleared that, most of mothers (86.7%) had low knowledge before of educational intervention implementation. While all of them (100%) had a high score of knowledge immediately and after one month with highly statistically significant difference pre, immediately post and after one month from the educational intervention implementation. The means of total mother's knowledge scores were 9.03 ± 2.28, 19.75 ± 0.60 and 18.93 ± 1.19 before, immediately and after one month from the implementation of educational intervention respectively.

Table (4): Shows total score of mothers' level of reported Practices regarding traumatic dental injuries and emergency care before, immediately post and one

month after implementation of educational intervention. The majority of mothers (96.7%) had unsatisfactory scores of reported practices prior to the educational intervention implementation. While immediately after, it was recognized that all mothers (100%) had satisfactory practice level. The majority of them (95.0 %) had satisfactory reported practices scores after one month with highly statistically significant difference pre, immediately post and after one month from the educational intervention implementation. The mean of total reported practices scores of mothers was 3.47 ± 1.86 , 11.80 ± 0.40 and 10.68 ± 1.50 before, immediately and after one month from the educational intervention implementation respectively.

Table (5): Shows total score of mothers' level of confidence regarding emergency care of their children with traumatic dental injuries before, immediately post and one month after implementation of educational intervention. It revealed that, all of the mothers (100%) were not confident before the implementation of educational intervention. While immediately post and after one month, most of them (90.0 %) & (80.0%) were confident respectively with statistically significant difference before, immediately post and one month after implementation of educational intervention. It was found that means of total scores of mothers' confidence were 21.20 ± 2.52 , 29.20 ± 1.61 and 28.60 ± 2.12 before, immediately and one month after educational intervention implementation respectively.

Table (6): Shows correlation between knowledge, practice and confidence of mother toward emergency care of their children with traumatic dental injuries. It was cleared that there was a positive significant correlation between knowledge and practice, before and immediate after educational intervention. Additionally, there was a positive significant correlation before, immediately after and after one month of the program implementation with statistically significant difference between knowledge and mothers' self-confidence. In addition the current study highlighted the presence of a significant positive correlation between mothers' practices and their self-confidence.

Discussion

Traumatic dental injuries usually occurred frequently in children and consider a significant oral health issue worldwide. It can cause physical and psychological effects on the children and their parents. Moreover, it has an impact on the permanent dentition development. Parents seek treatment when they become aware of traumatic dental injuries and post-traumatic sequel, which enables the prevention of

potential complication. (Baginska et al., 2016 & Bakarcic et al., 2017).

The present study demonstrates that the majority of mothers had low scores of knowledge related traumatic dental injuries and emergency care before the educational intervention implementation. This could be explained that the majority of mothers having never taken first aid training program for dental trauma before the implementation of educational intervention and unavailability of health information delivered by professional persons. This result was congruent with Namdev et al., (2018) & Joybell et al., (2019) who reported that there was insufficient knowledge regarding emergency dental trauma first-aid among participants in their study.

Additionally, these findings of the present study were agreed with findings of Resmy et al., (2019), Ahmed et al., (2020) & Alansari et al., (2020) who mentioned that parents had a low level of knowledge regarding the immediate management of traumatic dental injuries of their children before educational intervention.

Results of the present study revealed statistically significant improvement Regarding mothers' knowledge after implementation of the educational intervention. It cleared that all of them had high scores of knowledge immediately post and after one month. This improvement may be attributed to that the educational intervention was established in response to the cleared mothers' knowledge deficiency and their cleared need for education concerning traumatic dental injury care among their children. So they were obviously interested and interactively involved in the training sessions. These results were consistent with Salem et al., (2022) & Razeghi et al., (2020) who reported that having the educational dental program lead to enhancement of participants' level of knowledge regarding traumatic dental injuries care among their children.

The current study demonstrated that the majority of mothers had unsatisfactory level of their reported caring practices of traumatic dental injuries among their children before implementation of the educational intervention. This result agreed with Alshammary et al., (2022) who reported that there was obviously limited mothers' performance observed in their qualitative study.

On the other hand the current study cleared a highly statistically significant improvement regarding mothers' reported practices immediately after educational intervention implementation and after one month. This might be explained as a result of improvement in the mothers' awareness about the dangerous effect of delaying the immediate care of dental trauma for their children. Also as the mothers recalled the previously acquired information about

dental trauma in the past which indicates the importance of traumatic dental injury prevention and care programs for the mothers and their children. These results were in harmony with the result of **Fouad et al., (2020)** who indicated that the mothers' self-reported practices mean score was significantly improved after educational interventions. On the other hand, findings of the current study opposed to findings **Frujeri & Costa., (2019)** who mentioned that a relatively high proportion of their study participants stated they were not able to replant avulsed teeth or doing dental care after dental health education.

The current study demonstrated that all the mothers were not confident regarding their ability to care for their children with traumatic dental injuries before implementation of the educational intervention. This might be because the majority of them had no previous dental trauma first aid training program before the study. These results were in harmony with result of **Al-Sehaibany et al (2018)** who cleared in their assessment study that most of the respondents were not capable and not confident in their ability to manage a traumatic dental injury among their children.

Regarding correlation between mothers' knowledge and practices regarding the emergency care of their children with traumatic dental injuries. It was found that there was a positive correlation between mothers' knowledge and reported practices before, immediately after and after one month of the educational intervention. This may be attributed to that the improvement in mothers' awareness is reflected on their reported practices regarding care of their children with traumatic dental injuries. These results were aligned with **Salem et al., (2022)** who mentioned that the ability to deal with trauma injuries practically is directly related to knowledge, which has been enhanced by specialized traumatic dental injuries care educational programs. Additionally, the present study findings were in harmony with **Yeng et al., (2020)** & **Momeni et al., (2022)** who found that there was a positive correlation between mothers' knowledge and self-performance regarding dental trauma.

Findings of the present study referred to a positive correlation between mothers' knowledge regarding traumatic dental injury and their self-confidence, in addition a positive correlation between their reported traumatic dental injury care and their self-confidence. These findings may be one of the supportive outcomes of the educational intervention as providing mothers with information help them to develop a realistic perception of their capabilities, improve understanding of their children's condition and developing sense confidence and control over the

situation. These findings were in agreement with **Jabraeili et al., (2020)** who concluded that supportive programs which include providing parents specially mothers with information, training regarding caring for their children, have a positive effect on development of mothers' sense of confidence.

Conclusion

The current study's findings led to the conclusion that there was a significant improvement in mothers' knowledge, reported practices and confidence immediately and one month after implementation of the educational intervention. Also it was found that there was a positive significant correlation between knowledge and practice, before and immediate. There was statistically significant difference between Knowledge with confidence and practices with confidence with appositive significant correlation before, immediate and after one month.

Recommendation

- Continuous health education programs and training courses for mothers and their children should be repeated frequently and consistently regarding traumatic injuries and its emergency care.
- Updated training programs for pediatric nurses regarding dental health care and first aids for traumatic dental injuries among children.

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