Assessment of Mothers' Knowledge, Practice and Attitude regarding Care of their Children with Developmental Hip Dysplasia

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Abstract:

Background: Developmental dysplasia of the hip is an important cause of childhood disability. So, mothers should have knowledge and practice concering care of their children with developmental hip dysplasia. **Aim of the study:** Was to assess mothers' knowledge, reported practice and attitude regarding care of their children with developmental hip dysplasia. **Setting:** This study was conducted in Pediatric Orthopedic Outpatient Clinic of Benha Specialized Pediatric Hospital at Benha City. **Design:** A descriptive study design. **Subjects:** A purposive sample of 75 mothers and their children with developmental hip dysplasia who attended the previously mentioned setting. **Tools of data collection: Tool I:** Structured Interviewing Questionnaire Sheet included; characteristics of the studied mothers, characteristics of the studied children and their medical data and mothers' knowledge regarding developmental hip dysplasia. **Tool II:** Mothers' reported practice questionnaire. **Tool III:** Mothers' attitude likert scale toward care for their children with developmental hip dysplasia. **Results:** Almost two thirds of the studied mothers have inadequate knowledge about developmental hip dysplasia, three fifth of them have satisfactory level of reported practice and three quarter of them have negative attitude. **Conclusion:** There was statistically significant positive correlation between total mothers' knowledge, reported practices and attitude. **Recommendation:** Designing and implementing an educational program for mothers regarding caring for children with developmental dysplasia of the hip.

Keywords: Attitude, Children, Developmental Hip Dysplasia, Knowledge, Mothers, Practice

Introduction:

Developmental hip dysplasia (DDH) is a common congenital deformity of the skeletal system in children. It refers to a disease of the skeletal system in which the femoral head and acetabulum are abnormal during development or in the anatomical structure accompanied by dysfunction. The normal development of the child's hip relies on the congruent stability of the femoral head within the acetabulum. The hip joint will not develop properly if it stays unstable and anatomically abnormal by walking age **(Yue et al., 2024).**

Predisposition to developmental hip dysplasia (DDH) has been linked to factors as being born to a white mother, having a low birth weight, being born breech, having a mother with high estrogen levels, moreover female sex, a positive first-degree family history, and improper lower extremity swaddling all increase risk for DDH **(Akber et al., 2024).**

Clinical manifestations of DDH vary by age. As, in neonates it is asymptomatic while in infants, there is a limitation in hip abduction and at age of one year when a child

begins to walk, symptoms such as a limping, waddling gait, and discrepancy in leg length appear. These symptoms are typically painless **(Kilsdonk et al., 2021).** Developmental hip dysplasia has different degrees which vary from mild to severe dysplasia. Mild dysplasia might never manifest clinically, whereas severe dysplasia is most likely to present clinically in later infancy or early childhood. Developmental dysplasia of the hip is an important cause of childhood disability **(Anchan& Pervaje, 2024).**

Complications of developmental hip dysplasia arise when the diagnosis is delayed. So that, early diagnosis is crucial for the long-term therapeutic success of newborns with hip dislocation. The recognized approach for identifying DDH is routine clinical screening of neonates with the Ortolani/Barlow maneuvers. But by age of three months, these tests become less reliable, and limitations in hip abduction and other physical signs become more indicative of DDH, furthermore the other diagnostic testing includes ultrasonography before the femoral head's ossification (typically 4-6 months) and radiographs once the proximal femoral epiphysis has ossified **(El Fawal et al., 2022).**

Developmental dysplasia of the hip can be treated by different methods according to child age and degree of developmental hip dysplasia. These methods; include Pavlik harness, abduction brace, closed reduction and casting, open reduction, femoral and pelvic osteotomies **(Pang et al., 2024).**

Nurses play an important role in identifying signs of DDH and other congenital defects in new born. The earlier the defect is identified and treated, the better is the chances for favorable outcomes. Nurses also play a critical role in caring for a child pre & post-operative additionally, caring for a child in a corrective device or cast to maintain the position of the hip joint. Moreover, prevent complications and provide more stimulation necessary for the developing infant **(Yoshioka-Maeda et al., 2024).**

Mother plays a crucial role in supporting and care of their children with developmental hip dysplasia (DDH), through understanding their children condition and various treatments for DDH. As the affected children often must go through repeated surgical procedures, physiotherapy and must wear orthopedic braces for extended periods of time, which needs a high degree of compliance to treatment and follow up. Mother provide emotional support, reassurance for their children through encouraging open communication about feelings that help the child to feel understood and supported **(Braga et al., 2023).**

Significance of the study:

Developmental hip dysplasia incidence in children varies with geographical location from the lowest prevalence recorded in Africans, to the highest in Native Americans and Caucasians. The global incidence is approximately 6.6 cases per 1,000 live births. The incidence is higher in certain areas such as Middle East, gulf area, and Italy. Late-onset developmental hip dysplasia was detected in 2.2 cases per 1000 newborns **(Pollet et al., 2021).** In systematic medical literature review the incidence per 1000 live births ranges from 0.06 in Africa to 76.1 in Native Americans **(Alanazi et al., 2022).**

Developmental dysplasia of the hip (DDH) is a critical public health issue, and the global incidence rate of DDH varies significantly based on race, ethnicity and country is 0.2–120.1 per 1,000 **(Kuitunen et al., 2022).** The American Academy of Pediatrics reported that the incidence of

DDH among children was 11.5 per 1000 live births; 4.1 per 1000 for boys, and 19 per 1000 for the girls **(Alrashdi et al., 2024).** The annual prevalence of DDH in the United States has been estimated as 1.7 per 1000 infants **(Degnan et al., 2021).**

According to the statistical report from Benha Specialized Pediatric Hospital, the children diagnosed with developmental hip dysplasia admitted to Pediatric Orthopedic Outpatient from January 2019 to October 2023 were about 224 cases **(Statistical affairs department in Benha Specialized Pediatric Hospital, 2023).**

Mothers have an important role toward caring for their children with developmental hip dysplasia as they suffer from many problems associated with disease and if DDH untreated, it considers as the main causes of disability in childhood **(Gyurkovits et al., 2021).** So, the current study will be conducted to assess mothers' knowledge, reported practice and attitude regarding care of their children with developmental hip dysplasia.

Aim of the study:

This study aimed to assess mothers' knowledge, reported practice and attitude regarding care of their children with developmental hip dysplasia.

Research Questions:

1-What is the level of mothers' knowledge regarding care of their children with developmental hip dysplasia?

2- What is the level of mothers' reported practice regarding care of children with developmental hip dysplasia?

3-What is the level of mothers' attitude regarding care of their children with developmental hip dysplasia?

4-Is there a statistical relationship between mothers' knowledge, reported practice and attitude with their personal characteristics regarding care of their children with developmental hip dysplasia?

Research design:

A descriptive quantitative design was utilized to conduct the current study. Descriptive research design is a research method that describes the characteristics of the population that is being studied and focuses more on the "what" of the research subject rather than "why" of the research subject **(Siedlecki, 2020).**

Research setting:

This study was conducted in Pediatric Orthopedic Outpatient Clinic of Benha Specialized Pediatric Hospital at Benha City which affiliated to the Secretariat of Specialized Medical Centers. It was located in the first floor.

Subjects:

A purposive sample of 75 mothers and their children with developmental hip dysplasia who attended the previously mentioned setting.

Tools for Data Collection:

Data was collected through the following tools:

Tool I: A structured Interviewing Questionnaire Sheet: This tool developed by the researchers after reviewed related literatures, it written in a simple Arabic language to suit the mothers' level of understanding. It composed of 4 parts with (45) questions. It included;

Part (1): Characteristics of the studied mothers; It consisted of 2 sub parts;

A- Characteristics of the studied mothers, it included (11) questions regarding; mothers' age, level of education, occupation, place of residence, marital status, family income, family members, consanguinity and its degree, family history and who is suffering from disease.

B-Mother medical history during pregnancy, it included (9) questions

regarding; follow up during pregnancy, diagnostic 4D ray, nutritional status, types of supplementation, presence of complication during pregnancy and what is these complications, type of delivery, complications during labor and type of complications.

Part 2: Characteristics of the studied children.

This part included (7) questions regarding; children's age, gender, child order, weight, length or height, immunization intake or not and it causes.

Part 3: Medical data of children with developmental hip dysplasia.

This part included (6) questions regarding; detection of DDH, child age at the time of detection, method of DDH discovering, causes of DDH in the child, method of DDH treatment and fixation and its duration.

Part 4: Mothers' knowledge regarding developmental hip dysplasia.

This part included (12) questions regarding; definition of DDH, causes, risk factors, signs and symptoms, complications, diagnosis, management, method of hip fixation and duration of fixation, seek medical advice, prevention and source of mothers' information about developmental hip dysplasia.

The scoring system for mothers' knowledge:

The answers of mothers compared with key answers and the response of them scored as the following:

- Correct and complete answer scored (2).
- Correct and incomplete answer scored (1).
- Wrong answer or don't know scored (0).

The total scoring system of mothers' knowledge classified as the following:

Total score of questions range from 0-24 degree.

-65% - 100% considered adequate knowledge, when mothers score had (16-24) points.

-<65% considered inadequate knowledge**,** when mothers score had less than 16 points

Tool II: Mothers' reported practice questionnaire sheet: It was adapted from **Abd Elkhair et al., (2020),** to evaluate mothers' reported practices regarding care of their children with developmental hip dysplasia:-it included (6) procedures with 45 steps classified as the following; cast care(10 steps), pavlik harness care (9steps), skin and hygienic care (10 steps), diaper care (8 steps),feeding care (4 steps) and protection from potential injury (4 steps).

Scoring system of mothers' reported practices calculated as the following:

- Done step scored (1)
-Not done step scored (0)

The total scoring system of mothers' reported practices calculated as the following:

Total score of steps ranged from 0-45 degree.

-Satisfactory practice (≥ 75%), when mothers' score was ≥34 points.

-Unsatisfactory practice (< 75%), when mothers' score was less than 34 points.

Tool III: Mothers' attitude likert scale: It was adapted from **Alotaibi et al., (2021)** to assess mothers' level of attitude toward care of their children with developmental hip dysplasia. It was translated into Arabic language and measured by 3 point likert scale (agree-uncertain-disagree). It included (9) items.

Scoring system of mothers' attitude calculated as:

-Agree had score (2)
-Uncertain had score (1)
-Disagree had score (0)

Total Scoring system of mothers' attitude calculated as:

Total score of all items are ranged from 0-18 point.

-Positive attitude (>60 %), when mothers' score was more than 11 points.

-Negative attitude (≤60%), when mothers' score was less than 11 points.

Content Validity:

Data collection tools were revised for content validity by a panel of three experts in the field of Pediatric Nursing. The experts were from Faculty of Nursing, Benha University, one of them was professor of pediatric nursing while, two of them were assistant professors of pediatric nursing. They reviewed the study tools for its clarity, relevance, comprehensiveness, simplicity and applicability and minor modifications were done according to their judgment like reformulation of some question.

Reliability:

Reliability of the developed tools was estimated by using Cronbach's alpha coefficient test to measure the internal consistency of the study tools. Reliability for the structured questionnaire sheet for mother's knowledge was 0.707, for their practice was 0.704 and for their attuide was 0.721. This indicated a high degree of reliability for the study tools.

Ethical and legal consideration:

The study was approved by Scientific Research Ethical Committee at Faculty of Nursing - Benha University code (REC-PN-P.66). The researchers informed all mothers about nature and expected outcomes from their inclusion in the study in order to obtain their acceptance. The studied mothers were informed that the study is harmless, all gathered data were confidential and used for the research purpose only. They were informed that, they were optionally allowed either to participate or not in the study and they had the right to withdraw from the study at any time without giving any reason. Then, oral consent was obtained from the studied mothers.

Pilot study:

A pilot study was done on 10% of the total study sample (7 mothers & their children) to test clarity and applicability of the study tools and to estimate the time needed to fill each tool. No radical modifications were done according to the results of pilot study. Participants involved in the pilot study were included in the total study sample. Pilot study was done through one month beginning of April 2024 up to the end of April 2024 .

Field work:

The actual field work of the current study took about 6 months starting from the beginning of May 2024 up to the end of October 2024 in the previously mentioned setting according to policy of the study setting. The researchers was available at the study setting two days weekly at (Sunday) from 10 A.M to 1 P.M., and (Wednesday) from 2 P.M to 4P.M, the number of mothers present each day is approximately from (1-3) mothers. The researchers interviewed each mother individually, starting by introducing herself to the mothers, providing brief idea about the current study and its outcomes, and took their oral approval to participate in the study prior to data collection. The researchers used **tool (I)** to assess mothers' knowledge regarding developmental hip dysplasia. It took about 15 minutes, while used **tool (II)** to assess mothers' reported practice regarding developmental hip dysplasia, it took about 20 minutes. In addition to, used **tool (III)** to assess mothers' level of attitude toward care of their children with developmental hip dysplasia, it took about 10 minutes.

Statistical analysis:

The collected data were organized, categorized, analyzed, and presented in form of tables and figures using the Statistical Package for Social Sciences, version 22 (SPSS), which was used frequencies and percentages for qualitative descriptive data, chi-square coefficient X^2 was used for relation tests, mean and standard deviation was used for quantitative data.

Results:

Table (1): Illustrates that, 46.7% of the studied mothers' age range from 30 <40 years old with mean ± SD equal 31.47±6.04. 65.3% of mothers have secondary school and are married. The current study also illustrates that, 53.3% of mothers have 4-6 family members and 78.7% of them don't have consanguinity relationship. Concerning family history for the disease, 86.7% of mothers don't have any family history, while 50% of those who have family history have their grandparents with dysplasia.

Table (2): Illustrates that, 41.3% of the studied children age are 1< 3 years, 88% of them are girls and 53.3% are first child.

Table (3): Illustrates that, 60% of the studied children have the onset of disease at age<1 year, 38.7% of them are discovered by noting that the length of the legs isn't equal and 46.7% of mothers don't know the cause of developmental hip dysplasia in their children. Regarding method of treatment, the current study illustrates that, 53.3% of children are treated by fixation and 62.5% of them are fixed by splint.

Figure (1): Indicates that, 65.3% of the studied mothers have inadequate total knowledge level regarding developmental hip dysplasia

Figure (2): Illustrates that, 60 % of the studied mothers have satisfactory total reported practices about developmental hip dysplasia whenever, 40% of them have unsatisfactory total practices.

Figure (3): Shows that, 74.7% of the studied mothers have negative attitude regarding hip dysplasia whenever, 25.3% of them have positive attitude.

Table (4): Illustrates that, there is a positive statistically significant correlation between total mothers' knowledge, reported practices and total attitude.

Table (1): Distribution of the studied mothers regarding their characteristics (n=75)

Characteristics of the studied mothers	No.	%
Age in years		
<20	5	6.7
20<30	28	37.3
30<40	**35**	**46.7**
≥40	7	9.3
Mean ±SD 31.47±6.04		
Educational level		
Elementary school	0	0
Preparatory school	4	5.3
Secondary school	**49**	**65.3**
University education	14	18.7
Postgraduate	8	10.7
Marital status		
Married	**49**	**65.3**
Divorced	20	26.7
Widow	6	8.0
Family Members		
3	33	44.0
4-6	**40**	**53.3**
>6	2	2.7
Consanguinity relationship		
Yes	16	21.3
No	**59**	**78.7**
If Yes (n=16)		
First degree	3	18.8
Second degree	**13**	**81.2**
Family history for the disease		
yes	10	13.3
No	**65**	**86.7**
If Yes (n=10)		
Family member(father-mother-brother-sister)	4	40.0
Grandfather/grandmother	**5**	**50.0**
Aunt/Uncle	1	10.0

Table (2): Distribution of the studied children regarding their characteristics (n=75)

Characteristics of the studied children	No.	100%
Age		
< year	30	40.0
1 year<3 years	**31**	**41.3**
3≤5 years	14	18.7
Mean ±SD	**2.35±1.24**	
Gender		
Boy	9	12.0
Girl	**66**	**88.0**
Child order		
1st	**40**	**53.3**
2nd	26	34.7
3rd	8	10.7
4th	1	1.3
Vaccinations		
Yes	75	100.0
No	0	0

Table (3): Distribution of the studied children regarding their medical data (n=75)

Medical data of children with developmental hip dysplasia	No.	100%
Age at onset of disease		
<1 year	**45**	**60.0**
1 year	25	33.3
2years	5	6.7
3years	0	0
Method of discovering developmental hip dysplasia in the child		
Note that the length of the legs isn't equal	**29**	**38.7**
Periodic examinations and follow-up in maternity and child centers	22	29.3
Constant pain when changing the diaper	2	2.7
Imbalance in movement of the legs	8	10.7
I don't know	14	18.7
Cause of dysplasia		
Preterm birth	6	8.0
Lack of amniotic fluid	4	5.3
Position of the child inside the mother's womb	11	14.7
Injury during childbirth	19	25.3
I don't know	**35**	**46.7**
Method of treatment		
Fixation	**40**	**53.3**
Surgical treatment	23	30.7
Physiotherapy for the child after surgery	12	16.0
Method of fixation(40)		
Splint	**25**	**62.5**
Pavlik harness	15	37.5
Duration of stabilization of joint (63)		
One month	10	15.9
Two months	**30**	**47.6**
3 months	23	36.5

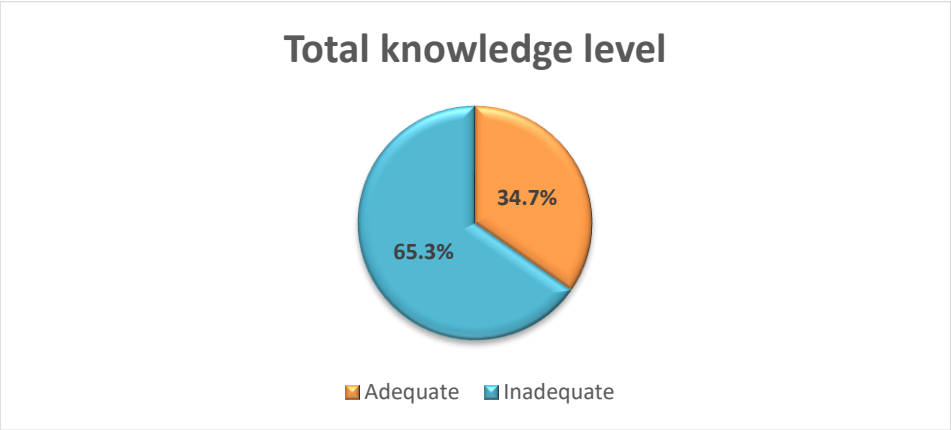

Figure (1): Distribution of the studied mothers regarding their total knowledge level about developmental hip dysplasia (n=75)

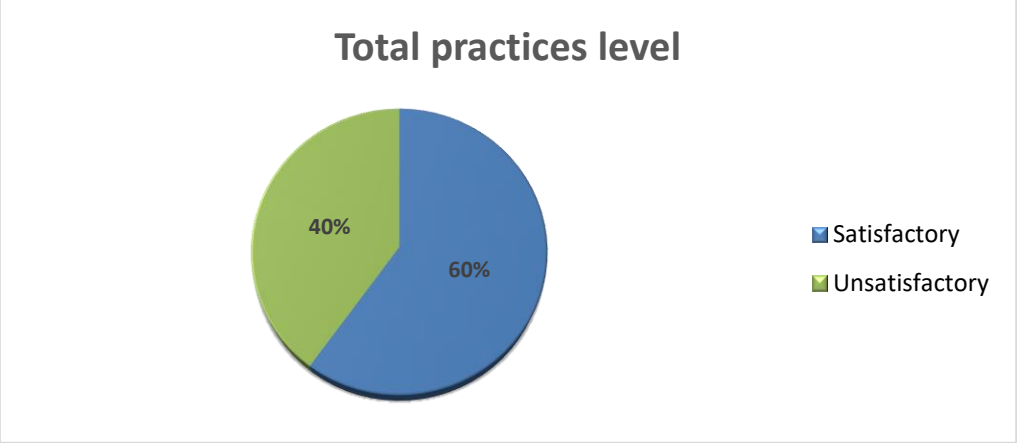

Figure (2): Distribution of the studied mothers regarding their total practices level about developmental hip dysplasia (n=75)

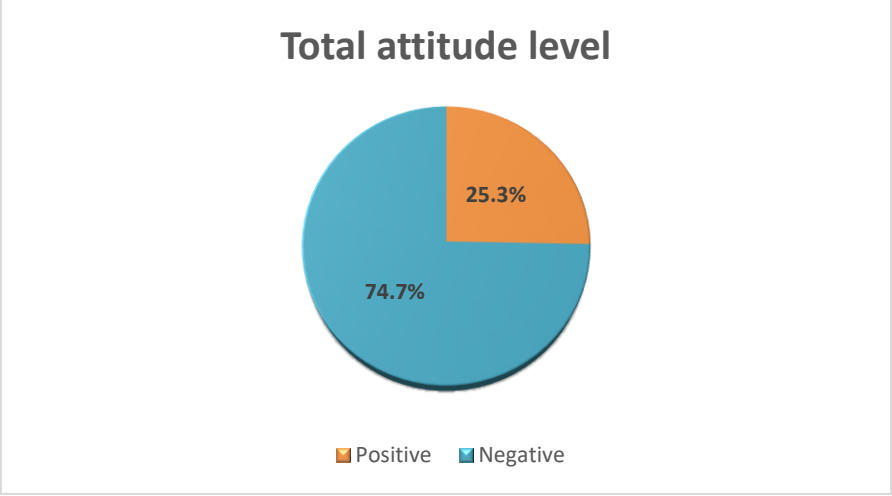

Figure (3): Distribution of the studied mothers regarding their total attitude level about developmental hip dysplasia (n=75)

Table (4): Correlation between total mothers' knowledge, reported practices and attitude regarding their children with developmental hip dysplasia.

Variables		Total knowledge	Total reported practices	Total attitude
Total knowledge	r	-	.591	.260
	p-value		.003*	.013*
Total reported practices	r	.591	-	.451
	p-value	.003*		.015*
Total attitude	r	.260	.451	-
	p-value	.013*	.015*	

Discussion:

Developmental hip dysplasia is considered as one of the most common pediatric hip pathologies, that affecting on musculoskeletal development of children very early. To avoid the devastating consequences of DDH, it should be diagnosed very early, before the hip joint has fully matured **(Dawod et al., 2023).**

Mothers have an important role in caring for their children with developmental hip dysplasia to prevent it's complications and improve children condition. So, the current study was aimed to assess mothers' knowledge, practice and attitude regarding care of their children with developmental hip dysplasia **(Gyurkovits et al., 2021).**

Regarding age of the studied mothers, the present study finding showed that, less than half of them were from 30 - < 40 years old with Mean± SD 31.47±6.04. This finding is consistent with the study performed by **Alanazi et al., (2022),** who studied "Assessment of community levels of knowledge about developmental dysplasia of the hip, its risk factors, treatment, and complications in the Riyadh Region, Saudi Arabia" and reported that (31.3%) of the study sample were between 26 and 35 years old. In relation to the educational level of the studied mothers, the present study finding reflected that, approximately two thirds of them had secondary education. This finding was disgreement with **Veloso et al., (2024),** in a study entitled " The roles of self-compassion and social support on the maternal adjustment to a child's hip dysplasia " who mentioned that, less than three quarters (72.3%) of the study sample completed higher education.

Regarding working of the studied mothers, the present study finding reflected that, more than two thirds of them didn't work. This finding was supported by the study performed by **Sadeq et al., (2023)**, in a study entitled "Psychological distress among caregivers of child with developmental dysplasia of the hip" who demonstrated that, nearly two thirds of the study subjects' job (66%) are housewife.

In relation to income of the studied mothers, the present study finding reflected that, three quarters of them had average income. This finding was in a greement with **Sadeq et al., (2023),** who reported that, 56% of mothers had barely sufficient income.

Concerning family history for the DDH, majority of the studied mothers didn't have family history. This finding was in a greement with **kardm et al., (2023),** that performed a study entitled "Developmental

Dysplasia of the Hip in Abha-Saudi Arabia. Incidence, and Risk Factors" and reported that, around 36.2% of children with DDH, had a family history. From the researchers point of view, family history may be a rare cause for DDH incidence.

In relation to method of delivery of the studied mothers, the present study finding reflected that, majority of them delivered by cesarean section. This finding was supported by the study performed by **Sadeq et al., (2023),** who reported that, 64% of the study sample delivered with caesarean section.

Concerning the age of the studied childern, the present study finding clarified that, two fifth of them were below 1<3 years old. This finding was in agreement with **Abd Elkhair et al., (2020),** in a study entitled "Effect of Protocol of Care for Mothers on Selected Postoperative Outcomes among their Children with Developmental Dysplasia of Hip" and reported that, highest percentages of children aged less than 3 years old.

Regarding gender of the studied children, the present study finding showed that, majority of them were girls. This finding was in a greement with **Kadhim, (2023).**Who studied" Ultrasound in detecting Developmental Hip Dysplasia in Neonates At Risk" and reported that, 72% of the studied sample wer female. In addition, this finding was similar to **El Fawal et al., (2022),** in a study entitled " Prevalence of Developmental Dysplastic Hip in Zagazig University Hospitals; Ultra-Sound Study" and reported that 66.3% were female. From the researchers point of view, this finding confirmed that female children have higher incidence rate for DDH than male children.

Regarding children order inside the family, the present study finding showed that, more than half of them were the first child. This finding was in a greement with **Sadeq et al., (2023),** who reported that, the highest percentage of children were first child in family.

Concerning the onset of DDH, three fifth of studied children had the onset of disease at age < 1 year. This finding was in a greement with **Bresler, (2023).** In a study entitled "Assessing parent and healthcare professional experiences with management of developmental dysplasia of the hip (DDH) in a Canadian setting" and reported that most infants were diagnosed with DDH within the first six months of birth.

As regard to method of discovering that child has developmental hip dysplasia, more than one third of the studied children were discovered by noting that the length of the legs isn't equal. This finding was in agreement with **Abo Elela et al., (2017),** in a study entitled "Nursing Intervention provided to Infants with Congenital Hip Dislocation at Zagazig City" and reported that 72% of children had unequal limbs.

Regarding total knowledge level about developmental hip dysplasia, almost two thirds of studied mothers had inadequate total level. This finding in agreement with **Alanazi et al., (2022),** and reported that less than three quarters (72.8%)of the study sample had a low knowledge level regarding DDH, and only 5.1% had a high knowledge level. While this finding was in disagreement with **Hashim et al., (2023),** who studied " Knowledge about developmental dysplasia of the hip and its treatment methods among adults in Saudi Arabia" and reported that, more than half of the participants demonstrated higher level of knowledge. From the researchers point of view, this might be related to low level of education of studied mothers.

Regarding total practices level of the studied mothers about caring for their child with developmental hip dysplasia, three fifth of them had satisfactory level. This finding was agreement with **Theunissen et al., (2022),** that stuided " Parental experiences of children with developmental dysplasia of the hip" and reported that parents had satisfactory level for caring their children with DDH. From the researchers point of view, this might be related to source of mothers regaring practice from health team and they follow health team instruction in applying care for their children.

Regarding the studied mothers' total level of attitude about hip dysplasia, three quarters of them had negative attitude. From the researchers point of view, this might be due to low level of knowledge of studied mothers that may be affect on their attitude.

Concerning correlation between total mothers' knowledge, reported practices and attitude regarding their children with developmental hip dysplasia, there was statistically significant positive correlation between total knowledge, total practices and total attitude. From the researchers point of view, this might be due to the fact that knowledge play an important role to mothers caring for their children, and affect on mothers' attitude regarding care of children with developmental hip dysplasia.

Conclusion:

Almost two thirds of the studied mothers had inadequate total knowledge level regarding developmental hip dysplasia. Meanwhile, three fifths of them had satisfactory total reported practices, and three quarters had negative attitude. Moreover, there was statistically significant relation between total knowledge of the studied mothers, their age and educational level. There was statistically significant relation between total mothers' practices and their age, educational level, place of residence and income and there was statistically significant relation between total mothers' attitude and their educational level. Also there was statistically significant positive correlation between total knowledge, total practices and total attitude.

Recommendations:

1.Designing and implementing an educational program for mothers regarding caring for children with developmental dysplasia of the hip.

2. Further studies should be conducted on large sample of children with developmental dysplasia of the hip for generalization of the study findings.

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تقييم معلومات وممارسات واتجاهات الأمهات فيما يتعلق برعاية أطفالهن المصابين بتشوهات مفصل الفخذ

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يعتبر تشوه مفصل الفخذ من اهم الاسباب التي تودي الي الاعاقه في مرحله الطفوله لذلك يجب ان تمتلك الامهات المعلومات والممارسات الصحيحه الخاصه برعاية أطفالهن المصابين بتشوهات مفصل الفخذ، لذلك هدفت هذة الدراسة إلي تقييم معلومات وممارسات واتجاهات الأمهات فيما يتعلق برعاية أطفالهن المصابين بتشوهات مفصل الفخذ، أجريت هذة الدراسة في العيادات الخارجية للعظام بمستشفى الأطفال التخصصى بينها، وقد تم استخدام التصميم الوصفي لإجراء الدراسة، و كذلك استخدام عينة غرضية (٧٥) من الأمهات وأطفالهن. و قد أسفرت النتائج على أن ما يقرب من ثلثي الامهات ليس لديهم معلومات كافيه عن رعايه اطفالهن المصابين بتشوهات مفصل الفخذ وثلاثه اخماس منهن يوجد لديهن مستوي ممارسه مرضي بينما ثلاثه ارباع منهن لديهم اتجاهات سلبيه. وقد لخصت الدراسة إلى أن هناك علاقة ذات دلالة إحصائية بين اجمالي معلومات وممارسات واتجاهات الامهات فيما يتعلق برعاية أطفالهن الذين يعانون من تشوهات مفصل الفخذ. لذلك وصيت الدراسة إلى تصميم وتنفيذ برنامج تثقيفي للأمهات حول رعايه اطفالهن المصابين بتشوه مفصل الفخذ.