Evaluation of Quality of Nursing Care Services Provided to Children under Five Years Based on Integrated Management of Child Health at Primary Health Care Centers in Baquba City

تقويم جودة خدمات الرعاية التمريضية المقدمة للأطفال دون السن الخامسة القائمة على الرعاية المتكاملة لمعايير صحة الطفل في المراكز الرعاية الصحية الأولية في مدينه بعقوبة

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المستخلص:

الأهداف: تهدف الدراسة إلى تقويم جودة خدمات الرعاية التمريضية المقدمة لأطفال دون السن الخامسة القائمة على الرعاية المتكاملة لمعايير صحة الطفل في مراكز الرعاية الصحية الأولية والمقارنة هذه الجودة بين قطاعي الرعاية الصحية الأول والثاني في بعقوبة.

المنهجية: تم إجراء دراسة وصفية للمدة من ١٥ كانون الأول ٢٠١٩ الى ١ مايس٢٠٢٠ . أختيرت عينة غرضيه غير إحتمالية من (٦٠) ملاك تمريضي و (٦٠) طفل .تم اختيار استبيان معتمد للدراسية يتكون من ثلاثة أجزاء. الجزء الأول الخصائص الإجتماعية الديموغرافية للملاكات التمريضي والجزء الثاني الخصائص الإجتماعية الديموغرافية للطفل والجزء الثالث الرعاية التمريضية للأطفال حديثي الوالدة والأطفال دون سن (٥) سنوات . يتم تحديد الإتساق الداخلي وصدق لمحتوى لأداة الدراسة خلال الدراسة الإستطلاعية. تم جمع البيانيات من خلال استخدام اداة الدراسية وطريقة المقابلة. يتم تحليل البيانات من خلال تطبيق سلوب تحليل البيانيات الإحصائي الوصفي كالتكرارات ، والنسبة المئوية ، والوسط الحسابي للقيم، والوسط الحسابي، والإنحراف المعياري، والمجموع الكلي للقيم، والمعدلات وإسلوب تحليل البيانات الإحصائي الاستنتاجي كالإختيار التائي وتحليل التباين.

النتائج: بينت نتائج الدراسة أن وحدة التقييم والإتصال غير كافية بالنسبة للأكثر، في حين أن دور الملاك التمريضي في وحدة العلاج مناسب في قطاع الرعاية الصحية الأول في بعقوبة. لكن، في قطاع الرعاية الصحية الثاني في بعقوبة كان في وحدة التقييم غير كافي، كما أن دور الملاك التمريضي غير كافي في وحدة الإتصال.

التوصيات: أوصت الدراسة بان الملاكات التمريضي العامل بحاجة للمشاركة الجادة في الدورات التدريبية المصممة والمخططة والمنفذة حول برنامج الرعاية المتكاملة لأمراض حديثي الوالدة والطفولة مع التركيز على وحدات التقييم والتواصل. مراقبة وتقويم برنامج IMNCI لفائدة الأطفال في قطاعات الرعاية الصحية في بعقوبة.

الكلمات المفتاحية: التقويم، جودة الخدمات التمريضية، الرعاية المتكاملة لصحة الطفل

Abstract

Objective(s): The study aims to evaluating the quality of nursing care provided to children under five years to compare between quality related to type of health sectors; to determine the quality of nursing care and to compare between such care in Baquba Health Care Sector I and II.

Methodology: A descriptive study is carried out for the period from December 15th 2019 to May 1st 2020**.** A purposive "non- probability" sample, of (60) staff nurse and (60) children is selected. An adopted questionnaire has been selected for the study which consists of three parts. The first part is nurses' socio-demographic characteristic; the second part is child's socio-demographic characteristics; and the third part is the nursing care for neonates and children under 5 years. The content validity and the internal consistency reliability for the study instrument are determined through a pilot study. Data are collected through the use of structured interview. Data are analyzed using frequency, percent, mean of scores, mean, standard deviation, total scores and ranges and inferential statistical measures of t-test and one - way analysis of variance.

Results: Results showed the study that the assessment module and the communication module is inadequate for the most, while, the role of staff nurses in treatment module is adequate in Baquba Health Sector I. But, in Baquba Health Care Sector II the assessment module is inadequate, and the role of staff nurses in treatment module is adequate and equally adequate and inadequate for the communication module.

Recommendations: The study recommends that staff nurses need to be seriously involved in designed, planned and implemented training sessions on Integrated Management of Neonatal and Childhood Illness

(IMNCI) program with emphasis on the assessment and communication modules. Monitoring and evaluation of the IMNCI program have to be done for the benefits of children in Baquba Health Care Sectors
Keywords: Evaluation, Quality of Nursing Care, and Integrated Management of Child Health

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Introduction

Integrated management of Neonatal and Childhood Illness (IMNCI) is an integrated approach to neonatal and child health that focuses on the well-being of the whole child. The aims of IMNCI to reduce death, illness and disability, and to promote, improve growth and development among children less than five years of age and include both preventive and curative elements that are implemented by family and communities as well as by health facilities [(1)]. The IMNCI strategy includes a group of criteria for assessing, classifying and treating the prevalent illnesses that can develop and become dangerous to the extent that causes death to children under five years, while the purpose of the IMNCI was not only to identify a diagnosis, but to conducting of the systematic and comprehensive evaluate to predictive clinical signs which determine the need to start treatment in primary health care centers or the home and this program focuses on families, with an emphasis on integrating curative, preventative, and health promotion activities [(2)].

More than (100) countries use IMNCI; Studies have shown that IMNCI improves the quality of health care, the performance of health workers, and can lead to a decline in under- five mortality and health care cost [(3)]. Indeed, the IMNCI protocol has been implemented by countries across the world and has been found to be a more cost- effective and holistic way of managing neonatal and childhood illness with better health outcomes [(4)].

The main principles of IMNCI are to train health workers, provide basic equipment, develop skills so that they can manage children with mixed diseases, provide basic requirement such as urogenital referral, appropriate treatment, and provide information for children's careers. Supervisors IMNCI should be followed-up for the staff through visits after training to assist him in the workplace to implement IMNCI and improved the quality of management of sick children [(5)].

Methodology

Design of the Study:

A descriptive study is carried throughout the present study to evaluate the quality of nursing care services provided to children under five years based on Integrated Management of the Child Health Standards at Primary Health Care Centers in Baquba City from December 15th 2019 to May 1th 2020.

Settings of the Study

The study is conducted in Diyala Health Directorate; Baquba Health Care Sector I that includes (7) main primary health care centers and Baquba Health Care Sector II which also include (7) main primary health care centers.

Sample of the Study

A purposive "non- probability" sample, of (60) staff nurse and (60) children, were selected for the present study. This sample is recruited from the aforementioned primary health care centers. The sample is distributed as: (32) nurses and (32) child from Baquba Health Care Sector I and (28) nurses and (28) child from Baquba Health Care Sector II.

Ethical Considerations:

The Scientific Research Ethical Committee at the University of Baghdad, College of Nursing has approved the study

to be conducted. All participants have signed a consent form to present their agreement for such participation and protect their human rights.

Study Instrument:

Part I: Nurses' Demographic Characteristics

Nurses' demographic characteristics included nurses' gender, age, training on IMNCH, years of employment, years of practice in pediatrics, and education.

Part II: Child's Socio-Demographic Characteristics

Child's socio-demographic characteristics the child's age, gender, parents' education, parents' employment, monthly income, and family socioeconomic status.

Part III: Nursing Care

This part includes three sections for the nursing care of neonates and children less than five years. Assessment module "Observation checklist -child 2month -5 years consists of (17) items" and "Observation checklist -child less than 2 month" includes (4) items.

1. The role of staff nurses in treatment module involves seven items.
2. A communication module consists of (10) items.

Validity and Reliability of the Study Instrument

Content validity of the study instrument is determined through panel of experts and internal consistency reliability is obtained through split-half technique and computation of Cronbach alpaha correlation coefficient of (r=0.87).

Data Collection

Data were collected through the using structured interview for the period from January 21st 2020 to 10th March, 2020. The interview was conducted with the focal points health personnel (staff nurses) for evaluating nursing care provided to children under five years based on IMNCI strategy at health care sectors and primary health care centers.

Statistical Data Analysis

1. Descriptive Statistical Data Analysis:

Frequency, percent, mean of scores, mean, standard deviation, total scores and ranges.

2. Inferential Statistical Data Analysis:

T-test and one - way analysis of variance (ANOVA).

Results

Table (1): Nurses' Demographic Characteristics in Baquba Health Care Sector I

List	Characteristics	Frequency	Percent
1	**Gender**		
	Male	11	34.4
	Female	21	65.6
2	**Age (Years)**		
	20-29	9	28.1
	30-39	8	25.0
	40-49	9	28.1
	≥ 50	6	18.8
3	**Education**		
	High School Nursing graduate	21	65.6
	Diploma Degree	9	28.1
	Bachelor's Degree	2	6.3
4	**Years of Employment**		
	1-10	10	31.2
	11-20	7	21.9
	≥ 21	15	46.9
5	**Training in IMNCI**		
	Yes	20	62.5
	No	12	37.5
6	**Years of Practice in Pediatrics**		
	1-10	16	50.0
	11-20	12	37.4
	21-30	2	6.3
	31-40	2	6.3

Results out of this table depict that most of these nurses are females (65.6%), (20-29) year and (40-49) years of age (28.1%) respectively, high school of nursing graduates (65.6%), have been employed for ≥ 21 years (46.9%), (62.5%) of them are trained in IMNCI and have practiced pediatrics for (1-10) years (50.0%).

Table (2): Overall Evaluation of the Quality of Nursing Care at IMNCI Program in Baquba Health Care Sector I

Items	Inadequate	Adequate
A. Assessment Module	**18 (49-73.5)**	**14 (73.6-98)**
B. The Role of Stuff Nurses in Treatment Module	**6 (29-43.5)**	**26 (43.6-58)**
C. Communication Module	**18 (24-36)**	**14 (37-48)**

Results out of such evaluation depict that the assessment module is inadequate for the most, the role of staff nurses in treatment module is adequate for the most and the communication module is inadequate for the most.

Table (3): Nurses' Demographic Characteristics in Baquba Health Care Sector II

List	Characteristics	Frequency	Percent
1	**Gender**		
	Male	11	39.3
	Female	17	60.7
2	**Age (Years)**		
	20-29	1	3.6
	30-39	10	35.7
	40-49	11	39.3
	≥ 50	6	24.4
3	**Education**		
	High School Nursing graduate	17	60.7
	Diploma Degree	9	32.2
	Bachelor's Degree	2	7.1
4	**Years of Employment**		
	1-10	11	39.3
	11-20	6	21.4
	≥ 21	11	39.3
5	**Training in IMNCI**		
	Yes	21	75.0
	No	7	25.0
6	**Years of Practice in Pediatrics**		
	1-10	16	57.2
	11-20	6	21.4
	21-30	3	10.7
	31-40	3	10.7

Results out of this table depict that most of these nurses are females (60.7%), (40-49) years of age (39.3%) respectively, high school of nursing graduates (60.7%), have been employed for (1-10) years and ≥ 21 years (39.3%) respectively, (75.0%) of them are trained in IMNCI and have practiced pediatrics for (1-10) years (57.2%).

Table (4): Overall Evaluation of the Quality of Nursing Care at IMNCI Program in Baquba Health Care Sector II

Items	Inadequate	Adequate
A. Assessment Module	**22 (49-73.5)**	**6 (73.6-98)**
B. The Role of Stuff Nurses in the Treatment Module	**4 (29-43.5)**	**24 (43.6-58)**
C. Communication Module	**14 (24-36)**	**14 (37-48)**

Results out of this table depict that overall evaluation is inadequate for the assessment module, adequate for the role of staff nurses in the treatment module and equally adequate and inadequate for the communication module.

Table (5): Comparative Difference between Baquba Health Care Sector I and Baquba Health Care Sector II Relative to the Assessment Module

Health Care Sector	Group Size	Mean	Standard Deviation	T-test	df	Sig.
Baquba I	32	70.13	12.684	0.811	58	0.421
Baquba II	28	67.11	16.102	0.798	51.146	0.428

df: Degree of freedom, Sig.: Significance at p ≤ 0.05

Such comparison display that there is no significant difference between Baquba Health Sector I and Baquba Health Sector II relative to the assessment module.

Table (6): Comparative Difference between Baquba Health Care Sector I and Baquba Health Care Sector II Relative to the Role of Staff Nurses in the Treatment Module

Health Care Sector	Group Size	Mean	Standard Deviation	T-test	df	Sig.
Baquba I	32	48.03	7.670	-0.093	58	0.927
Baquba II	28	48.21	7.843	0.092	56.066	0.927

df: Degree of freedom, Sig.: Significance at p ≤ 0.05

Such comparison shows that there is no significant difference between Baquba Health Sector I and Baquba Health Sector II relative to the role of staff nurses in the treatment module.

Table (7): Comparative Difference between Baquba Health Care Sector I and Baquba Health Care Sector II Relative to the Communication Module

Health Care Sector	Group Size	Mean	Standard Deviation	T-test	df	Sig.
Baquba I	32	36.13	7.272	0.664	58	0.509
Baquba II	28	37.36	7.051	0.665	57.367	0.508

Df: Degree of freedom, Sig.: Significance at $p \leq 0.05$

Such comparison shows that there is no significant difference between Baquba Health Sector I and Baquba Health Sector II relative to the communication module.

Discussion

Part I: Discussion of Staff Nurses' Demographic Characteristics in Baquba Health Sector I and II

Finding that Results out of the data analysis that most of these nurses are females (65.6%), (20-29) year and (40-49) years of age (28.1%) respectively, high school of nursing graduates (65.6%), have been employed for ≥ 21 years (46.9%), (62.5%) of them are trained in IMNCI and have practiced pediatrics for (1-10) years (50.0%),in Baquba Health Care Sector I (table 1). While Results out of (table 3) depict that most of these nurses are females (60.7%),(40-49) years of age (39.3%) respectively, high school of nursing graduates (60.7%), have been employed for (1-10) years and ≥ 21 years (39.3%) respectively, (75.0%) of them are trained in IMNCI and have practiced pediatrics for (1-10) years (57.2%) in Baquba Health Care Sector II. Demonstration of such characteristics displays similarities among nurses in terms of their gender, age, education, training and practice but there is dissimilarity in their employment.

A cross-sectional study is conducted in primary healthcare centers in Babylon Governorate to investigate the knowledge and performance of healthcare workers about IMNCI program and to assess the adherence of healthcare workers to IMNCI guidelines for managing childhood disease [(10)].

A cross-sectional study assesses factors associated with adherence to IMNCI guideline in Aweil East County, South Sudan. The study involves (232) health workers from (36) health facilities. Results revealed that respondents mean of age is (32) years, 154 (66.4%) are males, 104 (44.8%) reaches secondary education, and 190 (81.9%) have certificate. There is about 23 adhered to IMNCI guideline. The study confirms that academic qualification has great association with adherence to IMNCI guideline [(11)].

Part II: Discussion of Overall Evaluation of the Nursing Care at IMNCI in Baquba Health Sector I and II

Findings that Result out of an evaluation depict that the assessment module and the communication module is inadequate for the most but the role of staff nurses in treatment module is adequate for the most in Baquba Health Care Sector I (Table 2).

Whereas, the result of the an evaluation in Baquba Health Care Sector II, has indicated that it is, likewise that of Baquba Health Care Sector I, inadequate for the assessment module, adequate for the role of staff nurses in the treatment module and it is, not like, fair for the communication module (Table 4).

Such findings provide evidence which can be interpreted in a manner that staff nurses unfortunately in both Baquba Health Care Sectors I and II, have ineffectively implement the guidelines of assessment module, the role of staff nurses in treatment module and communication module of IMNCI as result of their low- slung education in nursing as high school of nursing graduates and their being unaware of their seriousness. Even though, some of them have participated in training sessions on IMNCI and pediatrics. Possibly, these sessions did not qualify to improve their clinical performance for many reasons, including being not well constructed, prepared and implemented.

A study aims at investigating likely impact of pre-service IMNCI-training on nursing students' case assessment and management skills. The four constructs namely General Skills (GS), Knowledge, Attitudes, and Skills (KAS), Confidence Level (CL) and Holistic Treatment Skills (HTS) that were used as latent variables to highlight their likely impact on the formative variable Assessment and Management Skills (AMS). All the four studied constructs appear to significantly influence case assessment and management skills of IMNCI-trained nurses [(12)].

Part III: Discussion of Comparative Difference between Baquba Health Care Sectors I and II Relative to the Assessment Module, Role Staff Nurses in the treatment Module and The Communication Module

Throughout the course of data analysis, the researcher has recognized that the implementation of IMNCI program in both Baquba Health Care Sector I and II is insufficiently oriented for certain reasons that nurses have low level of education as being graduates of high schools of nursing, they are for some extent incompetently complete the training on IMNCI, and some of them are middle - age and they have been employed for many years by which they may not have the interest to learn new care strategies to improve their practices and they are unwilling to implement new programs (Table 5 through 7).

Unfortunately, no reassuring evidence is available in the literature to support findings of this nature. Generally speaking, such a comparison presents important indication that nursing care at primary health care centers in Baquba Health Care Sectors, in which IMNCI program is implemented, has experienced deficiencies as they become obvious throughout the course of the present study with respect to the implementation of the assessment and communication modules.

Recommendations

1. The staff nurses to be involved in seriously designed, planned and implemented
   training sessions on IMNCI program with emphasis on the assessment and communication modules.
2. Staff nurses, with low education, encouraged participating in the training programs to improve their competencies to delivery adequate and high quality care.
3. Periodic and regular monitoring and evaluation of the IMNCI program for
   the benefits of children in Baquba Health Care Sectors I and II.

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