

Nurses' Knowledge Concerning Developmental Dysplasia of the Hip: A Cross-Sectional Study

Mohamad A Akber, Ali Malik Tiriyag*

Fundamentals of Nursing Department, College of Nursing, University of Basrah, Basrah, Iraq

Ahmed Ibrahim Habib Alobaidi

University of Basrah, Alzahraa Medical College,
MB.Ch. B, F.I.C.M.S., F.R.C.S. Orthopaedic Surgery, Lecturer

Abstract: Background: The phrase "developmental dysplasia of the hip (DDH)" describes a range of hip joint anatomical anomalies in which there is an improper interaction between the femoral head and the acetabulum. Due to capsular laxity and mechanical instability, this condition of aberrant growth causes hip dysplasia, subluxation, and sometimes dislocation.

Objectives: To identify nurses' knowledge concerning developmental dysplasia of the hip.

Methods: A descriptive cross-sectional study was implemented at the hospitals of Al-Basrah city, to determine the level of knowledge among nurses about the developmental dysplasia of the hip (DDH) in Al-Basrah hospitals from 30th October 2023 to the 13th of March 2024. Non-probability (convenience) sample consists of (150) nurses from five government hospitals (Al-Sader Teaching Hospital, Al-Basrah Teaching Hospital, Al-Mawani Teaching Hospital, Al-Faiha Teaching Hospital, and Al-Basrah Hospital for Gynecology and Pediatric) in Al-Basrah city. A self-reported questionnaire was developed by the researchers after extensive reading of the previous literature.

Results: The results of this study show more than half of nurses have good knowledge concerning developmental dysplasia of the hip (53.4%), less than half of nurses have medium knowledge (46.6%), and none of the nurses have weak knowledge.

Conclusions: More than half of nurses have good knowledge concerning developmental dysplasia of the hip.

Keywords: Nurses; Knowledge; Developmental Dysplasia of The Hip.

Introduction

The term "developmental dysplasia of the hip" (DDH) describes a range of aberrant hip joint development, from minor dysplasia that can only be seen on an X-ray or ultrasound to severe dysplasia that can cause a frank dislocation of the hip joint. DDH is a significant contributor to childhood and young adult impairment and the most frequent cause of complete hip replacement in those under 40 (1). Youngsters with "true DDH," who need therapy, have been kept apart from youngsters with simple dysplasia, who will grow normal hips if treatment is not received (2). It is estimated that 1-3 percent of Irish newborns are afflicted by hip dysplasia to some extent and that 1-2 out of every one thousand babies have frank hip dislocation at birth (3). Female sex, breech posture, a positive first-degree family history, and improper lower extremity

swaddling are risk factors for DDH (4). Treatment methods include surgical reduction and osteotomy, Pavlik harnessing, and other measures depending on the patient's age of presentation and the degree of dysplasia. Most writers state that a DDH diagnosis made after three months of age is considered late (5), with this cohort showing inferior results and a higher need for surgical intervention (6).

Within 72 hours following delivery, all newborns should have a whole-body clinical assessment, including the Ortolani (7) and Barlow (8), hip tests in addition to evaluating the degree of abduction, thigh fold symmetry, and leg length. A "six-week check," or second evaluation, ought to take place at about six weeks of age. But beyond the newborn stage, the Barlow and Ortolani clinical tests' reliability seems to decline (9). Current Irish regulations state that a screening ultrasound should be performed on neonates who exhibit either an unusual clinical examination or a positive status for risk factors, such as a first-degree family history or breech presentation (3).

Methods

A descriptive cross-sectional study was implemented at the hospitals of Al-Basrah city from 30th October 2023 to 13th March 2024, to determine the level of knowledge among nurses about the developmental dysplasia of the hip (DDH) in Al-Basrah hospitals from 30th October 2023 to the 13th of March 2024. Non-probability (convenience) sample consists of (150) nurses at the orthopedic operative theater, maternity ward, obstetric, pediatrics, neonatal intensive care unit, and orthopedic words departments in five governmental hospitals from five government hospitals (Al-Sader Teaching Hospital, Al-Basrah Teaching Hospital, Al-Mawani Teaching Hospital, Al-Faiha Teaching Hospital, and Al-Basrah Hospital for Gynecology and Pediatric) in Al-Basrah city. A self-reported questionnaire was developed by the researchers after extensive reading of the previous literature. The questionnaire contains two parts; the first part consists of 5 items related to the demographic characteristics of nurses, including age, sex, level of education, number of years of experience and workplace within the hospital. The second part of the questionnaire consists of 20 questions related to evaluating nurses' knowledge about dysplasia of the hip. The researchers used a three-point Likert scale that ranges from Yes, Uncertain, and No and scored 3 for yes, 2 for uncertain, and 1 for no. A Likert scale with points that go from 1 to 3 is used by the researchers. yes with 3, uncertain with 2, and no with 1. The knowledge level was categorized by the researcher using the Mean Score and the cutoff point (0.66): low = 1-1.66, moderate = 1.67-2.33, and good = 2.34-3. To ascertain the validity of the questionnaire, eleven experts provided copies of it. The reliability of the questionnaire was assessed using the Alpha-Cronbach coefficient ($\alpha = 0.78$). SPSS version 26.0 was utilized for the analysis of the data.

Results

According to the results of this study, table 1 describes the demographic data of nurses showing more than half of nurses' ages are between 20 and 30 years old, approximately two-thirds of nurses' sexes are female (64%), more than one-third of nurses is seen with diploma graduated (36%), also, more than one-third of nurses have years of experience between 5 and 10 years (36%), and approximately one-third of nurses' work in the orthopedic wards (32.6%).

According to the results of this study, Tables 2 and 3 describe nurses' knowledge concerning developmental dysplasia of the hip. The results of this study show more than half of nurses have good knowledge concerning developmental dysplasia of the hip (53.3%), less than half of nurses have medium knowledge (46.6%), and none of nurses have weak knowledge.

Table 1: Demographic Data of Nurses

Variables		F	Percent
1	Age		
	20-30 years	76	50.7%
	≥ 31 years	74	49.3%

		Total	150	100%
2	Sex	Male	54	36%
		Female	96	64%
		Total	150	100%
3	Education Level	Nursing School	44	29.3%
		Diploma	69	46%
		Bachelor	37	24.7%
		Total	150	100%
4	Years of Experience	< Five years	45	30%
		5-10 years	54	36%
		> Ten years	51	34%
		Total	150	100%
5	Place of Work	Orthopedic Operations	47	31.4%
		Maternity Ward	7	6.4%
		Obstetric Department	13	8.6%
		Pediatric Department	17	11.4%
		Neonatal Intensive Care Unit	17	11.4%
		Orthopedic Ward	49	32.6%
		Total	150	100%

Table 2: Questions to Assess Nurses' Knowledge

Items	Yes		Not sure		No		Mean of Score
	F	%	F	%	F	%	
1- You encountered a case of development dysplasia of the hip during your work.	108	72%	6	4%	36	24 %	2.48
2- Does a hip developmental dysplasia have an impact on the future child's life?	119	79.3 %	23	15.3 %	8	5.3 %	2.74
3- Family history is a risk factor for developmental dysplasia of the hip in a newborn.	61	40.6 %	45	30 %	44	29.3%	2.11
4- Hip developmental dysplasia affects both men and women equally.	83	55.3 %	38	25.3 %	29	19.3%	1.64
5- The first child is at greater risk of developmental dysplasia of the hip birth.	64	42.6 %	44	29.3 %	42	28%	2.14
6- Premature births are the most prevalent cause of hip developmental dysplasia.	62	41.3 %	52	34.6%	36	24 %	2.17
7- The most prevalent cause of hip developmental dysplasia in children is breech presentation.	107	71.3 %	36	24%	7	4.6 %	2.66
8- If the amount of amniotic fluid is high, it can cause developmental dysplasia of the hip.	30	20 %	70	46.6%	50	33.3%	2.13
9- Hormonal changes can be a cause of infectious developmental dysplasia of the hip.	42	28%	54	36%	54	36%	1.92
10- Swaddling causes the child to suffer from developmental dysplasia of the hip.	58	38.6 %	32	21.3 %	60	40 %	1.98
11- developmental dysplasia of the hip may be part of the deformities of another birth.	97	64.6 %	26	17.3 %	27	18 %	2.46
12- One of the most crucial techniques for the early detection of hip developmental dysplasia at birth is ultrasound.	78	52%	26	17.3 %	46	30.6%	2.21
13- All newborns should be examined clinically to rule out suffering from development dysplasia of the hip.	134	89.3 %	10	6.6 %	6	4%	2.85
14- developmental dysplasia of the hip can occur in both hips.	117	78%	22	14.6 %	11	7.3 %	2.7
15- A child with developmental dysplasia of the hip can walk.	86	57.3 %	37	24.6 %	27	18 %	2.39
16- Treatment is more complicated the later the diagnosis	121	80.6 %	23	15.3 %	6	4%	2.76

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17- Treatment should ideally begin in the first few months of a child's existence.	128	85.3 %	16	10.6 %	6	4%	2.81
18- Patients with developmental dysplasia of the hip are treated after the age of walking by plastering only.	48	32%	42	28 %	60	40 %	2.08
19- Most cases of development dysplasia of the hip are discovered by the Parents after the first year of life.	92	61.3 %	35	23.3 %	23	15.3%	2.46
20- One of the most important complications after treatment of developmental dysplasia of the hip is necrosis at the head of the femur.	78	52%	54	36 %	18	12 %	2.4

Table 3: Nurses' Knowledge Concerning Developmental Dysplasia of The Hip

Assessment	Interval	F	%
Weak	1-1.66	0	0 %
Medium	1.67-2.33	70	46.6 %
Good	2. 34-3	80	53.3 %

Discussion

The present study aimed to assess nurses' knowledge concerning developmental dysplasia of the hip. Based on the study's objectives, the discussion is classified into two parts. The first part involves a discussion of the results from Table 1 (demographic data of nurses). The second part involves a discussion of the results from Table 2 (nurses' knowledge concerning developmental dysplasia of the hip).

Part One: Demographic Data of Nurses

According to the results of this study, table 1 describes the demographic data of nurses showing more than half of nurses' ages are between 20 and 30 years old. According to the results of this study, approximately two-thirds of nurses' sexes are female. According to the results of this study, more than one-third of nurses are seen with diploma graduates. Also, more than one-third of nurses have years of experience between 5 and 10 years. Approximately one-third of nurses work in the orthopedic wards.

Part Two: Nurses' Knowledge Concerning Developmental Dysplasia of The Hip

According to the results of this study, Tables 2 and 3 describe nurses' knowledge concerning developmental dysplasia of the hip. The results of this study show more than half of nurses have good knowledge concerning developmental dysplasia of the hip, less than half of nurses have medium knowledge, and none of the nurses have weak knowledge.

The results of the present study agreed with a study (10) which stated most of the nurses have moderate knowledge about developmental dysplasia of the hip.

Conclusions

Most nurses have good knowledge concerning developmental dysplasia of the hip. More than half of nurses' ages are between 20 and 30 years old, approximately two-thirds of nurses' sexes are female, more than one-third of nurses are seen with a diploma, also, more than one-third of nurses have years of experience between 5 and 10 years, and approximately one-third of nurses' work in the orthopedic wards.

Recommendations

Continued education programs for nurses to refresh their knowledge concerning developmental dysplasia of the hip. Designing suitable booklets about risk factors, management, and complications of developmental dysplasia of the hip.

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