

# QUALITY OF PRIMARY HEALTH CARE SERVICES IN FAMILY HEALTH CENTERS IN EL-BEHIRA GOVERNORATE

Hend Salah Shehata <sup>(1)</sup>, Enas Mohamed Ibrahim <sup>(2)</sup>, Reem Bassiouny El Lassy <sup>(3)</sup>,  
Doaa Ali Eldemrdash<sup>(4)</sup>

<sup>(1)</sup> Student of Master's Degree in Community Health Nursing, Faculty of Nursing, Damanhour University

<sup>(2)</sup> Professor of Community Health Nursing, Faculty of Nursing, Damanhour University

<sup>(3)</sup> Professor of Community Health Nursing, Faculty of Nursing, Damanhour University

<sup>(4)</sup> Assistant professor of Nursing Education Department, Faculty of Nursing, Damanhour University

DOI: <https://doi.org/10.5281/zenodo.7868181>

Published Date: 26-April-2023

---

**Abstract:** High-quality primary health care services are the outcome of strong service delivery and the result of well-organized and achieved services, supported by a strong system and sufficient inputs, such as human resources, infrastructure, drugs, and supplies. The aim of the study is to assess the quality of PHC services in family health centers in El-Behira Governorate. **Material and Methods:** Research design: Descriptive research design will be used to conduct this study. **Setting:** The study will be conducted in governmental family health centers in El-Behira governorate affiliated with the Ministry of Health. **Subjects:** The subjects of the present study will be all the nurses (347) working in studied family health centers. **Sampling:** A multistage sampling technique will be used to select the required sample. **Tools:** two tools were used. **Tool (I):** Nurses' quality knowledge and perspective structured questionnaire sheet. **Tool (II):** Quality of Primary Health Care Services Evaluation. **Results:** the vast majority of the nurses in Damanhour, Etay EL-Baroad, Abo-Homos were females. More than two thirds (68.6%) of the nurses in Damanhour FHC compared to less than two thirds of the nurses in Etay EL-Baroad and Abo-Homos (66.4% and 64.3% respectively) and half (54.3%) of them in El-Rahmanya had a secondary school of nursing diploma. Among nurses with low perspectives, 3.2% of them had poor knowledge about quality compared to none of those with high perspectives. The Family Health Centers had the highest process mean score related to provision of services especially for maternity care, family planning services and childcare. While the total clinics' process is unsatisfactory for essential drugs. **Conclusion:** Based on the findings of the present study, it can be concluded that none of the studied family health centers in all districts studied had a high total quality level. A significant relation was found between nurses' mean score of knowledge and their perspective levels related to quality of services and socio-demographic characteristics related to previous training and frequency of training. The Family Health Centers had the highest process mean score related to provision of services especially for maternity care, family planning services and childcare. **Recommendations:** The predominant policy recommendation is that the Egyptian Ministry of Health needs to improve the budget allocation for primary health care units and centers as it is the entrance keeper to secondary and tertiary health care. It is equally important to maintain the support policy for primary health care services in order to meet the restricted affordability of low-income people who would fight to get health care if the prices of examination and medication would be increased.

**Keywords:** primary health care, family health centers, quality of PHC services.

---

## 1. INTRODUCTION

Primary health care (PHC) was proclaimed by the World Health Organization (WHO) in the 1978 Alma Ata declaration as the strategy to achieve "health for all by the year 2000." <sup>(1)</sup> It was renewed on 25-26 October 2018 along with the sustainable developmental goals (SDGs) and the universal health coverage. <sup>(2)</sup> PHC is defined as "the essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individual and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination." <sup>(3)</sup>

The Alma-Ata Declaration on PHC envisaged a minimum package of eight PHC elements: education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition, an adequate supply of safe water and basic sanitation, maternal and child health including family planning, immunization against the major infectious diseases, prevention and control of locally endemic diseases, appropriate treatment of common diseases and injuries and provision of essential drugs. <sup>(4)</sup> The aim of PHC is to promote population health and decrease disease burden as the world facing the double disease burden of communicable and non-communicable diseases which put a great demanding effect on the health care systems. <sup>(5)</sup> Egypt like every other country should have two main obligations to realize the right for health; an obligation of high-quality conduct of primary health care services and an obligation of results to ensure equal access to health facilities, provision of basic shelter, essential food and drugs. <sup>(6)</sup>

Health Sector Reform is a program (HSRP) of transformation between 1997 and 2020 with an overall goal of shifting the focus of health care from reliance on vertical programs and inpatient care to a more integrated and less costly, quality, universally accessible and sustainable primary health care model. <sup>(7)</sup> Family health care nursing its way for interacting with families about health care. It has evolved since 1980 as a way of thinking about, and working with the families when a member experiences a health problem. The International Family Nursing Association (INFA) represents 33 countries with the mission to transform family health by serving as a unifying force and voice for family nursing globally. <sup>(8)</sup> Family Health Model is a program aiming at enabling the Egyptian health system to deliver holistic family health care which is provided as a "Basic Benefit Package (BBP)" that is designed to both prevent and treat the most prevalent health problems in the Egyptian population. <sup>(9)</sup> Family medicine (FM) has been developed as a counterculture in response to rapid fragmentation of medical care. It is evolved as a concept of medical care to cater to the growing demand of the people for personalized, continued, and comprehensive care for the individual and family. The family health model does not only define family types or their exceptional traits, but as an alternative emphasis on the complication of health and illness from the family perspectives. Upon working to achieve the social justice in the Egyptian health sector, there is a great need to focus on improving the quality of public health services. <sup>(10)</sup>

High-quality primary care is the establishment of whole-person, integrated, reachable, and equitable health care by interprofessional teams who are liable for addressing the majority of an individual's health and wellness requirements across settings and through sustained relationships with patients, families, and communities. The committee based this definition on the following concepts: unified, whole-person health; interprofessional care teams; foundational, continuous, trustful relationships between the interprofessional care team and patients and families; the serious role of communities in providing primary care; the importance of equitable access to primary care; and the variety of settings and modalities used to provide primary care. This definition describes what high-quality primary care should be. <sup>(11,12)</sup>

Primary health care has been proven to be a highly effective and efficient way to address the main causes and risks of poor health and well-being today, as well as handling the emerging challenges that threaten health and well-being tomorrow. It has also been shown to be a good value investment, as there is evidence that quality primary health care reduces total healthcare costs and improves efficiency by reducing hospital admissions. <sup>(13)</sup>

Primary Health Care is a very fulfilling area for nurses to work in where they have a very important role to improve the quality of services. The Family Health Nurse (FHN) has an important role along the whole continuum of PHC. FHN can participate in development and implementation of health promotion programs in their locality selects, implements, and evaluates evidence-based strategies for health promotion; empowers individuals, groups, and communities to adopt healthy lifestyles and self-care. <sup>(14)</sup>

**Significance of the study**

Poor-quality health care can greatly affect the more vulnerable groups in the society, and the broader economic and social costs of patient harm caused by long-term disability, impairment, lost productivity and associated decrease in the country's Gross Domestic Product (GDP). Egypt's GDP was decreased from 1,347,300.000 EGP Mn in Dec 2018 to 1,225,200.000 EGP Mn in Mar 2019. <sup>(15)</sup> In addition, duplicate services and ineffective health care can generate considerable waste where up to a fifth of health resources are deployed in ways that generate very few health improvements. Poor-quality health care as well can waste precious resources that can be invested in other important drivers for social and economic development to improve the lives of citizens. It can also undermine the trust of the population in the benefits of modern medicine. <sup>(16)</sup>

Recent evidence highlights gaps in evidence about quality of PHC Furthermore, an Egyptian comparative study between the accredited and non-accredited primary health care clinics by Cairo American University in 2013 explored poor structure and process quality of primary health care services. <sup>(9,16)</sup>

Hence, strong primary care systems are associated with reduced morbidity, increased patient longevity and increased equity in health outcomes. Thus, assessing quality of PHC services is the first and initial step as it provides the basic knowledge about the defects in the PHC services delivery to work through for quality improvement.

**The aim of the study**

**This study aims to** Assess the quality of PHC services in family health centers in El-Behira Governorate.

**Research question:**

1. What is the level of quality of PHC services in the family health centers in El- Behira governorate?
2. What is level of nurses' quality knowledge and perspective in the family health centers in El- Behira governorate?

**2. MATERIALS AND METHODS**

**Research design:**

A descriptive design was adopted to carry out this study.

**Setting:**

The study was conducted in governmental family health centers in El-Behira governorate affiliated to the Ministry of Health and Population.

Four directorates named (Damanhour –Abo Homous –Etay El-Baroud –El-Rahmaneia) each one has 4 centers named systematically (Naser medical center –Saad medical center –Zawyet Gazal family health center - Medical Health Center- Demesna -Balakter El Garbia – Eltawfikya - Medical Health Center – Klishan – Smokrat - Medical Health Center - Kafr Mehalet Dawood)

**Subjects**

- The subjects of the present study were a sample of all the nurses (347) working in studied FHC.
- The sample size was calculated by using EPI info7 software.

**Table (1) Number of Nurses Selected from Damanhour, Abo Homos, Etay Elbarod, Al-Rahmanya Directorates:**

Damanhour Directorate	Total number of nurses (N)	Selected number (N)
Naser Medical Center	59	59
Saad Medical Center	51	51
Zawiet Ghazal	27	27
<b>Total</b>	<b>137</b>	<b>137</b>
Abo Homos Directorate	Total number of nurses (N)	Selected number (N)
Medical Health Center	18	18
Demesna	14	14

Balakter ElGarbia	10	10
<b>Total</b>	<b>42</b>	<b>42</b>
<b>Etay Elbaroad Directorate</b>	<b>Total number of nurses (N)</b>	<b>Selected number (N)</b>
Eltawfikya	28	28
Medical Health Center	44	44
Klishan	50	50
<b>Total</b>	<b>122</b>	<b>122</b>
<b>Al-Rahmanya Directorate</b>	<b>Total number of nurses (N)</b>	<b>Selected number (N)</b>
Smokrat	16	16
Medical Health Center	25	25
Kafr Mehalet Dawood	5	5
<b>Total</b>	<b>46</b>	<b>46</b>

Source: Ministry of Health and Population June 2019. <sup>(17)</sup>

### Sampling:

A multistage sampling technique was used to select the required sample as shown in the sample estimation table below: -

1. A quarter (four directorates) of the sixteen directorates in El-Behira governorate were randomly selected.
2. From each directorate three family health centers were randomly selected to collect the required data.
3. All nurses (347) working in the previously selected family health centers were included in the study.

### Tools for data collection:

Two tools were used by the researcher in order to collect the necessary data for the study.

#### Tool I: Nurses' quality knowledge and perspective structured questionnaire sheet

It was developed by the researcher after a thorough review of relevant recent literature. <sup>(18,19)</sup> It will include three parts: -

**Part (1): Personal characteristics:** sex, age, education, current working position, years of experience and previous training experience in quality.

**Part (2): Nurses' knowledge about quality of PHC services:** concept of quality and standard, types of quality standards in PHC, benefits of quality application, types of family health records, measures needed to enhance quality, obstacles facing quality application, role of center administration in quality improvement, importance of presence of quality coordinator and their role in quality application. In addition to, nurses' role in quality application and their source of knowledge about quality. Each knowledge item was scored as follows: not answered (0), equal or less than 50% of the correct answer (1), 50% to 75% of the correct answer (2), and more than 75% of the correct answer (3). The resultant total score was translated into percentage and classified into three levels; poor (<50%), satisfactory (50<75 %) and good (≥75%) knowledge.

**Part (3): Nurses' perspective about quality application in the center:** It contains three dimensions. *Firstly, structural items* as waiting area, clinics, number of doctors and nurses and state of their lounge, availability of supplies and equipment, records, staff training, quality committee, maintenance and management system. *Secondly, process items* as knowledge and clinical competence of nurses, patient's centeredness, team working, communication tactics with center managers and. *Thirdly, outcome items* as effect of enacting the quality committee on center performance, patients' safety and satisfaction levels, proportion of health care providers to patients, coverage rate of catchment area, effectiveness of the provided PHC services in reducing morbidity and mortality rates. The scoring system for each item was a five-point Likert scale from strongly agree (5) to strongly disagree (1). The resultant total score was translated into percentage and categorized into three levels; low (<50%), moderate (50<75 %) and high (≥75%) quality perspective.

#### Tool (II): Quality of Primary Health Care Services Evaluation Tool

It was adapted from the WHO-2014 Primary Care Evaluation Tool of Regional Office for Europe <sup>(20,21)</sup> and Egypt Ministry of Health and Population quality and accreditation standards tool for family health centers. <sup>(21)</sup> It assessed the quality of family health centers using the Donabedian framework (structure, process, outcome) and it includes four parts: -

**Part (1): Family health center data:** name, address, city, nearest referral place, building creation date, last accreditation date and number of populations served by the center.

**Part (2): Structure of family health centers assessment checklist:** It contains four dimensions to measure the structural quality of family health centers through facility audit of the overall center and in each clinic; (1) Structural characteristics; (2) Medical and non-medical equipment and supplies; (3) Human resources (physicians, nurses, pediatrics, technicians, quality coordinators, pharmacists, dentists, health educator) and (4) Center improvement system. Each item was scored as yes (1) or no (0). The total score was calculated and translated into percent score to be leveled as satisfactory ( $\geq 60\%$ ) or unsatisfactory ( $< 60\%$ ) structural attributes.

**Part (3): Process of PHC services observational checklist**

It composed of eight dimensions to assess the provision of primary health care services in the studied family health centers based on the minimum package of eight PHC elements; (1) Health education, (2) Communicable and non-communicable diseases, (3) Epidemic diseases, (4) Immunization, (5) Child care, (6) Maternal care, (7) Family planning, (8) Essential drugs. Each item was scored as done (1) or not done (0). The resultant total score was translated into percentage and categorized into two levels; satisfactory ( $\geq 60\%$ ) or unsatisfactory ( $< 60\%$ ) process attributes.

**Part (4) Outcome of PHC services provision in family health centers**

It was designed to measure the center effectiveness using facility indicators through record reviewing as mortality rate, number of births, total files numbers, total active files, number of eligible families, number of under-five children attending the center, number of new family planning clients, number of laboratory clients per month, number of new pregnant women, proportion of PHC physicians and nurses for the total population and number of returners in that month.

## Methods

### 1. Administrative phase:

- An official letter from the Faculty of Nursing, University of Damanhour was directed to the Health Affairs Directorate in El Behira to obtain an approval for collecting the necessary data from the selected settings.
- Approval letters was directed from Health Affairs Directorate in El Behira to the directors of the selected family health centers.
- Meetings was held with the directors of the selected family health centers to clarify the objective of the study and to gain their cooperation during data collection.

### 2. Development of the study tools:

- Tool (I) was developed by the researcher after thorough reviewing of the recent literature.
- Tool (II) was adapted from The WHO Primary Care Evaluation Tool of Regional Office for Europe 2014 and Egypt Ministry of Health quality and accreditation standards tool for family health centers<sup>(18,19)</sup> and it was developed based on Donabedian framework.
- Reliability of tools was done using Cronbach's Alpha reliability correlation coefficient. The result for the Tool I (Nurses' quality knowledge and perspective structured questionnaire sheet) was  $r = 0.863$  for knowledge scale, and  $r = 0.910$  for perspectives scale, Tool II (Quality of Primary Health Care Services Evaluation Tool) was  $r = 0.793$ .

### 3. Pilot study

After the development of the tools, a pilot study was conducted before starting data collection on a random sample of 34 nurses (10% of the estimated sample). They were obtained from Kar El Dawar directorate.

- The Purposes of the pilot study were:
  - To ensure the clarity and applicability of the tools.
  - To estimate the average time needed for data collection.

## International Journal of Novel Research in Healthcare and Nursing

Vol. 10, Issue 1, pp: (154-170), Month: January - April 2023, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com)

➤ To identify the limitation that might be come across during operation of the study, so as to make necessary measures to deal with them.

▪ All tools were evaluated for content validity by a jury of five experts in the field of Community Health Nursing and Nursing Administration. Based on the jury's comments and the pilot study, the tools were reviewed, and the necessary modifications were done.

#### 4. Collection of data

▪ Collection of data covered a period of 4 months started from the beginning of May 2020 until the end of September 2020.

▪ Data was collected from the studied nurses by the researcher after explaining the study purpose using study tool (I) to collect the required data.

▪ Each interview took approximately from (15-30) minutes using tool I.

#### 5. Ethical consideration

Each participant was interviewed individually after establishing trustful relationship with him to gain their cooperation and confidence, this was attained through explaining the purpose of the study, ensure confidentiality and anonymity of the data through a statement in the cover page and using a code number instead of names, assure them that the collected data was used only for the purpose of the study and inform them about their voluntary participation in the study.

#### 6. Statistical analysis:

▪ The collected data was revised, categorized, coded, computerized, tabulated and analyzed using statistical package for social sciences (SPSS) version 18.

▪ The following statistical measures were used:

1- Cross tabulation with frequency distribution and percentages were used to explore relationships between variables.

2- Arithmetic mean, and standard deviation were used as a summary statistic for quantitative data.

3- Appropriate tests were used as ANOVA test, t Student t test, and Chi-square at 0.05 level of significance.

4- For graphical presentation: Graphs were done for data visualization using Bar and Pie charts.

### 3. RESULTS

#### Part I: Nurses' knowledge and perspectives about quality of primary health care services

##### • Nurses' Personal Characteristics.

**Table (1)** displays that the vast majority of the nurses in Damanhour, Etay EL-Baroad, Abo-Homos were females (92.7%,95.1%,95.2% respectively) compared to 82.6% of the nurses in El-Rahmanya, with a statistically significant difference between the four districts ( $p = 0.043$ ).

Regarding the nurses' age, it was found that more than one third (35.8%) of the nurses in Damanhour compared to less than one fifth of the nurses in Etay El-Baroad, Abo-Homos, and El-Rahmanya (19.7%,16.7% and 19.6% respectively) aged 50 years and more. While less than one fifth (19.6%,14.3%) of the nurses in Abo-Homos and Al-Rahmanya respectively compared to minorities of the nurses in Damanhour and Etay El-Baroad (22% and 7.4% respectively) aged 20 to less than 30 years. A statistically significant difference was noticed between the four districts in relation to the nurses' age ( $p=0.000$ ).

With respect to the nurses' level of education, more than two thirds (68.6%) of the nurses in Damanhour, compared to less than two third of the nurses in Etay El-Baroad and Abo-Homos (66.4% and 64.3% respectively) and half (54.3%) of them in El-Rahmanya had secondary school of nursing diploma. While less than one fifth (12.4%,19.7% and 16.7%) of the nurses in Damanhour, Etay El-Baroad, and Abo-Homos respectively) compared to around one third (32.6%) of the nurses in Al-Rahmanya had a bachelor degree of nursing. Moreover, more than two thirds (68.6%) of the nurses in Damanhour compared to less than two thirds of the nurses in etay el baroaad and Abo-Homos (61.5% and 64.3% respectively) and more than half

(54.3%) of the nurses in Al-Rahmanya reported working as staff nurses. While less than one fifth (14.6% and 19.0%) of the nurses in Damanhour and Abo-Homos respectively compared to 23.0% of the nurses in Etay El-Baroad and 32.6% of those in Al Rahmanya mentioned that they are professional nurses.

Additionally, the same table reveals that more than two thirds (69.3%) of the nurses in Damanhour, compered to more than half of the nurse in Etay El-Baroad and Abo-Homos (59.0% and 52.4% respectively) and more than one quarter (26.1%) of those working in Al-Rahmanya had 20 years of experience and more, with a statistically significant difference between them ( $p = 0.000$ ).

**Table (1): Distribution of the studied nurses according to their personal characteristics**

Items	Damanhour FHC (n=137)		Etahy El Baroad FHC (n=122)		Abo-Homos FHC (n=42)		Al-Rahmanya FHC(n=46)		Total (n =347)		Test of significance
	No.	%	No.	%	No.	%	No.	%	No.	%	
<b>Sex</b>											
- Male	10	7.3	6	4.9	2	4.8	8	17.4	26	7.5	$X^2= 8.129$ $P= 0.043^*$
- Female	127	92.7	116	95.1	40	95.2	38	82.6	321	92.5	
<b>Age (years)</b>											
- 20-	3	2.2	9	7.4	6	14.3	9	19.6	27	7.8	$X^2= 47.715$ $P= 0.000^*$
- 30-	30	21.9	36	29.5	14	33.3	24	52.2	104	30.0	
- 40-	55	40.1	53	43.4	15	35.7	4	8.7	127	36.6	
- $\geq 50$	49	35.8	24	19.7	7	16.7	9	19.6	89	25.6	
Mean $\pm$ SD	45.23 $\pm$ 8.570		42.07 $\pm$ 8.302		40.02 $\pm$ 9.182		37.37 $\pm$ 9.530		42.45 $\pm$ 9.057		$F= 11.082$ $P= 0.000^*$
<b>Level of Education</b>											
- Secondary school	94	68.6	81	66.4	27	64.3	25	54.3	227	65.4	$X^2= 12.621$ $P= 0.181$
- Technical Institute	23	16.8	13	10.7	7	16.7	6	13.0	49	14.1	
- Bachelor degree	17	12.4	24	19.7	7	16.7	15	32.6	63	18.2	
- Post graduates	3	2.2	4	3.3	1	2.4	0	0.0	8	2.3	
<b>Current work position</b>											
- Staff nurse	94	68.6	75	61.5	27	64.3	25	54.3	221	63.7	$X^2= 7.606$ $P= 0.268$
- Technical nurse	23	16.8	19	15.6	7	16.7	6	13.0	55	15.9	
- Professional nurse	20	14.6	28	23.0	8	19.0	15	32.6	71	20.5	
<b>Years of experience</b>											
- $<5$	3	2.2	5	4.1	4	9.5	4	8.7	16	4.6	$X^2= 46.394$ $P= 0.000^*$
- 5-	3	2.2	2	1.6	2	4.8	6	13.0	13	3.7	
- 10-	18	13.1	25	20.5	9	21.4	20	43.5	72	20.7	
- 15-	18	13.1	18	14.8	5	11.9	4	8.7	45	13.0	
- $\geq 20$	95	69.3	72	59.0	22	52.4	12	26.1	201	57.9	
Mean $\pm$ SD	23.31 $\pm$ 8.966		20.17 $\pm$ 8.365		18.90 $\pm$ 9.527		15.35 $\pm$ 10.28		20.62 $\pm$ 9.358		$F= 9.928$ $P= 0.000^*$

$X^2$  Chi Square Test

F ANOVA Test

\* Statistically significant at  $p \leq 0.0$

**Table (2)** shows that the majority (81.0%) of the nurses in Abo-Homos had a good level compared to less than two thirds of the nurses in Damanhour and Etay El-Baroad (60.6%, and 66.4% respectively) and more than two fifths (43.5%) of those nurses in Al-Rahmanya, with a statistically significance between them ( $p= 0.010$ ).

Regarding the definition of the quality's standards, more than three quarters (78.6%) of the nurses in Abo-Homos, and more than half (54.1%) of the nurses in Etay El-Baroad had a high level of knowledge compered to ground half (49.6%) of the nurses in Damanhour and more than one third (37.0%) of those nurses in Al-Rahmanya, with a statistically significant difference between them ( $x^2 = 31.059$ ,  $p=0.000$ ). With respect of the quality standards, more than three quarter (78.1% and 81.0%) of the nurses in Damanhour and Abo-Homos respectively and about three quarter (74.5%) of the nurses of Etay El-Baroad, with a statistically significant differences between them ( $x^2 = 20.448$ ,  $p=0.002$ ).

Concerning the qualification of the quality manager, the same table shows that the majority (86.9% and 92.9%) of the nurses in Etay EL-Baroad and Abo-Homos, compared to more than three quarters (78.8%) of the nurses in Damanhour and less than two thirds (63.0%) of those in Al-Rahmanya had a high level of knowledge, with a statistically significance difference between them ( $x^2 = 31.703$ ,  $p = 0.000$ ). Furthermore, the majority of nurses in Damanhour, Etay El-Baroad and Abo-Homos had high level of knowledge regarding the responsibilities of the quality manager (86.9%, 91.8% and 95.2% respectively) compared to more than three quarters (78.3%) of the nurses in Al-Rahmanya with a statistically significance between them ( $p = 0.000$ ). Moreover, the majority of the nurses in Damanhour, Etay El-Baroad and Abo-Homos had high level of knowledge regarding the records used in family health units and centers (83.2%, 82.0% and 85.7% respectively) compared to more than half (54.3%) of the nurse in Al-Rahmanya, with a statistically significance difference between them ( $p = 0.000$ ).

The same table portrays that the majority of the nurses in Damanhour, Etay El-Baroad, Abo-Homos, and Al-Rahmanya had high level of knowledge about measures to improve quality (83.9%, 87.7%, 85.7% and 84.8% respectively). Additionally, more than two thirds (67.2%) of the nurses in Damanhour and more than half (55%) of the nurses in Etay El-Baroad had poor knowledge about challenges of application of the quality standards, on the other hand, more than half (52.4%) of the nurses in Abo-Homos and less than two thirds (63.0%) of the nurses in Al-Rahmanya had a good level of knowledge, with statistically significance difference between them (p=0.000). The same table reveals that the majority of the nurses in Damanhour, Etay El-Baroad, and Al-Rahmanya (92.7%, 96.7%, and 93.5% respectively) compared to all (100.0%) nurses in Abo-Homos had good knowledge level about role of manager in quality standards application. Moreover, more than one tenth of the nurses in Damanhour and Al-Rahmanya (10.2% and 10.9% respectively) compared to minor (3.3% of the nurses in Etay El-Baroad and non (0.0%) of the nurses in Abo-Homos had a poor knowledge about the role of the nurse in the application of the quality standards.

Finally, none of the nurses in Etay El-Baroad, Abo-Homos and Al-Rahmanya and minority (3.3%) of the nurses in Damanhour had a poor total level of knowledge about quality of care. On the other hand, the majority of the nurses in Damanhour, Etay El-Baroad and Abo-Homos had a good total level of knowledge about quality care compared to less than three quarters (73.9%) of the nurses in Al-Rahmanya, with a statistically significant difference between them (p=0.003).

**Table (2): Distribution of the studied nurses according to the knowledge levels about quality of primary health care services.**

Items	Damanhour FHC(n=137)		Etahy Baroad FHC(n=122)		Abo-Homos FHC(n=42)		Al-Rahmanya FHC(n=46)		Total (n =347)		Test of significance
	No.	%	No.	%	No.	%	No.	%	No.	%	
<b>Definition of quality</b>											
- Poor	41	29.9	30	24.6	5	11.9	16	34.8	92	26.5	X <sup>2</sup> = 16.902 P= 0.010*
- Fair	13	9.5	11	9.0	3	7.1	10	21.7	37	10.7	
- Good	83	60.6	81	66.4	34	81.0	20	43.5	218	62.8	
<b>Definition of the quality's standards</b>											
- Poor	65	47.4	52	42.6	8	19.0	21	45.7	146	42.1	X <sup>2</sup> = 31.059 P= 0.000*
- Fair	4	2.9	4	3.3	1	2.4	8	17.4	17	4.9	
- Good	68	49.6	66	54.1	33	78.6	17	37.0	184	53.0	
<b>The quality standards</b>											
- Poor	22	16.1	17	13.9	7	16.7	9	19.6	55	15.9	X <sup>2</sup> = 39.815 P= 0.000*
- Fair	8	5.8	14	11.5	1	2.4	17	37.0	40	11.5	
- Good	107	78.1	91	74.5	34	81.0	20	43.5	252	72.6	
<b>Benefits of application of quality standards</b>											
- Poor	19	13.9	8	6.6	5	11.9	8	17.4	40	11.5	X <sup>2</sup> = 20.448 P= 0.002*
- Fair	13	9.5	13	10.7	1	2.4	12	26.1	39	11.2	
- Good	105	76.6	101	82.8	42	85.7	46	56.5	268	77.2	
<b>Qualifications of quality manager</b>											
- Poor	20	14.6	8	6.6	2	4.8	4	8.7	34	9.8	X <sup>2</sup> = 31.703 P= 0.000*
- Fair	9	6.6	8	6.6	1	2.4	13	28.3	31	8.9	
- Good	108	78.8	106	86.9	39	92.9	29	63.0	282	81.3	
<b>Responsibility of quality managers</b>											
- Poor	17	12.4	7	5.7	2	4.8	1	2.2	27	7.8	X <sup>2</sup> = 43.894 P= 0.000*
- Fair	1	0.7	3	2.5	0	0.0	9	19.6	13	3.7	
- Good	119	86.9	112	91.8	40	95.2	36	78.3	307	88.5	
<b>Records used in family health units/centers</b>											
- Poor	19	13.9	11	9.0	6	14.3	3	6.5	39	11.3	X <sup>2</sup> = 59.563 P= 0.000*
- Fair	4	2.9	11	9.0	0	0.0	18	39.1	33	9.5	
- Good	114	83.2	100	82.0	36	85.7	25	54.3	275	79.3	
<b>Measures to improve quality</b>											
- Poor	20	14.6	14	11.5	5	11.9	3	6.5	42	12.1	X <sup>2</sup> = 11.783 P= 0.067
- Fair	2	1.5	1	0.8	1	2.4	4	8.7	8	2.3	



- Good	115	83.9	107	87.7	36	85.7	39	84.8	297	85.6	
<b>Challenges of application of the quality's standards</b>											
- Poor	92	67.2	68	55.7	14	33.3	2	4.3	176	50.7	X <sup>2</sup> = 63.210 P= 0.000*
- Fair	16	11.7	15	12.3	6	14.3	15	32.6	52	15.0	
- Good	29	21.2	39	32.0	22	52.4	29	63.0	119	34.3	
<b>Role of the center's manager in application of the quality standards</b>											
- Poor	3	2.2	0	0.0	0	0.0	0	0.0	3	0.9	X <sup>2</sup> = 7.799 P= 0.253
- Fair	7	5.1	4	3.3	0	0.0	3	6.5	14	4.0	
- Good	127	92.7	118	96.7	42	100.0	43	93.5	330	95.1	
<b>Role of the nurse in application of the quality standards</b>											
- Poor	14	10.2	4	3.3	0	0.0	5	10.9	23	6.6	X <sup>2</sup> = 10.387 P= 0.109
- Fair	3	2.2	3	2.5	1	2.4	0	0.0	7	2.0	
- Good	120	87.6	115	94.3	41	97.6	41	89.1	317	91.4	
<b>Total Knowledge level</b>											
- Poor	6	4.4	0	0.0	0	0.0	0	0.0	6	1.7	X <sup>2</sup> = 19.433 P= 0.003*
- Fair	15	10.9	12	9.8	3	7.1	12	26.1	42	12.1	
- Good	116	84.7	110	90.2	39	92.9	34	73.9	299	86.2	

X<sup>2</sup> Chi Square Test

\* Statistically significant at p ≤ 0.05

• Nurses' perspectives levels regarding quality of primary health care services

Table (3) portrays that less than one fifth of the nurses in Etay El-Baroad and Al-Rahmanya had a high level of perceptive about quality of care (13.1% and 19.6% respectively) compared to more than one third (38.1%) of the nurses in Abo-Homos and none (0.0%) of the nurses in Damanhour with a statistically significant difference between the four districts in relation to their perspectives about the structure domain (p= 0.000).

Regarding the process domain, more than one thirds of the nurses in Etay El-Baroad and Abo-Homos had a high level of perspectives about the process (37.7% and 38.1% respectively) compared to less than half (46.0%) of the nurses in Damanhour. On the other hand, half (50.0%) of the nurses in Al-Rahmanya had a low level of perspective with a statistically significant difference between the four districts (p=0.002).

Table (3) Portrays the distribution of the studied nurses according to the levels of their perspectives about quality of primary health care services.

Items	Damanhour FHC (n=137)		Etahy El Baroad FHC (n=122)		Abo-Homos FHC (n=42)		Al-Rahmanya FHC (n=46)		Total (n =347)		Test of significance
	No.	%	No.	%	No.	%	No.	%	No.	%	
<b>Structure</b>											
- Low	62	45.3	38	31.1	3	7.1	23	50.0	126	36.3	X <sup>2</sup> = 64.090 P= 0.000*
- Moderate	75	54.7	68	55.7	23	54.8	14	30.4	180	51.9	
- High	0	0.0	16	13.1	16	38.1	9	19.6	41	11.8	
<b>Process</b>											
- Low	28	20.4	27	22.1	7	16.7	23	50.0	85	24.5	X <sup>2</sup> = 28.924 P= 0.000*
- Moderate	46	33.6	49	40.2	19	45.2	19	41.3	133	38.3	
- High	63	46.0	46	37.7	16	38.1	4	8.7	129	37.2	
<b>Outcome</b>											
- Low	22	16.1	19	15.6	7	16.7	13	28.3	61	17.6	X <sup>2</sup> = 20.543 P= 0.002*
- Moderate	46	33.6	49	40.2	18	42.9	27	58.7	140	40.3	
- High	69	50.4	54	44.3	17	40.5	6	13.0	146	42.1	

X<sup>2</sup> Chi Square Test

\* Statistically significant at p ≤ 0.05

Figure (1) represents the studied nurses' levels of their perspectives about quality of primary health care services.

Exactly half (50.0%) of the nurses in Al-Rahmanya had a low total perspective about quality care compared to 29.9% and 23.0% of the nurses in Damanhour and Etahy EL-Baroad respectively. On the other hand, more than one tenth (11.9%) of the nurses in Abo-Homos had a high perspective about quality of care, with a statistically significant difference between the four districts (p=0.000).

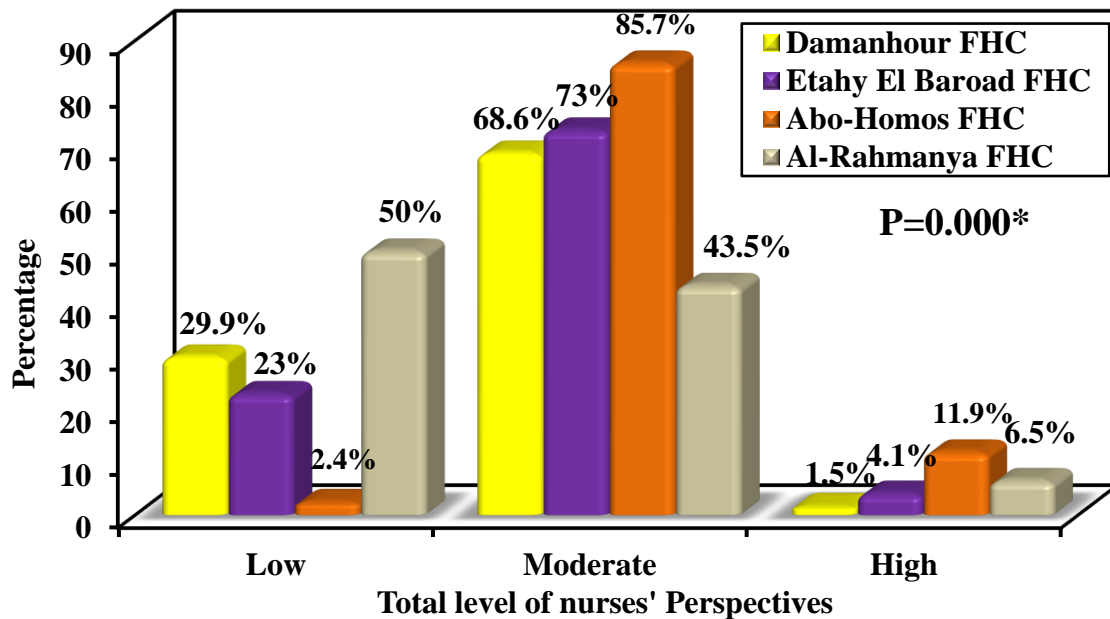


Figure (1) The total studied nurses' levels of their perspectives about quality of primary health care services.

Figure (2) The relationship between the nurses' level of knowledge about quality of primary health care services and their perspectives levels.

It was found that among nurses with low perspectives, 3.2% of them had poor knowledge about quality compared to none of those with high perspectives. While, around two thirds of the nurses with either low or high perspectives about quality had a high level of knowledge about it (66.8% and 66.7%) respectively), with a statistically significant relation between them (p=0.000).

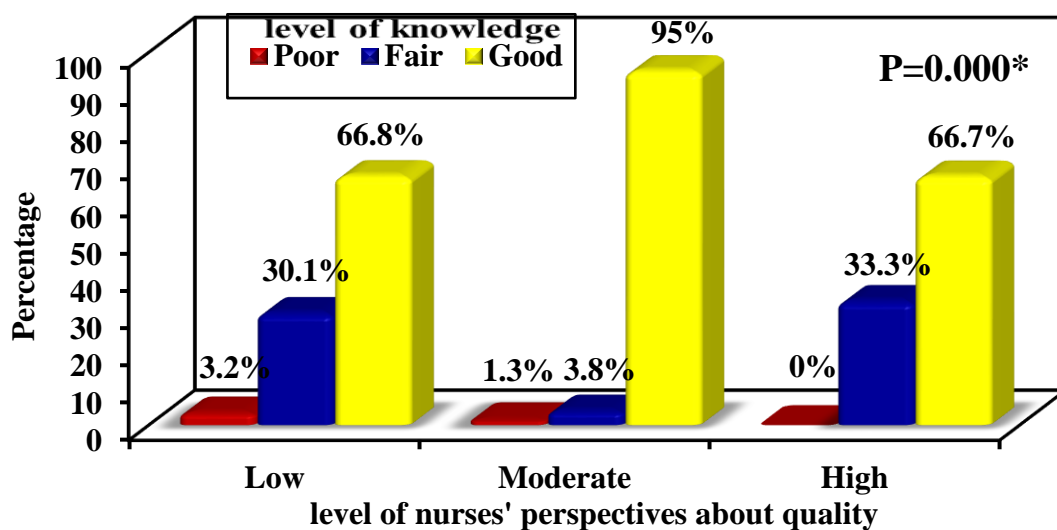


Figure (2): The relationship between the nurses' level of knowledge about quality of primary health care services and Perspectives about quality

**Table (4) The association between nurses’ knowledge about quality of PHC services and characteristics of the study sample**

It was explored using binary logistic regression analysis (Nurses' quality knowledge and perspective structured questionnaire sheet) with poor knowledge as the dependent variable. The R<sup>2</sup> value is 0.089 which means that only 8.9% of the variability in the outcome is explained by the studied characteristic in the model with overall model significance of (P= 0.054). Table (4) indicates that only one variable was found to be a predictor of poor knowledge namely nurses’ perspectives (P=0.000).

**Table (4) Predictors of nurses’ knowledge about quality of care (Regression analysis)**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	2.805	0.192		14.594	0.000
Directorate	-0.016	0.023	-0.040	-0.690	0.490
Center	0.023	0.028	0.044	0.808	0.420
Sex	-0.137	0.084	-0.089	-1.633	0.103
Age	-0.042	0.042	-0.093	-1.000	0.318
Level of education	-0.006	0.088	-0.012	-0.067	0.947
Current position	-0.034	0.094	-0.068	-0.362	0.718
Years of experience	0.010	0.034	0.027	0.283	0.777
Previous training	0.085	0.090	0.101	0.940	0.348
Number of trainings	-0.018	0.031	-0.061	-0.593	0.554
Frequency of training	-0.017	0.024	-0.067	-0.692	0.489
Nurses’ perspectives	0.200	0.043	0.251	4.618	0.000*

\* Statistically significant at p ≤ 0.05

Model Summary of nurses' knowledge predictors

R	R Square	Adjusted R Square	Std. Error of the Estimate	overall model significance
.298 <sup>a</sup>	.089	.059	.39582	P= 0.054

**Table (5) The association between nurses’ perspectives about quality care and characteristics of the study sample**

It was explored using binary logistic regression analysis (Nurses' quality knowledge and perspective structured questionnaire sheet) with poor perspectives as the dependent variable. The R<sup>2</sup> value is 0.132 which means that only 13.2% of the variability in the outcome is explained by the studied characteristic in the model with overall model significance of (P= 0.000). Table (5) indicates that three variables were found be predictors of poor perspectives namely nurses’ age (P=0.017), working place /center (P= 0.000) and nurses’ knowledge (P=0.000).

**Table (5) Predictors of nurses’ perspectives about quality of care (Regression analysis)**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.022	0.295		3.459	0.001
Directorate	0.003	0.028	0.005	0.090	0.928
Center	-0.126	0.034	-0.192	-3.710	0.000*
Sex	0.164	0.103	0.085	1.600	0.111
Age	-0.121	0.050	-0.215	-2.391	0.017*
Level of education	-0.100	0.107	-0.169	-0.934	0.351
Current position	0.146	0.115	0.231	1.268	0.206
Years of experience	0.074	0.041	0.168	1.806	0.072
Previous training	-0.149	0.110	-0.142	-1.358	0.175
Number of trainings	0.009	0.038	0.025	0.244	0.808
Frequency of training	0.035	0.029	0.111	1.178	0.240
Nurses’ knowledge	0.299	0.065	0.239	4.618	0.000*

\* Statistically significant at p ≤ 0.05

**Model Summary of nurses' perspectives predictors**

R	R Square	Adjusted R Square	Std. Error of the Estimate	overall model significance
.364 <sup>a</sup>	.132	.104	.48411	P= 0.000

**Part (II): Quality of Primary Health Care Services Evaluation Tool**

Figure (3) reveals that Etay El-Baroad had the highest mean score (124.67±6.110) followed by Al-Rahmanya (121.33±7.095), Damanhour (119.67±1.527) and finally, Abo-Homos (115.67±6.806). No significant result found between the mean score of the family health centers and structural characteristics, general infrastructure, clinics structures except family planning clinic (p=0.052).

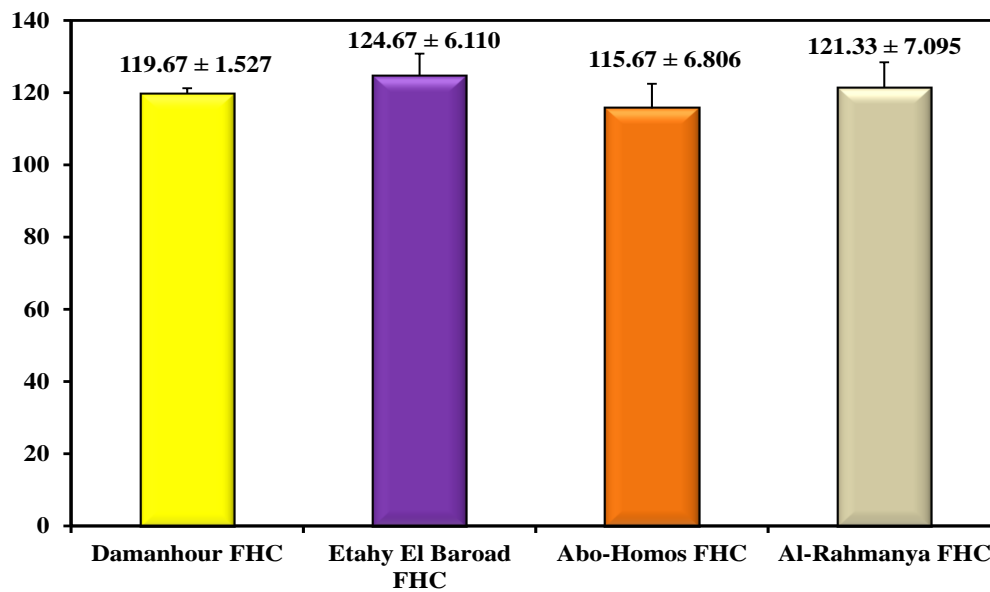


Figure (3): Total mean score Clinics' Structure

Figure (4) shows that the highest total process mean score was found among Etay El-Baroad clinics followed by Damanhour, Al-Rahmanya, and finally Abo-Homos (44.67±4.041, 44.00±1.00, 44.00±4.359 and 43.33±4.041 respectively).

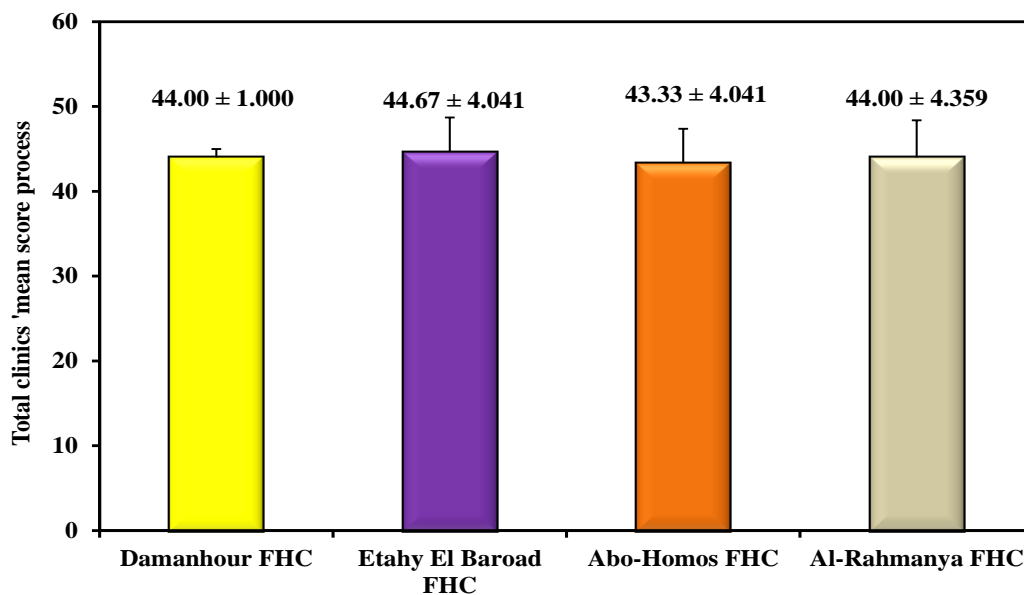


Figure (4): Total Mean Score Clinics' Process.

#### 4. DISCUSSION

Weak health systems combined with socioeconomic factors to impede coverage. Factors in addition beyond the health system influence patterns of service use and often intersect. Inadequate basic infrastructure, human resource gaps, poor quality services, and low trust in health practitioners and medical authorities remain barriers to achieving UHC. Poor people have lower coverage even for basic services such as immunization, sanitation and antenatal care. For these basic services, rural areas generally have lower coverage than urban areas.<sup>(22)</sup>

Geographic access to facilities remains a major obstacle, particularly in Africa in low- and middle-income countries. While geographic access can be particularly challenging in rural and remote areas, important and unique challenges to access are also found in cities, which will be home to two-thirds of the global population by 2030.<sup>(23)</sup>

Having limited facilities, far from where people live and work, – for example, because of inconvenient operating hours, inhospitable staff or unsafe or dysfunctional infrastructure – can deter people from seeking care altogether or delay care, with direct impact on health outcomes.<sup>(22)</sup>

Quality of care is often suboptimal to have the desired impact on health and well-being, services need to be of high quality – safe, effective and people-centered. Poor service quality can result in treatment delays, incorrect diagnoses, patient harm and poor user experiences. One way to assess quality is to examine whether health care providers make the right diagnosis and take the recommended or expected evidence-informed clinical action.<sup>(23)</sup>

Nurses' knowledge and perspectives about quality of PHC services may be affected by socio-demographic characteristics. The present study found that there was a statically significant relationship between age, sex, years of experience and level of knowledge, and nurses' perspectives.

Of the nurses who participated in the present study the majority of them were females, more than one-third were between 20 to less than 40 yrs. compared to the same percentage for those 40 to less than 50 years of age and more than half of them had more than 20 years of experience. Long years of experience could be due to their interest to work in PHC centers as there is no long shift and no critical cases; however, the work required them to help each other; also, all of them were living in the same setting of work so it is suitable for their social life. This result is contrary to Duffy et al. (2018)<sup>(24)</sup> who observed that the majority of the participants' ages ranged from 25 to 40 years.

Attendance of quality training courses is crucial for improving the awareness and acceptance of quality care programs which can lead to success of the program. Moreover, Deming who is considered as one of the main contributors of quality revolution pointed that training and retraining of employees is critical to the success of the corporation. He stated that education and training are investment in people; they help to avoid employee burnout, reenergizing employees, and give them a clear message that management considers employees to be a valuable resource.<sup>(25)</sup>

This is agreed with findings of the of the current study, it was found that nearly two thirds of the studied nurses previously received training about quality and more than half of them mentioned that the training courses they received was the main source of their knowledge about quality. In relation to nurse respondents about measures to improve quality and role of nurse in application of the quality standards, the majority of nurse respondents reported that continuing and in-service education programs as important measure to improve service quality. This is in line with Hassan et al., (2013)<sup>(26)</sup> whose study findings revealed that all health-care providers received training about quality health care. Consequently, it has an effect on the nurse's knowledge, where the majority of the nurses who were trained in quality had a good level of knowledge.

This directs the attention to the importance of participation of all staff in in-service training program related to quality. This is contradicted with findings of study conducted by Mohammed et al. (2018)<sup>(27)</sup> and Fahim et al. (2019)<sup>(28)</sup> whose findings revealed that more than two thirds of nurses have not attended any training program and their work depending on their personal abilities from the past experience.

Regarding the nurses' knowledge mean scores, the current study reported that the highest knowledge mean score was for nurses at Abo-Homose district in all items of quality for example (the definition of quality, quality standards, qualification of the quality manager). It was found that one variable was noticed to be a predictor of poor knowledge, namely nurses' perspectives. Contrary, to Hassan et al. (2013)<sup>(26)</sup> who found that half of the nurses were not aware about types of quality items. This may be due to their long time of experience in the same workplace, most of them had a secondary level of

education in nursing, well trained in applying quality nursing stander, have a qualified manager who is responsible quality application.

Regarding nurses' perspectives levels about quality application domains in primary health care services, the present study shows that half of nurses had moderate perspectives level related to the structure domain compared to more than one third had low level. While nurses' perspectives levels related to process domain, it was found that more than one third of nurses had a moderate perspective. On the other hand, exactly half of the nurses at Al-Rahmaniya Family Health Centers had low perspective level in the outcome domain. Because they felt burdened with the multiple tasks assigned to them and the hierarchical pressure to meet institutional targets, so they didn't want more tasks to improve the outcome which agreed with Costa et al., (2019).<sup>(29)</sup>

Primary health care (PHC) is where the patient's first contact with the health system occurs and comprises a range of actions which includes many dimensions, domains, and contexts. Due to these characteristics, it becomes important to evaluate and monitor the quality of primary care. It is established that primary care can lead to better health outcomes, lower costs, and greater equity in health.<sup>(30)</sup>

The present study displays the structure domain for the studied clinics in relation to the mean score of quality of primary health care services. By observation, FP clinics had significant relation with the mean score of clinics' structure quality. This is consistent with findings of the study conducted by Nasr et al. (2016)<sup>(31)</sup> who pointed out that the most of the studied FP clinics had satisfactory total mean of structure quality. Moreover, these are in agreement with Assaf, et al. (2015)<sup>(32)</sup> who investigate quality of care in family planning services at health facilities in Senegal. Thus because most of the studied FP clinics had the basic infrastructure needed for provision of quality FP services especially related to the availability of water supply, cleanliness, separate room for examination, at least one skilled staff, and wide range of FP methods.<sup>(33)</sup> This is disagreed with Sayed et al. (2018)<sup>(34)</sup>. The results of the present study were not surprising as family planning is a dominance program of the Ministry of Health (MOH) and a component of the reproductive health package & essential health care services of the Egyptian Health Sector Program. In addition, it displays the involvement of governmental and national organizations with the Ministry of health.

As defined by Donabedian, process dimension focuses on what is actually done, such as patient's procedures in seeking care and practitioner's activities while providing it. Since process indicators may help implementing better procedures and guidelines, resulting in better health care. Outcome dimension depends on the care provided, outcome indicators evaluate the result of the course of action of PHC professionals, unlike process indicators which evaluate a single aspect of care.<sup>(35)</sup>

Medicines are undoubtedly one of the weapons of mankind to fight disease and illness. Accessibility to medicines is too the fundamental right of every person. Essential medicines are those that satisfy the priority health care needs of the population. They are selected with due regard to public health relevance, evidence on efficacy and safety, and comparative cost-effectiveness. Essential medicines are intended to be always available within the context of functioning health systems in adequate amounts, in the appropriate dosage forms, with assured quality and adequate information, and at a price the individual and the community can afford.<sup>(36)</sup>

The present study reveals that the Family Health Centers had the highest process mean score related to provision of services especially for maternity care, family planning services and childcare. While the total clinics' process is unsatisfactory for essential drugs. Which is supported by the study of Amira Abdel Latif (2013)<sup>(37)</sup>, who reported that the unavailability of medicine impaired the clinics process. In many cases the medicines on the Essential Drug List are unavailable, which weakens the quality of service provided. Due to the increasing cost of medicines, the clients are now eligible to only two medicines instead of three, which also frustrates clients and add more economic burden on them. So, the selection of essential medicines is only one step towards the improvement of the quality of health care; selection needs to be followed by appropriate use. Each individual should receive the right medicine, in an adequate dose for an adequate duration, with appropriate information and follow-up treatment, and at an affordable cost.

Nurses constitute the largest human resource element in healthcare organizations and form the backbone of the health system in the public health sector and their performances have a direct effect on quality of health care, so that the country relies heavily on nurses for service delivery; their performance is critical for the successful provision of health care productivity.<sup>(38)</sup> The shortage of diverse multidisciplinary PHC teams has persisted, as the doctor–nurse ratio which limits a functional

response to the needs of the community.<sup>(39)</sup> This is in line with the current results as there were a significant relation between number of health care providers (nurses and physicians) and the FHC mean scores in quality of process domain.

In relation to clinics outcome and the mean score in quality of PHC services, finding shows that Damanhour had the highest mean score in (previous No. of births, current No. of deaths, previous No. of deaths, No. of enrolled families, No. family planning methods users, current attendance per month, pervious attendance per month, No. of physicians and nurses). Thus, because Damanhour Family Health Center is in a big city which have more focusing from the general level health directorates, and the main center for training. Also, clients were more aware about their health, highly educated and easier to access to the urban centers than the rural centers. This was supported by Hasan (2015)<sup>(40)</sup> who found that number of PHC visits per year is inversely related to satisfaction level.

## 5. CONCLUSION AND RECOMMENDATIONS

Based on the findings of the present study, it could be concluded that none of the studied family health centers in all districts studied had high total quality of care level. A significant relation was found between nurses' level of knowledge regarding quality of the PHC services and their gender, age, and frequency of training. Additionally, a significant relation was found between nurses' mean score of knowledge and their perspective levels related to quality of services and socio-demographic characteristics related to previous training and frequency of training. FP clinics had significant relation with the mean score of clinics' structure quality and had the highest process mean score related to provision of services especially for maternity care, family planning services and childcare. While the total clinics' process is unsatisfactory for essential drugs.

### Recommendations

The current study interprets the main findings of the research and introduces possible measures to improve the quality of primary health care services in all districts:

- Establish performance accountability to incentivize high-quality and high-value care
- Regular maintenance checks should be conducted every 6-12 months by one maintenance company that is contracted from the health directorate to serve certain the clinics in specific districts.
- Human Resources Policy Reform Recruitment
- Improve the performance evaluation process to involve more discussion between the staff and the supervisor.
- Specialize training courses for health care givers dependent on their assessment training needs.
- Monthly or quarterly committee meetings must be performed to discuss issues and goals of the family health center.

## REFERENCES

- [1] Kraef C, Kallestrup P. After the Astana declaration: is comprehensive primary health care set for success this time? *BMJ Glob Health* 2019; 4(6):e001871.
- [2] World Health Organization (WHO). A vision for primary health care in the 21st century: towards universal health coverage and the Sustainable Development Goals. Geneva, Switzerland: WHO; 2018.
- [3] Agarwal R, Jain P, Ghosh MS, Parihar KS. Importance of primary health care in the society. *International Journal of Health Sciences* 2017; 1(1):6-11.
- [4] Holst J. Rethinking medical training in Germany towards rural health care. *Primary Health Care* 2015; 5(194):1079–2167.
- [5] Gowshall M, Taylor-Robinson SD. The increasing prevalence of non-communicable diseases in low-middle income countries: the view from Malawi. *International journal of general medicine* 2018; 11:255-264.
- [6] Gorman A. *Historians, State and Politics in Twentieth Century Egypt: Contesting the Nation*. UK: Routledge; 2012.
- [7] Al Bahnasy RA, Mohamed OA, El-Shazly HA, Abdel-Azeem AA, Khedr RM. The successes and the challenges of Egyptian health sector Reform Program. *Menoufia Medical Journal* 2016; 29(4):979.

**International Journal of Novel Research in Healthcare and Nursing**

 Vol. 10, Issue 1, pp: (154-170), Month: January - April 2023, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com)

- [8] Bitton A, Ratcliffe HL, Veillard JH, Kress DH, Barkley S, Kimball M, et al. Primary health care as a foundation for strengthening health systems in low- and middle-income countries. *Journal of general internal medicine* 2017; 32(5):566-571.
- [9] Saleh SS, Alameddine MS, Natafji NM, Mataria A, Sabri B, Nasher J, et al. The path towards universal health coverage in the Arab uprising countries Tunisia, Egypt, Libya, and Yemen. *Lancet (London, England)* 2014; 383(9914):368-381.
- [10] Kumar R. Frequently asked questions about family medicine in India. *Journal of family medicine and primary care* 2016; 5(1):3-6.
- [11] Mohamoud G. An evaluation of the quality of service delivery in private primary care facilities in Nairobi, Kenya. Ph.D Thesis: Stellenbosch: Stellenbosch University; 2021.
- [12] World Health Organization (WHO). Report of the international conference on Primary Health Care. Geneva, Switzerland: WHO; 1978.
- [13] World Health Organization (WHO). Primary health care: transforming vision into action: operational framework. Geneva, Switzerland: WHO; 2018.
- [14] World Health Organization (WHO). The family health nurse: Context, conceptual framework and curriculum. Geneva, Switzerland: WHO; 2000.
- [15] Marcadelli S, Stievano A, Rocco G, Rowe A. Community Health Needs Assessment: An introductory guide for the family health nurse in Europe. *Journal of the American Board of Family Medicine* 2021; 34(4):849-852.
- [16] Kelpsa S. The role of the child and family health nurse in the digital era: A literature review. *Australian Journal of Child and Family Health Nursing* 2019; 16:11-18.
- [17] Ministry of Health and Population. El-Behira directorate: Information center, Distribution of Family Health Centers and Units in El- Behira Governorate. Egypt: Ministry of Health and Population; 2019.
- [18] Timmins F. Surveys and questionnaires in nursing research. *Nursing Standard* 2015; 29(42):42-50.
- [19] World Health Organization (WHO). WHO Primary Care Evaluation Tool of Regional Office for Europe. Geneva, Switzerland: WHO; 2014.
- [20] Ministry of Health and Population quality. Accreditation standards tool for family health centers. Cairo: Ministry of Health and Population; 2017.
- [21] Forsner M, Mörelius E, Hanberger L. Questionnaires to Measure Process and Structure of Quality Indicators for Pediatric Nursing. *Pediatric quality & safety* 2021; 6(1):e381.
- [22] Syed SB, Leatherman S, Mensah-Abrampah N, Neilson M, Kelley E. Improving the quality of health care across the health system. *Bulletin of the World Health Organization* 2018; 96(12):799.
- [23] Kruk ME, Gage AD, Joseph NT, Danaei G, García-Saisó S, Salomon JA. Mortality due to low-quality health systems in the universal health coverage era: a systematic analysis of amenable deaths in 137 countries. *The Lancet* 2018; 392(10160):2203-2212.
- [24] Duffy JR. Quality caring in nursing and health systems: Implications for clinicians, educators, and leaders. New York: Springer; 2018.
- [25] Ibrahim S, Kadry H. Nurses awareness regarding some quality healthcare concepts at university students' hospital in Alexandria. *Journal of High Institute of Public Health* 2011; 41(1):82-97.
- [26] Hassan M, Abo El Soud A, Abd El Wahab E, Abd El Aziz L. Health care providers awareness about quality system and its relation to quality of their performance at maternal and child health centers. Ph.D Thesis: Benha: Faculty of Nursing, Benha University; 2013.



**International Journal of Novel Research in Healthcare and Nursing**

Vol. 10, Issue 1, pp: (154-170), Month: January - April 2023, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com)

- [27] Mohammed ES, Seedhom AE, Ghazawy ER. Awareness and practice of patient rights from a patient perspective: an insight from Upper Egypt. *International Journal for Quality in Health Care* 2018; 30(2):145-151.
- [28] Fahim FN, Abd Elwahab EA, El-Guindy HA. Nursing staff perception about the quality of health-care system in primary health-care centers in Beni Suef Governorate. *Egyptian Nursing Journal* 2019; 16(3):141.
- [29] Costa M, Andrade SR, Soares CF, Pérez EIB, Tomás SC, Bernardino E. The continuity of hospital nursing care for Primary Health Care in Spain. *Revista da Escola de Enfermagem da U S P* 2019; 53:e03477.
- [30] Mansoureh Z. An empirical study on operation effectiveness in private hospital with references to critical patient care. *Ignited Minds Journal* 2018; 15(6):241-246.
- [31] Nasr E, Hassan H. Association between quality of family planning services and client's satisfaction level in maternal and child health centers in Port Said city. *Journal of Nursing Education and Practice* 2016; 6:85-99.
- [32] Assaf S, Wang W, Mallick L. Quality of care in family planning services at health facilities in Senegal. Atlanta: ICF International; 2015.
- [33] Persai D, Balu RK, Singh K, Prabhu RR, Lahoti S, Rout S, et al. Patient Satisfaction with Quality of Primary Care Health services-findings from India. *The International journal of health planning and management* 2022; 37(4):2256-2265.
- [34] Sayed S, Elgzar W, Ibrahim H. Quality of Family Planning Services in Maternal and Child Health Care Centers in Damanhour City. *International Journal of Studies in Nursing* 2018; 3:88.
- [35] Ramalho A, Castro P, Gonçalves-Pinho M, Teixeira J, Santos JV, Viana J, et al. Primary health care quality indicators: An umbrella review. *PloS one* 2019; 14(8):e0220888.
- [36] Kar SS, Pradhan HS, Mohanta GP. Concept of essential medicines and rational use in public health. *Indian Journal of Community Medicine* 2010; 35(1):10-13.
- [37] Abdel Latif AM. Improving the quality of public health services in lower income areas in Cairo, Egypt: a comparative study between the accredited and non-accredited primary health care clinics in Cairo Master Thesis: the American University in Cairo; 2013.
- [38] Abo El-Enen WK, Rizk SA, El Habashy M. Nurses' performance at the family planning clinics in Alexandria. *Alexandria Scientific Nursing Journal* 2019; 21(2):11-16.
- [39] Li X, Krumholz HM, Yip W, Cheng KK, De Maeseneer J, Meng Q, et al. Quality of primary health care in China: challenges and recommendations. *Lancet (London, England)* 2020; 395(10239):1802-1812.
- [40] Hasan MK. Power and quality of primary health care: Narratives from rural Bangladesh. Master Thesis: The University of Auckland 2015.