

RESEARCH ARTICLE

KNOWLEDGE, ATTITUDE AND PRACTICE OF PEDIATRIC DROWNING FIRST AID AMONG PARENTS IN HAIL POPULATION, SAUDI ARABIA

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Abstract

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Received: 19 December 2020 Final Accepted: 22 January 2021 Published: February 2021

Key words:-

Drowning, First Aid, Children, Knowledge, Parents, Hail, Saudi Arabia

Background: Around the world, drowning is one of the top three causes of death from unintentional injury, and children at the highest risk.

Aim: Our study aims to assess the parent's knowledge, attitude and practice towards pediatric drowning risks, causes and first aid.

Methodology: This is a cross-sectional study was conducted on males and females parents at any age in Hail. Saudi Arabia. Through a selfadministrated online questionnaire which divided into two sections: demographic information (age, gender, marital state and education level) and information about pediatric drowning (risk factors, causes, the riskiest place that could cause drowning, previous drowning accidents, swimming supervision, Pediatric drowning First Aid steps)

Result: Our study included 406 male and female parents. The majority were females (81.7%).

The level of knowledge about drowning first aid among the participants was moderate (with a mean of 8.14±2.57). (76.1%) of participants chose lack of supervision as a risk factor of drowning. The majority of the participants (77.8%) chose children not knowing how to swim as the cause of drowning. (87.7%) of the participants agreed that the public swimming pool is the riskiest place that could cause drowning. Most of the participants (74.9%) haven't had any previous drownings.

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Introduction:-

First aid can be defined as helping behaviors and primary care provided for an acute illness or injury. First-aid providers' goals are to preserve life, alleviate suffering, prevent further illness or injury, and promote recovery. (1)Taking rapid action while waiting for professional help can dramatically reduce mortality and morbidity. The prognosis of any injuries after accidents mainly depends on the victim's management immediately following the incident. (2)

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Drowning is a major global public health crisis; it is the third leading cause of unintentional injury deaths, accounting for 7% of all injury-related deaths. There are an estimated 372 000 annual drowning deaths worldwide. (3)(4)One of the factors associated with the bad near-drowning outcome is delayed rescue at the scene in Saudi Arabia. (5)

The definition of drowning is death within 24 hours from suffocation by submersion in liquid, ordinarily freshwater or seawater. (6)

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There are several risks of drowning; in Saudi Arabia are Children and males individuals are at the highest risk because of increased access to the water; another factor found to be associated with the bad near-drowning outcome is delayed rescue at the scene. (3)(5)although risky behavior including alcohol use and lack of supervision. (7)(8)Deaths caused by drowning are attributable to inadequate adult supervision; Infants are left in bathtubs unsupervised. Preschoolers discover ungated swimming pools and drown. (9)

Our study would assess the enrolled parents' knowledge, attitude and response regarding drowning in the children. Researchers would further investigate the factors that influenced their reactions while managing a drowning child.

Research Method:-

Study Design and sampling:

The study will be a cross-sectional non-interventional study in the Hail region, Saudi Arabia, in 2020.to determine Knowledge, Attitude And Practice Of Pediatric Drowning First Aid Among Parents In Hail Population, Saudi Arabia. Data will be collected through an online questionnaire by Random sampling. Inclusion criteria: Males and females Parents at any age in hail city, Saudi Arabia.

Data Collection:

We will use a self-administrated questionnaire that consists of multiple-choice questions. The questionnaire is divided into two sections: demographic information (age, gender, marital state and education level) and information about pediatric drowning (risk factors, causes, the riskiest place that could cause drowning, previous drowning accidents, swimming supervision, Pediatric drowning First Aid steps).

Data Entry and Statistical Analysis:

An excel spreadsheet will be established for the entry of data. Data will be represented and statistically analyzed using Statistical Package for the Social Sciences (SPSS) v 22.0. The Chi-Square test or Fisher's Exact test will be used to estimate the relationship between categorical variables. Significance will be adopted at p < 0.05 for interpretation of results.

Result:-

Our study included a total of 406 participants, of which 332 are females and 74 are males. (24.4% n=99) were 31-35 years old, (18.5% n=75) were 26-30 years old, (16.3% n=66) were 36-40 years old, (15% n=61) were 41-45 years old, (9.1% n=37) were 46-50 years old, (7.9% n=32) were ≥ 51 years old,(7.4% n=30) were 21-25 years old and (1.5% n=6) were 18-20 years old. the highest percentage(76.1\%, n=309) had a bachelor's degree followed by high school degree, postgraduate degree, elementary school degree and intermediate school degree with a percentages of (12.8% n=52), (7.6% n=31), (2.2% n=9), (1.2% n=5) respectively. The majority (97.3\%,n=395) were married, (2% n=8) were divorced and (0.7% n=3) were widowed. (72.2% n=293) of the participants had two or more children under the age of 14 and (27.8% n=113) had one child under the age of 14.

The participants were asked to point out the risk factors that might lead to drowning, (76.1% n=309) chose lack of supervision, (63.5% n=258) chose children not knowing how to swim, (46.3% n=188) chose unsecured swimming pools and (15.5% n=63) chose younger age children. They were also asked to point out the causes of drowning; the majority (77.8%, n=316) chose children not knowing how to swim, (59.1% n=240) chose not to wear life preservers, (52.5% n=213) chose sudden falls in the water, (20.2% n=82) chose leg cramps, (16.3% n=66) chose loss of consciousness and (8.6% n=35) chose stroke and heart attacks. Our participants were asked about the riskiest place that could cause the drowning of children (87.7% n=356) chose public swimming pools, (8.1% n=33) chose home swimming pools and (4.2% n=17) didn't know. We asked about previous drowning accidents; most of the participants (74.9%, n=304) haven't had any previous drownings and (25.1% n=102) have faced previous drownings. The participants were asked about who supervise their children while swimming; more than half (56.9%, n=231) leave them under the supervision of an adult, (33% n=134) leave them under the supervision of an expert, (9.4% n=38) leave them under supervision of another swimmer in the pool and (0.7% n=3) leave them unsupervised.

The level of knowledge about drowning first aid among the participants was moderate (with a mean of 8.14 ± 2.57) and it has been assessed by asking them fifteen questions about the steps of first aid and they scored as following:(18.2% n=74) got 9 out of 15, (16% n=65) got 7 out of 15, (13.5% n=55) got 8 out of 15, (11.8% n=48) got 10 out of 15, (10.6% n=43) got 11 out of 15, (7.6% n=31) got 6 out of 15, (5.7% n=23) got 5 out of 15, (4.2%

n=17) got 4 out of 15,(3.7% n=15) got 12 out of 15,(2.7% n=11) got 13 out of 15,(2.5%n=10) got 3 out of 15, (1.5% n=6) got 2 out of 15,(1% n=4) got 14 out of 15, (0.7% n=3) got 0 out of 15 and (0.2% n=1) got 1 out of 15.

The participants were asked about the source of their information, (45.6% n=185) got their information from friends and family, (45.3% n=184) got it from social media, (6.4% n=26) got it from medical courses and (2.7% n=11) are workers in the medical field.

Discussion:-

Drowning is one of the leading causes of death worldwide, especially among children.(10)So, it's agreeable that having FA awareness (especially for parents) is extremely important. However, there is a defect in delivering FA training courses in public in Saudi Arabia.(5) There is little published data about drowning in Saudi Arabia, with few papers from the Riyadh area. To the best of our knowledge, this issue has not been studied in Hail region, which is located in northern Saudi Arabia.

Regarding the risks of drowning in this study(76.1% n= 309) choose lack of supervision as a significant risk of drowning; however in other study mention that supervision has been recommended as a strategy for the prevention of drowning in children,(8)in comparison different study result shows that A total of 1804 drownings were recorded: (76% n= 1376) of these were unsupervised, (18% n= 319) were supervised. (7)also in another study mention that Many drowning deaths are attributable to inadequate adult supervision.

About the knowledge and ability of the child to swim (63.5 % n= 258) choose it as a risk and (77.8% n= 316) choose it as a cause of drowning of children, however in other study mention that There were a total of 296 incidents recorded (86% n= 254) in which drowning children did not have any swimming ability, (10% n=29) in which they had some swimming ability. (7)In this study, (46.3% n= 188) choose that the safe and secure swimming pools can be a risk of drowning. However, another study mention that Preschoolers' children discover ungated swimming pools and which lead to drowning.(10) In our study, (15.5 % n= 63) choose that the child's age can be a risk of drowning.

Regarding the causes that can lead to drowning situation (59.1% n=240) chose not to wear life preservers can lead to drowning. However, in other study mention that Lifejacketshave also been proposed as a prevention strategy for drowning(8)

This study (52.5% n=213) chose sudden falls in the water, although in other study mention that children were 1.75 times more likely to drown as a result of a fall into water, (8)Quan and Cummings reported that most (76%) of victims 0-4 years drowned while bathing or after falling in the water.(11)

In the present study (87.7% n= 356) answer that public swimming pools are more risky places for children drowning in comparison to(8.1 % n=33) choose home swimming pools or bathtub are riskier, while in other study shows drowning cases took place in public swimming pools(81% n= 17/21) and private in (19%n= 4/21) of cases(12) also, other study mention that (54% n = 43) of drowning occurred in public swimming pools. (13)

About the drowning situation, (25.1 % n=102) had face a child drowning situation, while (74.9 % n=304) didn't face any drowning situation.

In this study, we asked the parent regarding first aid knowledge, first if they find a drowning child who is responding, breathing and awake: 1- put the child in the recovery position (n=243, 59.9%) who answer "yes". 2-try to calm the child (82% n=333) who answer "yes" .3- keep the child warm with a blanket (57.1% n=232) who answer "yes" .4- shake the child's body to remove the water out (45.6 n=185) which answer "No". 5- call the ambulance or Saudi red crescent 997 (83.5% n= 339), who answer "yes".

Regarding the knowledge of first aid, parents were asked if the child was breathing but not response:1- put the child in the recovery position (53.9 % n= 219) who answered "yes". However, in a study done in Riyadh, they found that (64.3% n= 189) who answered "yes". 2- start chest compressions (CBR) (18.5 % n=75) who answer "No ", in compare to Habeeb K and Alarfaj Study (19.7% n=58), which is near to our study result .3- laying the child on his back "supine position" (63.3 % n=186) of the answer was "No" in Riyadh study. However, in this study was (32.3 % n=132). 4- Not shaking the child vigorously trying to awaken him (51% n= 150) who agreed, in comparison to this

study was (31.3 % n=127). 5-call the ambulance or Saudi red crescent "997" (95.8 n= 389) answers were "yes " in the recent study.(5)

In this study, also we asked the parents regarding first aid knowledge first if they find a drowning child who is not breathing and not responding:1-start chest compressions (CBR) (79.8 % n=324) answer "yes". However, in another study, the result was (90.5% n= 266).(5) in comparison to other study mention that The finding of their research shows clearly that we have significant defects in our general population CPR education and only (n=9) cases who receive CPR before arriving at the hospital.(6) 2-performing abdominal compression to push the water out of the child inHabeeb K and Alarfaj Gstudy answer "No" was (23.8% n=70) in comparison to our study (9.1% n=37) response was "No". 3- Not slapping the child on the back in Riyadh study (65.6% n= 193) agreed. However, in this study (28.6 % n= 116) of participants agreed. 4- Put the child in recovery position (45.2 % n= 133) answer "No" in Riyadh study. Meanwhile, in our study (25.1% n=102) response was "no ". 5-call the ambulance or Saudi red crescent 997 (94.8 n= 385) answer "yes". (5)

Regarding our study, the scores of FA knowledge were significantly better among educated parents (p=0.0002). Also, we found that medical workers and participants who take FA courses have a higher mean of FA knowledge scores than other participants. In this study, the parents who leave their children without supervision have less knowledge about drowning causes. Knowledge of risks is higher among parents with two or more children than parents with one child. Of the 406 participants, females have greater knowledge, as well as the married and divorced parents. Scores of FA knowledge were indistinguishable between parents who experienced a previous drowning case and those who didn't.

Conclusion:-

Drowning is a major global public health crisis and it is related to many risks and causes that can be prevented. First aid knowledge among the public, especially parents is essential to avoid drowning complications. It is also important to achieve first aid courses and be subject to schools and universities to raise the level of knowledge and awareness.

Acknowledgment:-

All the authors are thankful to those who share in this study.

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