

Nursing Students' Knowledge towards Caring for Children with Idiopathic Nephrotic Syndrome

معرفة طلاب التمريض باتجاه العناية بالأطفال المصابين بالتناذر الكلوي المجهول السبب
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الخلاصة:

خلفية البحث: التناذر الكلوي هو خلل في الكلية يصيب اجسام الاطفال والبالغين ايضا. طلاب التمريض يحتاجون الى تطوير معرفتهم باتجاه العناية بالأطفال المصابين بالتناذر الكلوي من خلال تطبيق منهاج التمريض الدراسي الشامل في معظم كليات التمريض من اجل تحسين المعرفة والمهارات لهم لتقديم العناية التمريضية المثلى لهؤلاء الاطفال.

الاهداف: تهدف الدراسة الى تقييم معرفة طلاب التمريض باتجاه العناية بالأطفال المصابين بالتناذر الكلوي المجهول السبب. لمعرفة العلاقة بين معارف طلاب التمريض ومعلوماتهم الديمغرافية (العمر، الجنس، والمستوى التعليمي).

المنهجية: دراسة وصفية استعمل فيها أسلوب التقييم حيث أجريت الدراسة على عينة غرضية (غير احتمالية) مكونة من (١٤٢) طلاب التمريض (ذكور وإناث) اختيروا في هذه الدراسة. ولإجراء الدراسة تم تطوير استمارة استنباطية من خلال مراجعة الادبيات والدراسات لغرض الدراسة، حيث تضمنت استمارة الاستبانة جزأين: الجزء الأول يتضمن الخصائص الديموغرافية لعينة الدراسة والجزء الثاني يقيم معارف طلاب التمريض باتجاه رعاية الأطفال المصابين بالتناذر الكلوي المجهول السبب ويتضمن (٢٧) فقرة تم تصنيفها الى مقياس ليكرت الثلاثي حسب التالي: نعم (3)، لست متأكداً (2)، ولا (1). جمعت المعلومات من خلال تقنية الإدخال الشخصي من خلال الأنترنت خلال المدة من 1 / تشرين الثاني / ٢٠١٩ إلى 1 / كانون الثاني / ٢٠٢٠. استعمل في تحليل البيانات أسلوب الإحصاء الوصفي (التكرارات، النسب المئوية، والوسط الحسابي)، وتحليل التباين (معامل الارتباط بيرسون ومربع كاي).

النتائج: أشارت نتائج الدراسة الى يتمتع طلاب التمريض بمستوى معقول من المعرفة تجاه رعاية الأطفال المصابين بالمتلازمة الكلوية، ولم يكن هناك ارتباط كبير بين معرفة طلاب التمريض وأعمارهم وجنسهم، وكان هناك ارتباط كبير بين معرفة طلاب التمريض بمرحلتهم الدراسية في القيمة $p \leq 0.05$.

الاستنتاج: استنتجت الدراسة أن مستوى معرفة طلاب التمريض كان مقبول تجاه رعاية الأطفال المصابين بالمتلازمة الكلوية مجهولة السبب.

التوصيات: أوصت الدراسة بأن هناك حاجة لتوفير برامج تعليمية إضافية مهمة لتحسين معرفة طلاب التمريض تجاه رعاية الأطفال المصابين بالمتلازمة الكلوية.

الكلمات المفتاحية: معرفة طلاب التمريض، الاطفال المصابون بالمتلازمة الكلوية.

ABSTRACT:

Background: Nephrotic Syndrome (NS) is a kidney disorder that causes children body as well as adult. Nursing students need to develop their knowledge about caring for children with nephrotic through applying the comprehensive nursing syllabus in most nursing schools in order to promote their knowledge and skills to provide optimum nursing care for these children.

Aims of the study: Assess nursing students' knowledge towards Caring for Children with Idiopathic Nephrotic Syndrome and to find out the relationship between nursing students' knowledge and their demographic data (age, gender, and educational level).

Methodology: A descriptive study was conducted at University of Baghdad / Collage of Nursing. A purposive "non-probability" sample of (142) undergraduate nursing students (males and females) were selected in this study. A questionnaire was adapted from reviewing previous literatures and studies focused for the purpose of the study. The study instrument comprised of two parts, part one was demographic data. The second part assessed nursing students' knowledge towards Caring for Children with Idiopathic Nephrotic Syndrome and contained of 27 items which were rated to three Likert scale and scored the follows: Yes (3), Not sure (2), and No (1). Data were collected through using of the questionnaire and the process of the self-administrative report via internet from 1st of November 2019 to 1st of January 2020. Data were analyzed through the application of the descriptive statistical data analysis approach (frequency, percentage, mean of scores) and inferential statistical data analysis approach (Pearson correlation coefficient and chi-square).

Results: The findings of the study indicated that nursing students have a fair level of knowledge towards caring for children with nephrotic syndrome, there was no significant association between nursing students' knowledge and their age and gender, and there was a significant association between nursing students' knowledge with their scholastic stage at $p\text{-value} \leq 0.05$.

Conclusion: The study concluded that the level of nursing students' knowledge was acceptable towards caring for children with idiopathic nephrotic syndrome.

Recommendations: The study recommended that there is need to provide additional education programs are important to improve nursing students' knowledge towards caring for children with nephrotic syndrome.

Keywords: Nursing students' knowledge, Children with nephrotic syndrome.

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INTRODUCTION

Nephrotic Syndrome (NS) is a kidney disorder that causes children body as well as adult and it includes massive proteinuria, hypoalbuminemia, and hyperlipidemia. The disease is caused by increased glomerular permeability of the protein in the body, which results in massive urinary protein loss. The incidence of the nephrotic syndrome (2) per (100, 000) children, (9 - 16) per (100,000) between Arab and Asian population and a peak incidence between (1) and (5) years old, Males are commonly affected more than females (2.5:1), approximately (85%) as major cause children with NS have minimal change type. Usually affects children in the age group 2-6 years with slight preponderance of males. Each initial episode or relapse may begin with a previous infection such as urinary tract infection. Minimal nephritic syndrome is the sensitive variety of steroid nephrotic syndrome, while other types also exist such as membranous nephropathy and proliferative membranous glomerulonephritis ^(1, 2). Nephrotic syndrome might be idiopathic (90%) or secondary in nature. Minimal Change Disease (MCD) is the most common cause of primary Nephrotic syndrome in children. Most children between the ages of (2-6) and boys outnumber girls. Focal segmental glomerulosclerosis and proliferative glomerulitis in budgets represent the remaining cases of idiopathic nephritis syndrome in children ^(3, 4). As reported in several studies that nurses' need to improve their knowledge and practices regarding the role of the role of evidence-based nursing care for children with nephrotic syndrome ⁽⁵⁾. However, there is a gap between nurses' knowledge related to the caring for children with idiopathic nephrotic syndrome and pharmacological treatment such as the precautions for co-administration of prednisolone. In a study conducted by Shunsuke Kanayama and et al (2021), nurses with experience of caring for patients with idiopathic nephrotic syndrome have been well applying nursing care plans for these nurses without experience especial in pharmacokinetic mechanism of the patients' medications ^(6, 7). Nursing students need to develop their knowledge about caring for children with nephrotic syndrome through applying the comprehensive nursing syllabus in most nursing schools that should represented by lectures, seminars, and discussion about caring for children with nephrotic syndrome in practical units ^(1, 8).

AIMS OF THE STUDY

Assess nursing students' knowledge towards Caring for Children with Idiopathic Nephrotic Syndrome and to find out the relationship between nursing students' knowledge and their demographic data (age, gender, and educational level).

METHODOLOGY

Study Design: A descriptive study was conducted on of 142 undergraduate nursing students was selected for current study; data was collected from 1 / November / 2019 to 1 / January 2020.

Study Setting: Data were collected through using of the questionnaire and the process of the self-administrative report via internet as means for data collection.

Instrument of the study and procedure: The questionnaire was developed on the basic of are view of the literature and the opus groups of parents. The questionnaire format was consisting of two parts: the first part is demographic data related to the nursing students, and the second part is related to the knowledge of caring for children with idiopathic nephrotic syndrome is contained of 27 items which were rated to three Likert scale and scored the follows: Yes (3), Not sure (2), and No (1). The level of knowledge was estimated by calculating the cut off points for the total mean of scores for the scale as: Poor= 27–45, Fair=

46–63, Good= 64–81. The level of knowledge for each item was also calculated by estimation the cut off points for the mean score as follow: Poor= 1-1.66, Fair= 1.67-2.33, Good= 2.34-3.

Validity of the instrument was conducted after experts reviewed and content validity was established. Furthermore, changes were made in questionnaire items according to the recommendation and notes of experts. The reliability of instrument was $r = 0.83$ at the level ($p \leq 0.05$) which was statistically acceptable.

Statistical analysis: SPSS programme version 24 was used, frequency, percentage, and mean used in data analysis.

RESULTS:

Table (1): Distribution of Sample according to their Socio-demographic Characteristics and Mean of score

L.	Characteristics		F	%
1	Age Average = 21.8± 1.8	18 – 20 years	37	26
		21 – 23 years	86	60.6
		24 – 26 years	17	12
		27 ≤ years	2	1.4
		Total	142	100
2	Gender	Male	28	19.7
		Female	114	80.3
		Total	142	100
3	Scholastic stage	First	30	21.2
		Second	23	16.2
		Third	8	5.6
		Fourth	81	57
		Total	142	100

F: Frequency, %: Percentage.

The findings in table (1) shows that students' age is (21-23) years old as revealed by highest percentage (60.6%) and the average mean for their age is (21.8 ± 1.8) year. More of the students are females (80.3%) while only (19.7%) of them are males. Regarding the scholastic stage, more than half of the students are from fourth stage (57%) and (21.2%) of them were from first stage.

Table (2): Levels of Nursing Students' Knowledge about Care of Children with Nephrotic Syndrome

Levels	F	%	M.S	SD
Poor	1	0.7	2.68	0.482
Fair	98	69		
Good	43	30.3		
Total	142	100		

F: Frequency, %: Percentage, M.S: Mean of score, SD: Standard deviation, (Poor= 27–45, Fair= 46–63, Good= 64 – 81).

The table (2) shows the levels of total knowledge among nursing students regarding the care of children with idiopathic nephrotic syndrome; the findings reveal that (69%) of the students are showing fair level of knowledge and (30.3%) of them are showing good level of knowledge.

Table (3): Association between Nursing Students' Knowledge and their Age Group.

Age \ Knowledge	Poor	Fair	Good	Total
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18 – 20 years	0	26	11	37
21 – 23 years	1	60	25	86
24 – 26 years	0	11	6	17
27 ≤ years	0	1	1	3
Total	1	98	43	142
$\chi^2_{obs.} = 1.260$ $df = 6$ $\chi^2_{crit.} = 1.575$ $P \leq 0.05$				

df: Degree of freedom, $\chi^2_{obs.}$: Calculated Chi-square, P: Probability level (P-value ≤ 0.05), $\chi^2_{crit.}$: Tabulated Chi-square.

The table (3) indicates that there is no significant association between nursing students' knowledge with their age at p-value ≤ 0.05 . Correlation is significant at the 0.05.

Table (4): Association between Nursing Students' Knowledge and their Gender

Gender \ Knowledge	Poor	Fair	Good	Total
Male	0	17	11	28
Female	1	81	32	114
Total	1	98	43	142
$\chi^2_{obs.} = 1.528$ $df = 2$ $\chi^2_{crit.} = 1.672$ $P \leq 0.05$				

df: Degree of freedom, $\chi^2_{obs.}$: Calculated Chi-square, P: Probability level (P-value ≤ 0.05), $\chi^2_{crit.}$: Tabulated Chi-square.

The table (4) reveals that there is no significant association between nursing students' knowledge with their gender at p-value ≤ 0.05 . Correlation is significant at the 0.05.

Table (5): Association between Nursing Students' Knowledge and their Scholastic Stage

Stage \ Knowledge	Poor	Fair	Good	Total
First	0	21	9	30
Second	0	14	9	23
Third	0	3	5	8
Fourth	1	60	20	81
Total	1	98	43	142
$\chi^2_{obs.} = 9.604$ $df = 6$ $\chi^2_{crit.} = 6.562$ $P \leq 0.05$				

df: Degree of freedom, $\chi^2_{obs.}$: Calculated Chi-square, P: Probability level (P-value ≤ 0.05), $\chi^2_{crit.}$: Tabulated Chi-square.

The table (5) shows that there is a significant association between nursing students' knowledge with their scholastic stage at p-value ≤ 0.05 . Correlation is significant at the 0.05.

DISCUSSION

The results of the present study showed that students' age is (21-23) years old as revealed by highest percentage and the average mean for their age is (21.8 $\pm$ 1.8) year. More of the students were females, who were from the fourth stage. Such finding regarding age group may interpreted the usual age group among the students at the third and fourth scholastic stage at the college, while the finding of gender may reflect that the highest percentage of female students are registered in the undergraduate studies in Nursing college. This result supported by the study conducted by Mahmoud (2016) it showed the evidence of research that has found a similar finding concerning the sociodemographic characteristics of nursing student in his study⁽⁹⁾.

Also, the study result shows that the levels of total knowledge among nursing students regarding the care of children with idiopathic nephrotic syndrome; that refer to a fair level of knowledge. This result consistent with the result of the study conducted by Ahmed et al.

(2017) who reported in their study that nurses have good level of knowledge about the nephrotic syndrome in pediatric ⁽⁸⁾.

However, these findings of the current study may indicate that nursing students need to have a good level of knowledge regarding caring of children with nephrotic syndrome through applying a comprehensive syllabus containing lectures, seminars, and assignments in practical areas. Moreover, the study results supported that there is no significant association between nursing students' knowledge with their age at $p\text{-value} \leq 0.05$. This finding is supported by the study of Abolwafa and Hossien (2018) who found that there is no significant relationship with regarding to the age group ⁽¹⁾. In addition, the results showed that there is no significant association between nursing students' knowledge with their gender at $p\text{-value} \leq 0.05$. A study supported the current study that found Mukhlif and Hattab (2016) who reported that there is no significant relationship between level of knowledge and gender ⁽²⁾.

The present findings showed that there is a significant association between nursing students' knowledge with their scholastic stage at $p\text{-value} \leq 0.05$. This finding is come with the study's hypothesis that the scholastic stage has significantly associated with the level of knowledge regarding caring for children with nephrotic syndrome. Adib-Hajbaghery et al., (2015) found that there were significant differences were observed between the mean score of nursing students' knowledge and their scholastic stage with ($P = 0.05$), and male students gained higher scores than female ⁽¹⁰⁾.

CONCLUSIONS

The level of nursing students' knowledge was fair towards caring for children with idiopathic nephrotic syndrome. However, there was a significant association between nursing students' knowledge with their scholastic stage at $p\text{-value} \leq 0.05$.

RECOMMENDATIONS:

1. Providing scientific publication and journal about nephrotic syndrome for nursing students.
2. Continuing education programs are important to improve students' knowledge toward children with nephrotic syndrome.
3. Increase the number of clinical training hours to the nursing students that will improve their knowledge and skills in caring for these children.

- **Ethical Clearance:** All experimental protocol was approved under the College of Nursing, University of Baghdad, Iraq and all experiments were carried out in accordance with approved guidelines.

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