



TURKISH REPUBLIC OF NORTHERN CYPRUS
NEAR EAST UNIVERSITY
HEALTH SCIENCES INSTITUTE

**To Determine of Satisfaction from the Pilot Family Medicine System Implemented in The
Kurdistan Region**

By

Zana Khalid Smail

**SUPERVISOR
ASSOC. PROF. Dr. HATİCE BEBİŞ**

NICOSIA, 2020



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CONFIRMATION

To the Directorate of Health Sciences Institute;

This thesis study was accepted by the jury on 24.08.2020 as a Master's Thesis in the Nursing Program of the Near East University Institute of Health Sciences.

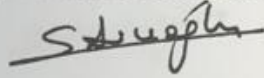
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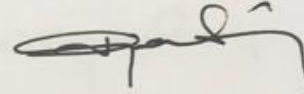
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STATEMENT (DESTATEMENT (DECLARATION))

I hereby declare that the work carried out in this thesis itself was produced and originated entirely by myself in the Department Public Health Nursing at Near East University. This thesis has not been submitted for any degree or other purposes and I certify that the intellectual content of this thesis is the products on my own work and that all the assistance received in preparing this thesis and references has been acknowledged. I obtained all the information in academic and ethical rules.

Zana Khalid Smail

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I thank everyone who helped me complete my message, and I thank all the health institutions in the Kurdistan Region that have supported me with the statistics and information necessary for the success of my message.

Through my desires and in cooperation with all my colleagues and health institutions through the family medicine system, we provide basic health services to all members of society, because a healthy individual is the basis of a healthy community.

My sincere thanks to all of my family members and all my friends for being the cause of all my successes.

I would like to thank my teachers all the way from primary school to high school, I have paved the way that led me to write this letter.

Zana Khalid Smail

ENGLISH ABSTRACT

Introduction: As a division of primary care, family medicine is an important medical discipline which can guarantee the public health of a community by providing continuous and comprehensive health care for the individuals and families across all ages, genders, diseases, and parts of the body. In this regard, family medicine system needs to be well-organized and family medicine centers should be equipped with specialized facilities and well-trained doctors, nurses, and technicians.

Objectives: The aim of the study is to investigate the lived experiences of health care personnel in the Kurdistan Region of Iraq in order to figure out the challenges and barriers to launching an efficient family medicine system and propose appropriate solutions.

Methods: A descriptive cross-sectional design was adopted to carry out the current study. It was conducted in Brayati, Shady, and Sarwaran family medicine centers located in Erbil Governorate, Kurdistan Region-Iraq over a period between February 2020 to August 2020. The study sample consisted of 125 individuals who were selected from the doctors, nurses, and other technicians working in those three centers. Required data were collected through face-to-face interviews with the participants. Descriptive and analytic statistics were utilized to analyze the collected data. For this purpose, Statistical Package for the Social Sciences (SPSS version 21) was employed.

Results: Out of the 125 participants, 50 were nurses and 47 were doctors. Most of them (44.8%) had a working experience of 6-12 months. The family medicine centers provided primary healthcare services to individuals of all age groups, genders, and educational level. Most of the recipients of healthcare services lived within 5 kilometers from the family medicine centers. As stated by the participants, interventions and monthly and yearly statistics are recorded, and notifiable diseases are reported; however, steps are not taken appropriately and statistical yearbook of the last year is not prepared. The centers had shortness regarding their referral chain and registry of clients' information, control, and follow-up. Over half of them were not satisfied with the infirmaries. The three centers were significantly different in terms of profession, satisfaction, and experience of their staff ($p=0.001$). Satisfaction had significant relationships with profession, age, and experience. The most significant barrier to family medicine system in the Kurdistan region of Iraq were respectively poor quality of medical service (28%), shortage in financing (26.4%), and poor information technology (21.6%). According to the results, the nurses played various roles and provided different services, such as disease prevention (26.0%), healthcare

education (20.0%), health care (16.0%), health counseling (16.0%), management (14.0%), and supporting (8.0%).

Conclusion: As the results revealed, the family medicine system and centers in the Kurdistan region of Iraq lack sufficient equipment and information registry system. They also lack nurses, doctors, and other technicians who are specially trained to serve in family medicine centers. In this regard, continuous training needs to be provided for the staff working in family medicine centers. Family medicine should be provided with more financial resources. They also need to be equipped with necessary technological facilities and information registry systems.

Keywords: family medicine, primary health care, family health care, family medicine education, family medicine centers

TÜRÇE ÖZET

Giriş: Birinci basamak bölümü olarak, aile hekimliği, her yaştan, cinsiyetten, hastalıktan ve vücudun bazı bölgelerinde bireylere ve ailelere sürekli ve kapsamlı sağlık hizmetleri sunarak bir toplumun halk sağlığını garanti edebilecek önemli bir tıbbi disiplindir. Bu bağlamda aile hekimliği sisteminin iyi organize edilmesi ve aile hekimliği merkezlerinin uzmanlaşmış tesisleri ve iyi eğitilmiş doktorlar, hemşireler ve teknisyenlerle donatılması gerekir.

Amaç: Çalışmanın amacı, etkili bir aile hekimliği sistemi kurmanın önündeki engelleri ve engelleri belirlemek ve uygun çözümler sunmak amacıyla Irak Kürdistan Bölgesi'ndeki sağlık personelinin yaşadığı deneyimleri araştırmaktır.

Yöntemler: Bu çalışmanın yürütülmesi için tanımlayıcı kesitsel tasarım benimsenmiştir. Erbil Valiliği, Kürdistan Bölgesi-Irak'ta bulunan Brayati, Shady ve Sarwaran aile hekimliği merkezlerinde Şubat 2020'den Ağustos 2020 arasında gerçekleştirildi. Çalışma örneği Iecus doktorlarından seçilen 125 kişiden oluşuyordu. hemşireler ve bu üç merkezde çalışan diğer teknisyenler. Gerekli veriler katılımcılar ile yüz yüze görüşülerek toplanmıştır. Toplanan verilerin analizinde tanımlayıcı ve analitik istatistikler kullanılmıştır. Bu amaçla Sosyal Bilimler için İstatistik Paketi (SPSS sürüm 21) kullanılmıştır.

Bulgular: 125 katılımcıdan 50'si hemşire, 47'si doktordu. Çoğu (% 44.8) 6-12 aylık bir çalışma deneyimine sahipti. Aile hekimliği merkezleri, tüm yaş gruplarına, cinsiyetlere ve eğitim seviyelerine sahip bireylere birinci basamak sağlık hizmetleri sunmuştur. Sağlık hizmeti alıcılarının çoğu aile hekimliği merkezlerine 5 kilometre mesafede yaşıyordu. Katılımcılar tarafından belirtildiği gibi, müdahaleler ile aylık ve yıllık istatistikler kaydedilmekte ve bildiri zorunlu hastalıklar rapor edilmektedir; ancak, adımlar uygun şekilde atılmaz ve geçen yılın istatistik yıllığı hazırlanmaz. Merkezler, sevk zincirleri ve müşterilerin bilgi, kontrol ve takibinin kayıt altına alınması konusunda kısaydı. Yarısından fazlası revirlerden memnun değildi. Üç merkez, personelinin mesleği, memnuniyeti ve deneyimi açısından önemli ölçüde farklıydı ($p = 0.001$). Memnuniyetin meslek, yaş ve deneyim ile anlamlı ilişkileri vardı. Irak Kürdistan bölgesindeki aile hekimliği sistemine önündeki en önemli engel sırasıyla yetersiz tıbbi hizmet kalitesi (% 28), finansman sıkıntısı (% 26.4) ve zayıf bilgi teknolojisi (% 21.6) idi. Sonuçlara göre, hemşireler çeşitli roller oynadılar ve farklı hizmetler sundular gibi hastalıkların önlenmesi (%26.0), sağlık eğitimi (% 20.0), sağlık hizmeti (% 16.0), sağlık danışmanlığı (% 16.0), yönetim (% 14.0) ve destek (% 8.0).

Sonuç: Sonuçların ortaya çıkardığı gibi, Irak Kürdistan bölgesindeki aile hekimliği sistemi ve merkezlerinde yeterli donanım ve bilgi kayıt sistemi bulunmamaktadır. Ayrıca, aile hekimliği

merkezlerinde hizmet vermek üzere özel olarak eğitilmiş hemşireler, doktorlar ve diğer teknisyenlerden yoksundurlar. Bu bağlamda, aile hekimliği merkezlerinde çalışan personele sürekli eğitim verilmesi gerekmektedir. Aile hekimliği daha fazla finansal kaynakla sağlanmalıdır. Ayrıca gerekli teknolojik tesisler ve bilgi kayıt sistemleri ile donatılmış olmaları gerekmektedir. **Anahtar Kelimeler:** aile hekimliği, birinci basamak sağlık hizmeti, aile sağlığı bakımı, aile hekimliği eğitimi, aile hekimliği merkezleri İçindekiler.

Anahtar Kelimeler: aile hekimliği, birinci basamak sağlık hizmeti, aile sağlığı bakımı, aile hekimliği eğitimi, aile hekimliği merkezleri

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ABBREVIATIONS

AED	: Automated External Defibrillator
FD	: Family Doctors
FM	: Family medicine
GP	: General Practitioner
KRG	: Kurdistan Regional Government
MOH	: Ministry of Health
PHC	: Primary HealthCare
UK	: United Kingdom
WHO	: World Health Organization
WONCA	: World Organization of Family Doctors

1. INTRODUCTION

1.1. Problem definition

Family medicine (FM) is referred to as a significant medical discipline all over the world. The family is defined as the smallest social unit to which everyone belongs. As a specific discipline, family medicine (FM) focuses on family and deals with medical practice at the level of the family. Family medicine is also referred to as the interface between community and individual medicine. Therefore, the general practitioner (GP) is required to be equipped with family medicine skills. In this regard, countries all over the world have developed course content for training family medicine (Demarzo et al, 2010; Moosa et al, 2013).

Family medicine is a division of primary care that provides continuous and comprehensive health care for the individual and family across all ages, genders, diseases, and parts of the body (ABFM, 2019). It is based on knowledge of the patient in the context of the family and the community, emphasizing health promotion and disease prevention (AAFP, 2008). Concern for family health and medicine dates back to the early 1930s and 40s in the United States. In February 1969, family medicine (which was known as family practice at that time) was recognized as a distinct specialty in the U.S (Pisacano, 2019). Family medicine is significant for 5 reasons. First, family doctors follow your life cycle. Second, they know your personal and family history. Third, family doctors treat more than you think. Fourth, when you need a specialist, they help find the right one. And finally, they can improve lives and save money. It has also been indicated that family doctors (FD) play an essential role in promoting and maintaining primary healthcare (PHC). The first step in developing and implementing an efficient family system is training and preparing family practitioners or family doctors in medicine universities (Talbot et al, 2009; Abdulla, 2013).

In different countries in the world, the scope and nature of family medicine are different remarkably. Family medicine is faced with several problems and challenges, such as variability of standards and recognition, incomplete understanding of roles, and limited capacity. These challenges and issues might be tackled through system-wide support, flexible training methods, changes in pedagogy, collaboration, and technology (Arya et al, 2017).

It is necessary to develop and implement a family medicine system in the Kurdistan Region because of long lines inside and outside the offices of different doctors with different specialties because the patients cannot easily find the appropriate specialist, spending a lot of time and money in the search for right specialists, and unnecessary reference to specialist when the problem can be solved by a GP. In this regard, the following are some solutions that are proposed to solve the

problem of lack of an advanced family medicine system in the Kurdistan Region (Nazar et al, 2012; Arya et al, 2017):

- Increasing the number of family doctors according to the population of the Kurdistan Region, valuing the family doctors, and enhancing their salary
- Starting a society specific to family doctors in order to develop and promote the profession based on the well-accepted global practices and the ones advised by the World Health Organization
- Considering family medicine in the programs of master's studies held in the Kurdistan Region in order to make the profession more research-based and up-to-date
- Providing general practitioners with training courses so they can work as family doctors
- Converting and changing the current medical centers and clinics in order to make them appropriate places to practice family medicine
- Making necessary coordination with different medical and health specialties and sectors so that they can work together efficiently in this regard
- Establishing family medicine centers according to the number of people residing in each region
- Launching a special information system for family medicine
- Raising public awareness of the importance of family medicine

Anyway, in order to decrease the medical costs, provide faster better medical and health care to people, and save their time, it is highly necessary to develop an advanced family medicine system in the Kurdistan Region. And this system can be developed and implemented following sufficient coordination and cooperation among the Council of Ministers, Ministry of Health, Ministry of Higher Education, Ministry of Finance, and Public Health Directorate (Shabila et al, 2012 Moore et al, 2014).

1.2. Aim of the study

The main objective of the present study is to investigate the lived experiences of health care personnel in the Kurdistan Region of Iraq in order to figure out the challenges and barriers to launching an efficient family medicine system and propose appropriate solutions.

The research questions are as follows:

- What are the challenges and barriers to developing an efficient family medicine system?
- What are the challenges and barriers to implementing an efficient family medicine system?
- What role do members of parliament, ministry of health, general directorate, physician, nurses and other health workers play in developing and implementing an efficient family medicine system?

2. BACKGROUND OF THE STUDY

2.1. Family medicine system

Cultural, political, economic, and social development of human societies is remarkably dependent on their health because once people of a society are healthy, they can participate more efficiently in economic and social activities (Jannati et al, 2010). People living in rural and urban areas all over the world are provided with healthcare services through family medicine facilities which have facilitated provision of such services to the entire population globally (Vafaei et al, 2014). Family doctors are those medical specialists who provide comprehensive ongoing health services for family members and people of all genders and ages and with different diseases (Khayyati et al, 2011). As shown by research, there have been many reforms in primary health care; however, desirable outcome has not achieved yet (Takian et al, 2011).

According to research, some patients have not been quite satisfied with programs provided and managed by family physician (FP). The reason for their dissatisfaction might be sought in the fact that there are numerous challenges in family physician (FP) program. These problems include some doctors are not quite willing to deliver healthcare services in rural areas, some doctors have not received sufficient training in family medicine, and there are shortages regarding family medicine personnel. Other reasons include legal medical issues, patients' high expectations, lack of laboratory resources and tests, poor access to specialists, specialists' failure to cooperate, inequity of incomes, heavy workloads, limited budget, and time limitations (Suki et al, 2011; Van Der Voort et al, 2012).

2.1.1. Role and history of family medicine

In the 1960s, family medicine was first started in Britain and Canada. In 1969, family medicine in the US was started and considered as a specialty different from general practice which required training at postgraduate level. In the Netherlands, Denmark, and the United Kingdom (UK), someone who has finished postgraduate training in family medicine and mainly works in an outpatient setting is called general practitioner; however, this term in other parts of the world is regarded as a graduate of a medical school who starts clinical practice with no need for more training after graduation. In the US and Canada, family medicine is committed to providing lifelong healthcare services. In comparison with the UK and Canada, family doctors in the US work less as gatekeepers (Demarzo et al, 2010; Flinkenflögel et al, 2014).

2.1.2 Family medicine training

Regarding postgraduate training, Canada has the shortest period of 2 years, while it takes 3 years in the US. The period of such programs ranges from 3 years in the UK to 5 years in Denmark. Since there is generally free movement of labor across borders throughout Europe, European countries have tried to standardize training and qualifications of generalist physicians (Kumar, 2012).

2.1.3. Future challenges and opportunities

In these countries, there has been rising realization that decentralizing the training for primary care physicians is vitally important in order to develop specialized skills and retain doctors in regions of high need. A “distributed learning” model is used in order to establish family medicine training in Canadian communities; however, a new rural, remote specialty with its own board has been promoted in Australia (ACRRM, 2015). In-service training in remote areas of Norway has been utilized as a strategy to encourage the retention of doctors (Straume, 2010).

2.2. A global picture of family medicine

As a clinical and academic discipline, family medicine (FM) puts emphasis on providing contextualized, coordinated, comprehensive, continuous, and primary healthcare (PHC) services for communities, families, and individuals. All spiritual, cultural, socio-economic, psychological, and biological parameters are taken into account in FM, and it is not restricted by disease, system, organ, gender, or age. Through FM, health education and prevention are incorporated within the framework of clinical care. As suggested by studies, healthcare systems of countries that have strong primary health care (PHC) are more cost-effective, leading to a reduction in health inequalities and increase in healthier populations (Kidd, 2013; Vincent et al, 2019).

FM is supported by numerous organizations all over the world, including the World Health Organization (WHO), which highlighted the fact that the health system is remarkably dependent on PHC, and the World Organization of Family Doctors (WONCA), which believes that improving FM can lead to outstanding improvement in the quality of life of the people all over the world (GFD, 2017). As the international center of collaboration between FM partners, the College of Family Physicians of Canada’s Besroure Centre attempts to promote FM globally (Rouleau et al, 2015). Because FM is almost a new discipline in a large number of countries and although it is highly supported, it is still associated with many basic challenges which are related to the fact that its scope varies and its practice is associated with the heterogeneity in different contexts all over the world (Arya et al, 2017a). In order to promote FM globally, motivations and professional experiences of FM specialists need to be identified. Moreover, appropriate strategies like

engendering pride among FM colleagues, engagement with institutions and non-FM peers, and student recruitment need to be taken into account (Arya et al, 2017 b).

2.3. The need for family medicine

The World Organization of Family Doctors (WONCA) employs strategies like a family medicine programs so as to offer person-centered, coordinated, comprehensive, and accessible healthcare services to all individuals in order to ultimately provide universal health coverage (UHC) all over the world. In order to make sure that future family doctors have the skills and expertise to deliver this care, young students need to be provided with appropriate training. In this regard, WONCA has devised a number of tools to assist this education process. The late great Professor Barbara Starfield of Johns Hopkins School of Public Health has provided compelling evidence and reasons which used to clarify the point that there should be great emphasis on PHC in health systems all over the world. She highlight the importance of PHC because it

- reduces the cost of healthcare services,
- promotes health by facilitating access to more proper healthcare services,
- enhances patient satisfaction,
- reduces prescribing, and
- decreases the health inequities observed in some communities (Kidd, 2013).

In addition, more cost-effective and clinically effective healthcare services can be provided by health systems which depend of effective primary care and are equipped with highly trained generalist physicians. As postulated by WHO and endorsed by WONCA, in order for family doctors to provide high-quality primary healthcare services, they need to be well-trained and educated and equipped with required specialized competencies (Garth, 2016).

2.4. Family medicine challenges in the Kurdistan region of Iraq

Undoubtedly the quality of the health care system of a country depends on the efficiency of its primary health care system. Powerful primary health care services certainly are the cornerstone of a prosperous health care system. The Family Medicine (FM) approach to Primary Health Care (PHC) is useful and cost-effective to patients and country (Nguyen et al, 2019). Indeed, the “gatekeepers” of PHC systems are Family doctors. Family doctors on the average are capable of managing 85% of health problems of families efficiently (VMH, 2013; VMH, 2016). Family doctors have unique skills, attitudes, and information, which characterize them to provide constant, comprehensive healthcare services, health maintenance, and preventive facilities to all family members regardless of their sex, age, or type of problem. Since family doctors have a proper background and are connected with family members, they can be best options to refer

individuals to with any kind of health problems. They can also provide individuals with health-related consultation (Khalid et al, 2019).

In Iraq, primary health care services are delivered through a network of about 1900 PHC centers. Lately, efforts were made to advance the practice of primary health care to include the family health model with WHO support (Al-Jumaily and Al-Lami, 2010). Currently, in Iraq, including Kurdistan region, medical graduates are undergoing one year of obligatory work in PHC in urban or rural areas following two years of rotation in general health settings and emergency hospitals after that they are either becoming general practitioners or go into residency training where they prefer or approve. As a medical specialty and as a career option, FM in the Kurdistan region does not have a stabilized situation in the region. Those medical graduates who choose FM have not sufficient understanding level of this discipline and face some difficulties (Shabila et al, 2012).

The shortage of family doctors in the region results in difficult access to healthcare services, causes doctors to overwork, and forces patients to wait longer. A large number of patients visit general hospitals, resulting in cost and burden on the health care system, which can be considered as a part of the problem of maintaining the quality of health care and suitable staffing in primary healthcare units. These problems can be resolved through FM. Improvement of the PHC system in the region has faced serious issues due to the inadequate number of family doctors (Moore et al, 2014). One of the biggest decisions for medical graduates to make is choosing a specialty. On a personal level, it defines lifetime career achievements and for the community, it has direct impacts on the outcome of public health programs (Martin & Evans, 2015). Numerous factors affect the limited power of FM to attract more attention. These factors can include cultural and social values, personal interest, special characteristics, and medical curricula. There has been no investigation into perception of medical graduates in the Kurdistan region towards FM. In this regard, it is significant to understanding their perception towards FM in order to develop strategies that might encourage more students to enter into the FM specialty (Moore et al, 2014; WHO, 2016).

2.5. Enhancement of family medicine

Based on the researches carried out by AlKot et al (2015), there are several ways for enhancement of FM as a fundamental key for achieving the advanced medical healthcare system. These ways are mentioned below:

- Present and future medical physicians and students should be familiarized with family medicine during the early years of their education or postgraduate training. They need to be informed about the societies' need for family medicine which includes curative and

preventive services, and its ultimate effect on increased life expectancy and quality of delivered healthcare services (BRFSS, 2010).

- At each medical and nursing school (or at least one in each governorate), a senior faculty position for family medicine should be established in order to supervise and monitor research, mentorship, training, and practice of primary care-oriented community medicine. In this regard, senior physicians and nurses ((preferably M.D.-Ph.D. and doctoral level) with formal training and experience in family medicine, community medicine, or other related nursing/medical specialty fields need to be considered for the position (BRFSS, 2010). The responsibilities of the senior faculty position include:
 - Deciding on and providing budget for research and investigation into healthcare services pertinent to nursing or medicine,
 - Employing these positions to devise and provide public health and medical training programs, and
 - Assigning community/family faculty in medicine and nursing schools in order not only to provide the specific expertise needed for rural health training and education but also to promote the visibility of rural health care and provide students with a role model (Palu, 2010; Reid et al, 2010).
- Physicians and nurses should be encouraged to specialize in community or family nursing or medicine. In this regard, a range of motivations can be taken into account, including professional recognition, professional development opportunities, subsidized access to medical textbooks and journals, subsidized housing and child education, and financial bonuses (HMN, 2008; Moore et al, 2014).
- A grant program should be established for health staff working in rural areas in order to support and provide them with online training and potentially degree training of varying lengths (e.g., 1–36 months) (Moore et al, 2014).

2.6. Strengths and limitations of a family physician (FP)

Different sets of skills and knowledge might be required for family physicians (FP) practicing in different parts of the world in order to meet the needs of the areas and societies where they work and the requirements of the professional entities with which they are registered. Although these differences are significant, it is quite evident that the basic principles of FM hold regardless of one's location (Shabila et al, 2012).

Family medicine is a clinical discipline on the basis of synthesizing skills and knowledge from behavioral sciences including anthropology and psychology, public health sciences, and clinical disciplines. Its uniqueness is related to combination and utilization of these disciplines in order to

provide healthcare services to the community, family members, and other individual patients in clinical settings. Family practitioner (FP) refers to is a medical graduate who gives continuing, personal, primary care to families and individuals regardless of their illness, sex, or age. Such doctors have prolonged contact with their clients, which gives them various opportunities to collect information at a speed suitable to each patient and establish a trustful relationship which can be of professional utilization (Krzton et al, 2013; Neil et al, 2017).

Similar to other academic clinical disciplines, FM possesses intellectually rigorous training, an active area of research, a unique field of action, and specific body of knowledge. The WHO and WONCA have collaborated and successfully enhanced FM approach and strategies in developing areas all over the world. Following, November 1994 WHO/WONCA conference, FM was recognized as a discipline to be educated in all medical schools. Provision of personalized, coordinated, continuous, and comprehensive healthcare services is the responsibility of family practitioners whose role is pivotal and is regarded significant in the optimal use of health resources. As demonstrated by scientific research, family doctor-based services are cost-effective (Macinko & Harris, 2015; Fuentes et al, 2016).

Family practice is a community- and patient-centered clinical method. It is highly dependent on doctor-patient relationship in a way that the FP plays a role beyond a mere “doctor” to the family and patients. Better understanding of the patients and their illness is assisted by the development of such doctor-patient relationships. Quality affordable health care and solutions to common illnesses can be provided by an FP. To be more successful, they need to obtain the patients and families’ trust. This practice does not require costly infrastructure or resources. A variety of options exist in practice settings of family medicine. Factors such as age, sex, or symptoms do not restrict an FP. FPs can be educators at the same time because FM has preventive aspects, too. FPs can also be coordinators and leaders of medical teams (Zohreh et al, 2016).

In spite of the fact that family practice has some strengths, FPs are associated with some limitations. When referring to their FP, patients have undifferentiated and ambiguous symptoms without any clear diagnosis. As a result, there should be exploration into all possibilities, and various dimensions need to be taken into account and red flags should be regarded. As the first contact doctors, FP undergo a lot of anger, concerns, and fears of families and patients. Restricted available resources and access to technology are the characteristics of most family practice settings; therefore, FPs are usually faced with the problem of maintaining health records. FPs have various responsibilities, including research, clinical governance, teaching, and service delivery, which are also considered as different staged of FM development in various parts of the world (Lankarani et al, 2010; Atef et al, 2014).

2.7. Enhancement of professional qualifications

Conducting training programs and appropriate education can lead to enhancement and improvement of professional qualifications. Every healthcare system depends on a well-trained workforce. Health outcomes can be dramatically influence by both the number and the quality of health workers whose decisions determine whether resources are utilized effectively and efficiently or not. As shown by research, properly trained and motivated members of a workforce can make the best use of available resources (Majdzadeh, 2012).

The educational program recommended by Straume et al (2010) consists of practical experience that allows clinicians to master 5 pivotal competencies, including use of informatics, use of quality improvement, use of evidence-based practice, capacity to work in interdisciplinary teams, and patient-centered care.

Moreover, Flinkenflogel et al (2014) presented some specific interventions in order to improve professional training and education, as follows:

- An executive professional committee should be established in order to develop and monitor management of the supply of medical staff to meet forecasted needs, recruitment of students across the medical professions, licensing and recertification standards, and professional training and education,
- Nursing and medical students should be recruited from rural areas in order to attract professionals to provide more permanent rural healthcare services,
- Primary health care needs to be included in the curricula of nursing and medical schools,
- By providing family physicians with preferential motivations for rural service and professional development opportunities during their year of obligatory medical service in primary care centers, their experience of general practice should be improved,
- The profile of family medicine should be enhance as a foundation for medical education and modern medical care,
- Primary health care should be included in the clinical rotations of nursing and medical schools,
- Training in practical clinical skills should be promoted during all post-graduate training, rural rotation year, internship, and nursing and medical school training,
- New nursing curriculum and training needs to be completely redesigned and implemented in each level of the Kurdistan Regional Government's (KRG) nurse training (i.e. institute, college, and university),

- A mandatory continuing education system should be developed and implemented for pharmacy, dental, nursing, and medical professionals,
- A system for revalidation and licensing should be devised and implemented for medical professionals, and
- Training needs to be enhanced, and a strong career track should be created for preventive medicine specialists.

All of the abovementioned interventions are all potentially valuable ways to promote professional qualifications. However, the first four may be the most suitable near-term priorities due to their significance and feasibility (Straume et al, 2010; Flinkenflogel et al, 2014).

2.8. The health workforce in Kurdistan Region

As demonstrated by many studies, health outcomes are highly dependent on the qualifications and size of a country's health workforce. Strategic investments and careful planning in education designed to address the country's key health system priorities are required in order to prepare the healthcare workforce, including low- and mid-level health workers, nurses, and doctors. After the workforce are trained well, they should be properly managed, which means that clinical skills should be monitored, maintained, and updated) (Nazar et al, 2012). To achieve these objectives, motivations and policies are required. A long tradition of excellence is the characteristics of medical training and services in Iraq. Some of Iraq's best physicians have recently migrated to the Kurdistan Region. During Saddam Hussein's regime, the KRG health system underwent significant erosion; however, since 1991, the situation has begun to gradually stabilize. Although the present healthcare workforce has outstanding strengths, there are still significant areas which need improvement in terms of qualifications and size. For instance, there are fewer physicians per capita in the Kurdistan Region compared to many other countries in the region. In developing areas, physician shortages involve hours worked, distribution (shortages are particularly pronounced in rural areas), numbers, competencies, and training (VMH, 2010).

Public sector ambulatory care in the Kurdistan Region depends almost merely on the obligatory one-year service of junior general-practice physicians following their completion of one or two years of post-graduate clinical (residency) training. This year of obligatory clinic service is not itself regarded as a year of formal clinical training (VMH, 2010). During this year, no supervision, mentorship, or other professional development support are provided to these physicians, and they have restricted access to professional resources like professional journals or the Internet. Virtually, all of them deliver clinic services in the morning and examine private patients in the afternoon. All physicians that finish their clinical training have guaranteed government jobs and pension;

however, they are paid relatively meager salaries by the government for their service in the public sector, while they make more money from seeing private patients in the afternoon (Shabila et al, 2010; VMH, 2010).

According to the health authorities of the KRG, nursing profession has numerous critical problems. There are more nurses per capita in the Kurdistan Region than in some countries in the region, but fewer than in some other countries. However, according to the Minister of Health, the number of nurses in Kurdistan is not a critical problem, but the problem is related to their competencies, qualifications, and distribution across all level. As stated by the Minister of Health, there are particular concerns about an absence of defined responsibilities and duties and an absence of defined nursing competencies, which result in inefficient employment of nurses in clinical care (Tawfik & Khoshnaw, 2010; Quinn, 2011).

However, according to the study carried out by Shabila et al (2012), two of the most significant strategies to improve the healthcare workforce in Kurdistan include promoting professional qualifications through training and education and improving the performance and distribution of the healthcare workforce by adopting specific human resource management interventions.

2.9. Health sector reform in the Kurdistan Region

Since 2010, the RAND Corporation has cooperated with the Ministry of Planning of the Kurdistan Regional Government and the Ministry of Health in order to devise and implement appropriate policies and strategies to improve the region's healthcare system through development of analytical tools, planning, and analysis. In their study, Saeid et al (2017) put emphasis on devising and using a primary healthcare management information system as a health financing reform with unique focus on policy modification choices to resolve the problem physicians who work in both public and private settings; and hospital patient safety training within the context of health quality improvement (Saeid et al, 2017). Furthermore, based on the results of the study conducted by Ross et al (2018), it could be seen that some major primary healthcare centers provide services to too many people, while most sub-centers serve too few people. In addition, there uneven staffing of pharmacists, dentists, nurses, and physicians across the region. They also identified centers in which X-ray, laboratories, and/or other equipment needed to be replaced or repaired and the users needed to be trained or retrained (Ross et al, 2018).

2.10. Improvement of health workforce performance

A problem which is not unique to Kurdistan but most countries are faced with is recruiting and retaining healthcare workers, and this problem has been focused on by numerous research studies. As documented by the WHO, several factors have remarkable effect on the choices of midwives,

nurses, and doctors to work in rural areas. Some of these factors seem to be attractive for the workers, including a more stimulating environment for worker and family, better supervision, better living and working conditions, better income and allowances, and better employment opportunities or career prospects. However, some other factors like work overload, inadequate availability of employment for the worker's spouse, poor access to education for the worker's children, poor working and living conditions, poor socioeconomic environment and poor job security discourage healthcare workers from rural assignments (Melinda et al, 2014).

In their report, Moosa et al (2013) suggested some specific interventions in order to improve the management of healthcare workforce, including:

- Developing, implementing, and monitoring needed qualifications and job descriptions for professional personnel at all related levels,
- Devising a plan to distribute the workforce on the basis of standards that are specified in law for each sort of healthcare facility,
- Specifying and implementing supportive and systematic supervision for nurses, doctors, and other health specialists serving in primary healthcare centers, particularly in remote rural areas,
- Offering suitable motives in order to attract nursing and medical personnel to serve and remain in remote rural regions,
- Increasing opportunities for online human resource management, such as applications for education, licensure, placement, training, study, and relevant documentation, and
- Adopting and implementing strategies to decrease fraudulent private medical practice by unauthorized staff (e.g., medical assistants who advertise themselves as physicians and provide specialized services).

Utilizing these interventions can lead to improvement in the management of the healthcare workforce. However, their feasibility in certain areas and settings needs to be checked before being implemented (Moosa et al, 2013; Melinda et al, 2014).

2.11. Common healthcare financing systems

In any country, the healthcare financing system is a vitally significant element of the healthcare system because it can capacitate all other related parts. Through the policies and plans of the financing system, required resources can be devoted so as to provide all segments of the society with efficient and quality healthcare services. A country's basic cultural and economic values can also be reflected by the financing system (Melinda et al, 2014).

The present healthcare financing system of the Kurdistan Region is mainly a public budget system which covers all Iraqis, and a broad range of primary healthcare centers, hospitals, and other medical care centers. Public budgets (KRG, governorates, or Baghdad) are used to pay for most public services, while individuals pay for the services provided by private physicians and hospitals. In theory, both the public and private health care sectors are regulated by the government. Moreover, the system provides few motives for cost control, quality, or efficiency (Melinda et al, 2014).

Currently, the Kurdistan Region lacks sophisticated managerial skills and information technology (IT) systems that are needed for successful operation of more management-intensive systems like national health plans or social insurance. Before the KRG can successfully start reforms, these requirements need to be actualized and met. Moreover, the Kurdistan Region is rapidly developing; therefore, in the near future, it is likely to take further steps toward developing health financing systems which are not mainly budget-driven. Wise choices and careful planning can help the Kurdistan Region achieve the health outcomes of much richer countries more cost-effectively (Mishari et al, 2014; Zohreh et al, 2016).

3. METHODOLOGY

3.1. Study Design

In order to carry out the present study, a descriptive-cross sectional design was used.

3.2. Study setting

The study was carried out in Brayati, Shady, and Sarwaran family medicine centers located in Erbil Governorate, Kurdistan Region-Iraq from February 2020 to August 2020. These two centers are active family medicine centers in Erbil Governorate. They provide specialized family medicine services to local people and those coming from surrounding cities and towns. They are manned with physician and nurses who are particularly trained to provide family medicine healthcare services.

3.3. Sample selection

The study sample consisted of 125 individuals, including 43 nurses, 6 gynecologists, 7 midwives, 17 general practitioners (GP), 7 dentists, 13 pharmacists, 9 laboratory assistants, 10 management staff, 4 family physicians, 4 biologists, 2 chemistry specialists, 2 cleaners, and 1 pharmacy assistant who were working in Brayati, Sarwaran, and Shady family medicine centers during the study period. For this purpose, full scale method was employed as the sampling method.

3.4. Study tools

Required data in the present study were gathered through a researcher-designed questionnaire (See Appendix 1) which consisted of 132 items aimed at collecting information about the respondents' health unit, the name and address of the infirmary, faculty of graduation, date of employment start, and so forth. The items were of two types: open-ended and multiple-choice. The validity and reliability of the questionnaire and the comprehensibility of the questions were checked by seeking some field experts' views and making required modifications.

3.5. Data collection

In order to gather required data, a researcher-designed questionnaire was used. The questionnaires were distributed among the participants, and they completed them in face-to-face interview method. The respondents were allowed to take the questionnaires home with themselves, so that they would have sufficient time to respond to the questions.

3.6. Ethical considerations

Ethical consideration were taken into account by obtaining ethical approval from the Near East University Scientific Researches and Ethics Committee (YDU/2020/81-1087) and Ministry of Health-Erbil (13.01.2020/595). Furthermore, the researcher introduced himself to the participants and provided them with explanations about the research aims and duration. Afterwards and before distributing the questionnaires, the participants' written consent was obtained, and they were assured that the obtained information would be treated as strictly confidential as possible.

3.7. Data analysis

The SPSS 21.0 package program was used in the study in order to analyze the data and compare the three family healthcare centers. Descriptive statistical analysis were performed for sociodemographic and centers-related features. In terms of these features, chi-squared test was used for consecutive data and Mann–Whitney U-test was used for continuous data to determine whether there was a significant difference between the groups. Student t-tests were used for those with normal distribution and Mann–Whitney U-test was used for those without normal distribution in the independent groups to determine whether there was a significant difference between groups in terms of the satisfaction scale point averages.

A p-value of <0.05 was considered as significant for all tests.

4. RESULTS

Table 4.1. Demographic characteristics of the participants (n=125)

Items	Frequency (n)	Percentage (%)	
Locations or region	Brayati	29	23.2
	Shady	50	40.0
	Sarwaran	46	36.8
Professions	Nurse	50	40.0
	Doctor (dentist, etc.)	47	37.6
	Technicians (Lab etc.)	28	22.4
Duration working at her current position	< 6 months	27	21.6
	6-12 months	56	44.8
	13-24 months	18	14.4
	> 24 month	24	19.2
Marital status	Married	45	36.0
	Single	56	44.8
	Widow/divorced	24	19.2

locations or region

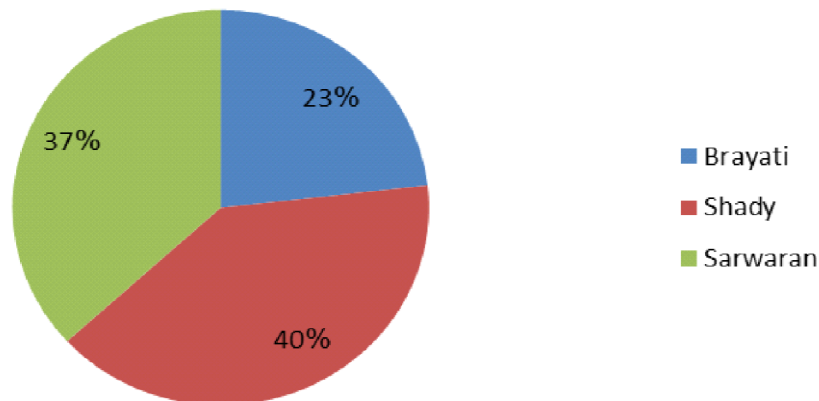
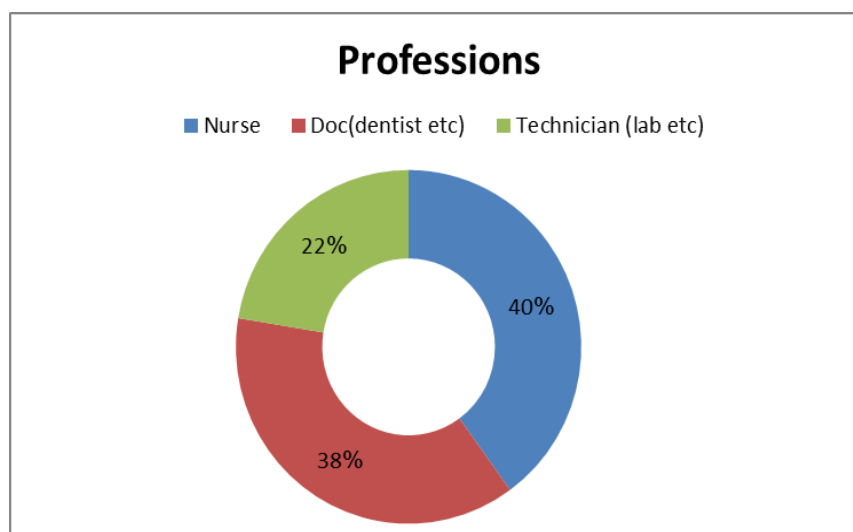


Fig1: Location or region

According to the collected demographic data, %40 of the participants (n=50) were working in Shady family medicine center, n=46 in Sarwaran family medicine center, and n=29 in Brayati family medicine center. Also, most of the participants were nurses (n=50), followed by doctors (i.e. dentists, gynecologists, GPs, family doctors, etc.) (n=47), and other technicians (i.e. lab technicians) (n=28). Regarding their working duration, most of them had been working in their current position for 6-12 months (44.8%), followed by less than 6 months (21.6%). Fifty-six participants were single, 45 were married, and 24 were widowed/divorced (See Table 4.1).

Table 4.2. Characteristics of the population served by the infirmary (n=125)

Items	Frequency (n)	Percentage (%)
Total number of the population served by the infirmary		
	48000.00	30
	52500.00	46
	60000.00	49
Population served by the infirmary according to their status		
	Registered members	61
	Military servant civil	36
	Ordinary	28
Population served by the infirmary according to age groups		
	18-28	25
	29-39	16
	40-50	64
	> 50 + Unknown	20
Population served by the infirmary according to the education level		
	Illiterate	2
	Primary	3
	Secondary	2
	High school	4
	I don't know	114
Distance between population receiving service from your infirmary to the infirmary/km		
	4.00	18
	5.00	60
	6.00	1
	8.00	30
	10.00	16



Figuer2: Professions

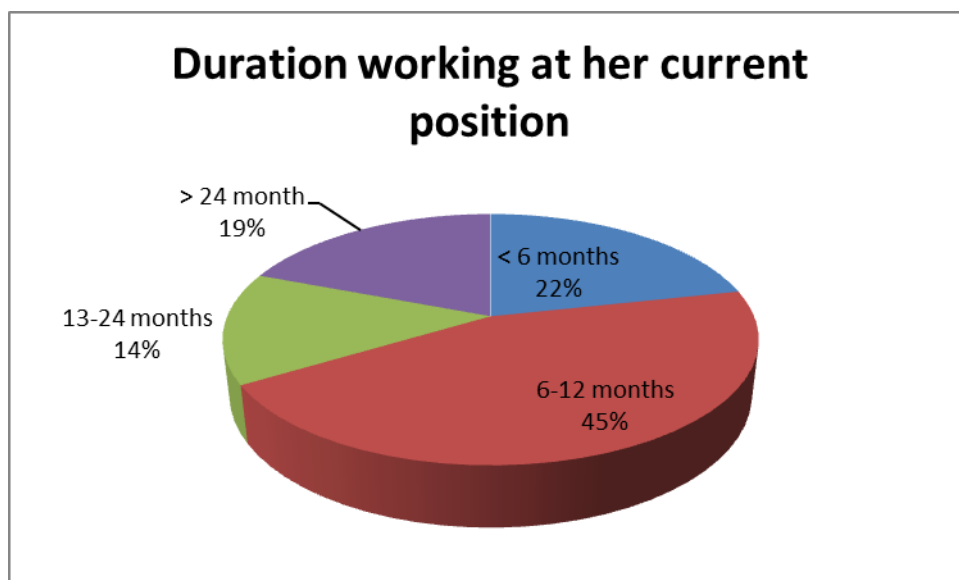
Table 4.2 shows the characteristics of the population that was served by the infirmary. As seen, the infirmary had provided services to 160,500 individuals. Sixty-one participants provided services to registered members and 36 to military servant civils. Most of the participants (51.2%) provided services to the age group 40-50 years. Most of them (91.2%) did not know the education level of the population they served (See Table 4.2).

Table 4.3. Assessment of recoding and statistics in infirmary (n=125)

Variables	Yes		No	
	n	%	n	%
1. Interventions recorded in the infirmary's registry	101	80.8	24	19.2
2. Monthly and annual statistics are issued	109	87.2	16	12.8
3. Statistical yearbook of the last year	54	43.2	71	56.8
4. Notifiable diseases reported	109	87.2	16	12.8
5. The steps taken appropriately	22	17.6	103	82.4
* Row frequency used				

According to the results, the services provided by the family medicine centers included blood biochemistry, hematology, ECG, X-ray, GUE, and GSE. However, all of the participants stated that there were not enough supplies, inventory materials, and stationery supplies. It was also stated that routine periodic examination, routine health screening, and regular construction and repair were not carried out.

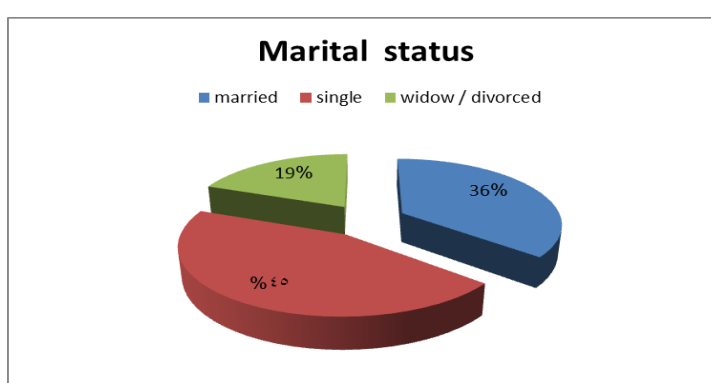
The results indicated that most of the participants stated that the interventions were registered in the infirmary registry (80.8%), monthly and annual statistics were issued (87.2%), and notifiable diseases were reported (87.2%). More than half of them (56.8%) said statistical yearbook was not issued the previous year, and 82.4% stated that the steps were not taken properly (See Table 4.3).



Figurer 3: Duration Working at her current position

Table 4.4. Referral assessment in infirmary (n=125)

Variables	Yes		No	
	n	%	n	%
1. Infirmary and infirmary-related population fit into the existing referral chain	0	0.0	125	100.0
2. Referral chain work properly when further examination-treatment is needed	96	76.8	29	23.2
3. Receive information about the patient's condition from the referral patient or referral institution	29	23.2	96	76.8
4. Can the control and follow-up of the patient coming from the hospital be made	0	0.0	125	100.0



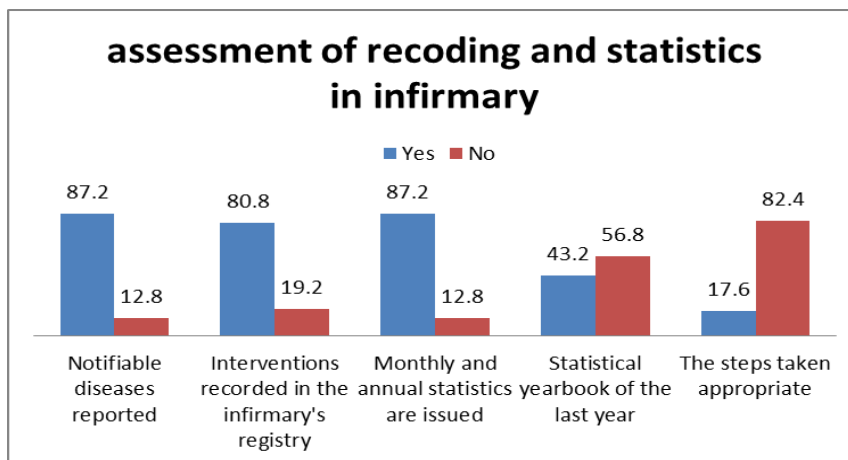
Figuer 4: Marital status

The results revealed that all of the participants believed that infirmary and infirmary-related population did not fit into the existing referral chain. Most of them (76.8%) stated that referral chain worked properly when more examination treatment was required. Most of them (76.8%) stated that they did not receive information about the patients from the referral institutions. All of them believed that control and follow-up of the patients could not be made from the hospitals (See Table 4.4).

Table 4.5. Staff satisfaction with infirmary (n=125)

Variables	Agree		Disagree	
	n	%	n	%
1. Thinking that the training program you have received is sufficient to work in the first step	31	24.8	94	75.2
2. Satisfied with working in such a place	45	36.0	80	64.0
3. Thinking that your right team is sufficient	59	47.2	66	52.8

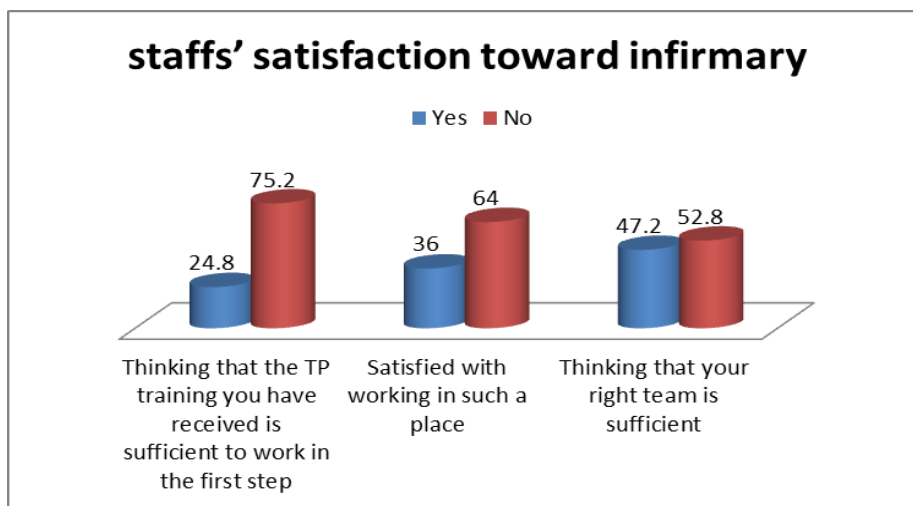
Regarding the staff's satisfaction, the results showed that most of them believed that the training program (TP) was not sufficient (75.2%), were not satisfied with working in the infirmary (64%), and thought their team was not sufficient (52.8%) (See Table 4.5).



Figuer 5: Assessment of recoding and statistics in infirmary

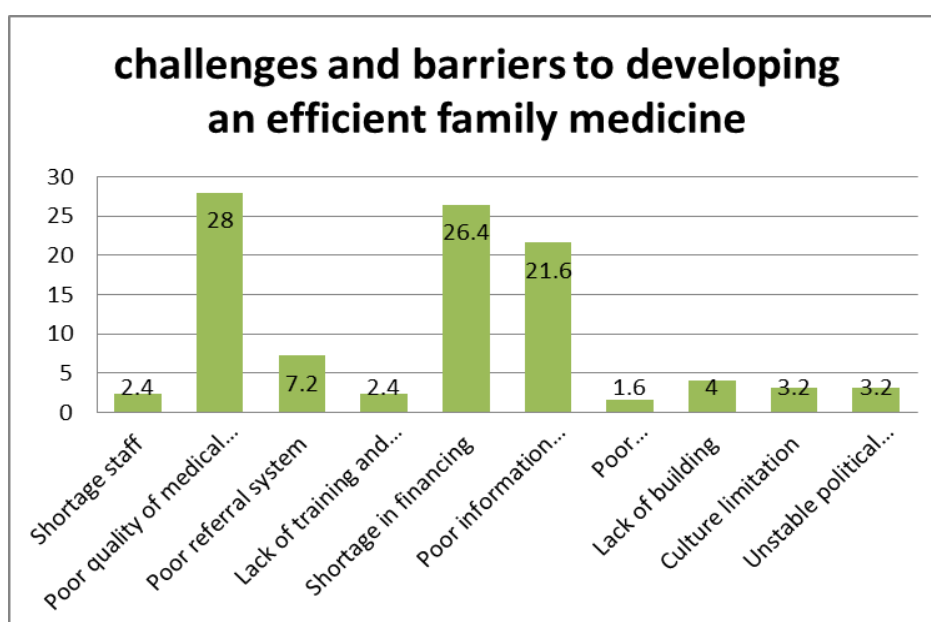
Table 4.6. Association between variables

Items		Locations						Total		X ²	p
		Brayati		Shady		Sarwaran					
		n	%	n	%	n	%	n	%		
Profession	Nurse	12	24.0	24	48.0	14	28.0	50	100	22.41	0.001
	Doctors (dentist etc)	12	25.5	17	36.2	18	38.3	47	100		
	Technician (lab etc)	5	17.9	9	32.1	14	50.0	28	100		
	Total	29	23.2	50	40.0	46	36.8	125	100		
Satisfaction	Disagree	16	20.0	23	28.8	41	51.3	80	100	20.621	0.001
	Agree	13	28.9	27	60.0	5	11.1	45	100		
	Total	29	23.2	50	40.0	46	36.8	125	100		
Experience	< 6 months	14	51.9	11	40.7	2	7.4	27	100	64.106	0.001
	6-12 months	13	23.2	30	53.6	13	23.2	56	100		
	13-24 months	2	11.1	9	50.0	7	38.9	18	100		
	> 24 months	0	0.0	0	0.0	24	100	24	100		
	Total	29	23.2	50	40.0	46	36.8	125	100		



Figuer 6: staffs satisfaction toward infirmary

With regard to the association between the studied variables, the results of the study indicated that there was a significant association between the professions and the location of the family medicine centers ($p=0.001$). It was also seen that there was a significant association between staff satisfaction and the location of the family medicine centers ($p=0.001$). Therefore, the staff working in the three centers were almost similarly satisfied with their job and conditions. Finally, it was observed that there was a significant relationship between staff experience and the location of the centers ($p=0.001$), which reveals the fact that the three family medicine centers were similar in terms of their staff's experience (See Table 4.6).



Figuer 7: challenges and barriers to developing an efficient family medicine

Table 4.7. Association between satisfaction and social demographic variables

Social demographics		Satisfaction						X ² test	
		Agree		Disagree		Total		X ²	p
		n	%	n	%	n	%		
Profession	Nurse	31	62.0	19	38.0	50	100.0		0.376
	Doctors (dentist etc.)	28	59.6	19	40.4	47	100.0		
	Technicians (lab etc.)	21	75.0	7	25.0	28	100.0		
	Total	80	64.0	45	36.0	125	100.0		
Marital status	Single	31	68.9	14	31.1	45	100.0		0.001
	Married	35	62.5	21	37.5	56	100.0		
	Widow/divorced	14	58.3	10	41.7	24	100.0		
	Total	80	64.0	45	36.0	125	100.0		
Experience	< 6 months	13	48.1	14	51.9	27	100.0		0.652
	6-12 months	34	60.7	22	39.3	56	100.0		
	13-24 months	9	50.0	9	50.0	18	100.0		
	> 24 month	24	100.0	0	.0	24	100.0		
	Total	80	64.0	45	36.0	125	100.0		

The results revealed that there was a significant relationship between the participants' satisfaction and their marital status ($p=0.001$), while the relationship between satisfaction and profession and experience was not significant ($p>0.05$) (See Table 4.7).

Table 4.8. Challenges and barriers to developing an efficient family medicine

Variables	n	%
Poor quality of medical service	35	28.0
Shortage in financing	33	26.4
Poor information technology	27	21.6
Poor referral system	9	7.2
Lack of building	5	4.0
Culture limitation	4	3.2
Unstable political circumstances	4	3.2
Shortage staff	3	2.4

Lack of training and educational opportunities	3	2.4
Poor leadership/governance	2	1.6
Total	125	100.0

According to the results and based on the participants' views, the most frequently stated challenges associated with establishing and implementing an efficient family medicine system included poor quality of medical service (28%), shortage in financing (26.4%), and poor information technology (21.6%) (See Table 4.8).

Table 4.9. The roles played by the nurses in the family healthcare centers

Roles played by the nurses	Frequency (n)	Percentage (%)
Prevention	13	26.0
Education	10	20.0
Care	8	16.0
Counseling	8	16.0
Management	7	14.0
Supporting	4	8.0
Total	50	100.0

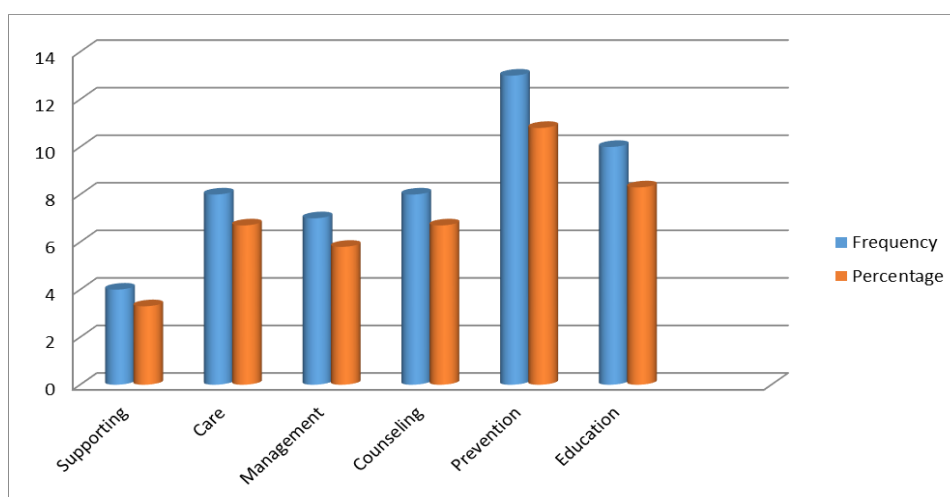


Figure 8. The roles played by the nurses in the family healthcare centers

The results of the study revealed that the nurses working in the studied family medicine centers played various roles, such as prevention (26.0%), education (20.0%), care (16.0%), counseling (16.0%), management (14.0%), and supporting (8.0%) (See Table 4.9 & Figure 8).

5. DISCUSSION

Due to the principles of family medicine (FM), it has become an integrated and constructive component of primary health care (PHC) around the world (WBG, 2007). As shown by numerous studies, FM is associated with better health outcomes even in regions that have health equality (Maeseneer & Flinkenflögel, 2010; Voort et al., 2012). Therefore, with its long history in developed healthcare systems and as one of the main reforms in developing healthcare systems over the past recent decades, family medicine has turned into a pivotal discipline which provides primary healthcare services (Kringos et al., 2010; Oleszczyk et al., 2012; Masic et al., 2014).

Countries with a solid primary healthcare system frameworks have outstandingly lower expenditure, less unnecessary deaths, and better health outcomes compared to countries with underprivileged primary healthcare systems. There is no doubt that similar to high-income countries, low- and middle-income countries are faced with an increasing prevalence of non-communicable diseases. Appropriate primary healthcare services are essential to future requirements so as to provide efficient management of chronic illness such as stroke, cardiovascular disease, hypertension, and diabetes (Gillam, 2008; Saeid et al 2017). The practices and roles that are generally performed by a family physician are defined by WONCA. However, the fact is that actual roles and practices are determined and defined by the characteristics of the healthcare system where family physicians are working (Takian et al, 2011; Takian et al, 2013). The current study was an investigation into family medicine in the urban population of the Kurdistan region of Iraq and specified the essential roles that it can play in response to current and future issues and problems of this region's healthcare system. It was also an attempt to specify the challenges and barriers to launching an efficient family medicine system and propose appropriate solutions.

Based on the principles mentioned in WHO (2008), an adequate number of doctors, nurses, and technicians should be accessible in primary healthcare clinics from local district hospitals, from community health centers, or even from private general practice. In this study, there were a large number of nurses, doctors, and technicians in three studied family medicine centers. The working duration of more than 65% of family medicine staff was less than a year that is considered as little experienced staff. The staff member in the family physician program (FPP) should be experienced enough for at least 3 years of working in FPP as a physician for at least 2 years of clinical experience in urban areas and having the tendency to participate in the study for experts. Moreover, there is a high demand for being familiar with FPP and having family physicians in urban regions with at least 3 years of experience (Mozhgan et al, 2019).

Providing healthcare services is quite important in the context of military leadership as it promotes a safe work environment, especially because most people in the military service operate in dangerous environments (Gustaveson, 2014). While this attribute may seem less important in the context of military leadership as healing is a role preserved for healthcare providers, it remains essential in promoting effective leadership in the military because through this attribute a leader is able to express genuine concern in assisting his followers to overcome personal challenges. Moreover, organizations that provide health care to military servants have a complex system, comprising of many stakeholders including hospitals, different clinics, primary healthcare centers, and the management and staff of these facilities/institutions. The focus of the healthcare organizations is to provide the best healthcare services to the population that it is designated to cater to (Trastek et al, 2014; Penny, 2017). In the present study, about one-third of the clients were stated to be military servants who served by the infirmaries. This may be due to the lack of healthcare services in their military setting that forces them to use primary healthcare services provided by family medicine centers. It is while just one-fifth of the clients of the centers were reported to be ordinary people who do not belong to a special organization.

Based on the research carried out by Callahan and Cooper (2010), young adults use healthcare system significantly less than other groups; however, they utilize emergency room significantly higher than those who are immediately younger or older than them. These lower utilization rates are necessarily an indication for better health. However, young people are constantly getting caught up in the hot mess of a for-profit healthcare system and later have to deal with the real-life consequences (Callahan & Cooper, 2010). In this study, the age distribution of people is not the same and more than half of them are in the age group of 40-50 years and older than 50 years, while just one-third of them are younger than 40 years. This may indicate that younger people do not care much about their health issues. Anyway, Hall et al (2012) demonstrated that unlike other fields of specialty which are restricted to a special disease or organ, family medicine provides healthcare services to individuals of all sexes and ages, and supports patients in a complex healthcare system. Given their comprehensive training, family doctors are the only professionals who qualify to treat most illnesses and provide extensive healthcare services to people of all ages; from infants to the elderly. Like other medical professionals, family doctors finish a three-year residency program after they graduate from medical school (Hall et al, 2012). The educational status of patients and their knowledge about health issues would be assumed as their power and facilitators of being healthy and make it easier for them for making decisions about health issues. For instance, young adults with chronic health conditions, including substance use disorders and mental health, often have lower educational achievement and less successful employment outcomes and experiences (Joseph et al, 2014). However, in this study, the educational status of

more than 90% of participants was not clear, which can be one of the shortcomings of family medicine system in this region.

As defined by the World Health Organization (WHO), primary health care is a healthcare system to provide essential healthcare services to families and individuals in the societies by acceptable means and via their full participation and at an affordable cost (WHO, 2008). In this regard, various kinds of medical equipment are required that must be prepared as basic equipment. As mentioned by the general report of WHO (2008) the basic category of this equipment should consist of autoclave, wheelchairs, water filtration system, stethoscopes, step stools, stainless steel equipment, specialized lighting, specialized equipment (spirometer, fetal monitoring, etc.), sharps containers, freezer/refrigerator, protective equipment (gloves, aprons, eyewear, facemasks), procedure tables, laboratory diagnostic equipment (centrifuge, urine/chemistry/glucose analyzers, microscope, specimen refrigerator/freezer, etc.), janitorial equipment, eye charts, exam tables (bariatric, pediatric, power), ECG unit and accessories, emergency equipment and supplies (airways, aspirators, oxygen, mask, resuscitation bag/mask, etc.), printers and accessories, colposcope, computers, centrifuge, cabinetry and storage shelving, body weight scales, office and waiting room furniture, examination room, blood draw, basic diagnostic (blood pressure monitor, thermometer, pulse oximeter, etc.), tympanometer/audiometer, and automated external defibrillator (AED) (WHO, 2008; ACP, 2009). In this study, the investigated centers were only equipped with blood biochemistry, hematology, ECG, X-ray, GUE, and GSE services; therefore, nearly all participants complained about the lack of facilities and also mentioned that routine periodic examination, routine health screening, and regular construction and repair were not carried out.

Identification of preventable dangerous situations is at a higher rate of significance to each age group and to measure the detection of maneuvers and preventive interventions relevant to each condition. Based on the results of the study carried out by Goldberg (2012), some important recommendations should be considered as minimum standards, and it would be a big mistake if health insurance agencies, for instance, ever regard them to be utmost standards instead. It should also be noticed that many individuals that are at high risk will need more than the recommended interventions. Moreover, Morain and Mello (2013) recommended that the implementation of national health recommendations would make more efficient use of health issues as main prevention resources. Increased efficiency of appropriate intervention programs could result not only from more selective use of tests and procedures but also from the more effective deployment of the many different types of health professionals. In this study, more than four-fifths of the participants stated that the essential steps for performing precise interventions were not taken

properly and just over four-fifths of the participants reported that the process of recording demanded interventions were conducted in infirmary's registry. While more than half of them stated that the statistical yearbook had not been issued the previous year. In addition, the process of identification of preventable dangerous situations was not carried out appropriately.

Indeed, referrals are defined as processes in which low-level healthcare staff of the healthcare system require help from other healthcare providers who are uniquely and better trained in order to successfully perform their duties in certain episodes of clinical conditions of a patient (WHOSIS, 2004). A range of skills across all levels of care should be taught to basic generalist doctors. These skills should show the clinical setting in which they will give service after graduation. Educationalists and health planners widely criticize the traditional approaches of medical education because they state that such approaches are dominated by training in tertiary settings by specialists (Ishandree & Ozayr, 2019). As was seen in this study, due to the lack of available facilities, nearly all participants stated that the infirmary population could not fit into the existing referral chain. However, as a result of failure to follow healthcare principles, approximately three-fourths of the infirmary population stated that they were not able to receive information about the patients from the referral institutions. Through conducting a more standardized healthcare principles and providing more facilities in primary health care centers, the process of follow-up of the patients could be conducted more effectively (NDH, 2010). Anyway, in this study, due to the lack of primary healthcare services, the hospital staff were not capable of controlling and following up the patients appropriately.

An essential role in quality improvement and assurance should be played by referral hospitals. Training the referral hospitals can be the most significant mechanism for quality improvement and assurance. Setting of standards for treatment can be another key mechanism. For instance, professionals in referral hospitals need to consider evidence of cost-effectiveness and effectiveness which are applicable to the local setting, specify the formularies to be utilized at each level of the healthcare system, and devise and modify treatment protocols. The quality of peripheral services can be improved by referral hospitals through monitoring the quality of the referrals, providing clinical services alongside local practitioners, offering on-site training, and giving advice (Mahmud et al, 2017). In this study, three-fourths of the staff believed that the training program was not sufficient, and nearly half of them stated that their medical team was not sufficient for the management of the referral population.

Based on the previous studies carried out by researchers around the world, it is proved that job satisfaction of health care staff is highly associated with their better performance. Moreover, higher satisfaction levels of health care staff will significantly decrease patients' hospitalization

time and also improve their morale. However, a better health situation of patients would be provided through higher facilities that a medical center has (Fisher & William 2011; Mahmud et al, 2017). The data achieve in this study demonstrated that the levels of satisfaction of staff in these three health centers was not the same. That may be due to the quality and quantity of facilities which any of the centers have.

As revealed by the results of the present study, 13 nurses out of 50 provided preventive health care which has been referred to as an important factor in raising public health and awareness (Fooladi, 2015). Moreover, illness prevention has been stated to be one of the significant roles played by nurses in primary healthcare centers (Padoveze & Figueiredo, 2016). Another role played by 10 nurses was health education. By providing patients with health education, nurses can increase the patients' knowledge about their health status, which in turn the patients' understanding of health issues and their self-management ability rise (Bergh et al, 2015). It can also raise and ensure (Murdock & Griffin, 2013). Another important role played by the nurses (n=8) was providing health care which has been stated to be a vitally important factor in promoting the management of public health (Hutchison et al, 2011). The nurses (n=8) also provided counseling services to the clients. In this regard, the relationship between nurses and patients and providing counselling services to patients have been referred to as significant factors in enhancing the quality of healthcare services and the patients' self-management of their own health status (Molina-Mula & Gallo-Estrada, 2020).

The nurses (n=7) in the present study also provided services in the management section of the studied family medicine centers. In doing so, nurses need to establish balance and connection among all dimensions of the individual patients' health care, which can significantly influence patient satisfaction and clinical outcomes (Carayon et al, 2015). The final role played by the nurses (n=4) was supporting. In this role, nurses support the patient's best interests while respecting the family's significant role. They take part in healthcare team meetings with the patient and family and try to resolve any communication problems and ensure information from the healthcare team is complete and correct, which in turn leads to improvement in patient satisfaction and clinical outcomes (Fahlberg & Dickmann, 2015).

6. Conclusion

According to the researcher's reviews, family medicine is as a profitable and fast growing enterprise in the developing regions and countries. Medical education regulators need to pay immediate attention to practice, training, teaching, and the lack of robust guidelines and role models in order to improve standards of family medicine and associated practice in the Kurdistan

region of Iraq. The trust of the public and other professionals in family medicine can be attracted by family doctors, nurses, and other personnel if they show relevant competency through professional development and continuous training. Family doctors need to be trained across the spectrum of prevention, preparedness, response, and recovery.

Some developed countries like China have made significant progress regarding family medicine. In this regard, structured certification and accreditation of physicians training and community clinics have been proposed through the work of WONCA and other specialized medical entities. Creative ways of practice should be utilized in order for family doctors to reach more patients in need. New methods of practice like the using digital health and the internet can have a significant role during challenging times. Using such technologies, family doctors can provide patients with consultation and information without face-to-face encounters. This is especially helpful during the outbreak of infections and viruses and quarantine periods.

As indicated by the results of the present study, decision-makers and policy-makers of different healthcare organizations in Iraqi Kurdistan region should regard family medicine as a vital method of provision of healthcare services, which requires some essential reforms and modifications. Implementing family medicine in Kurdistan in the face of the present health challenges can improve and promote the primary healthcare model in the urban regions. In order to implement the project effectively, a general consensus needs to be created among various relevant stakeholders. It was also seen that job satisfaction did not have a significant relationship with profession and experience. Similar to this finding are those reported by Williamson et al (2005) and Soni et al (2017) who respectively highlighted the fact that profession and employee experience do not have a significant effect on their job satisfaction. It was seen that marital status has a significant association with job satisfaction. This finding is in agreement with those of the study reported by Kemunto et al (2018) who concluded that married people are more satisfied with their jobs.

The nurses in the present study played different roles and provided various services, including disease prevention, healthcare education, health care, healthcare counseling, management, and supporting. Each of these services and roles can play a significant role in patient satisfaction and clinical outcomes; therefore, they need to be encouraged in healthcare centers, particularly in family medicine centers which provide primary healthcare services and significantly affect the public health status.

7. RESULTS AND RECOMMENDATIONS

7.1. Results

The findings of the present study demonstrated that; there were professions that nurses, doctors, and technicians in the three investigated health care centers but unfortunately, about two-thirds of them were experienced less than one year, and there is no doubt that higher experienced staff could provide a higher quality of health care services.

Due to the lack of health care services mainly in the Kurdistan region of Iraq, the number of the population referred to the infirmity centers is higher than the capacity of those centers. Another point that could be talked into account as a limitation is the shortness of healthcare systems in providing registration for approximately all people. For instance, one-fifth of the participants were ordinary people who were not supported by any other organizations. Another factor that may be considered as a functional weakness of the healthcare system in this region is that just one-third of the participants were under the age 40 years. So, the healthcare services for adults and younger people are not provided as much as that for older people that maybe because of the fact that adults and younger people have more complex health issues.

In addition, the findings of the current study showed that social problems and the lack of medical facilities are expressed as an important challenge and public dissatisfaction was an important subtheme of it. People have to use the referral system to visit a specialist at a reasonable price. Finally, the most significant barrier to family medicine system in the Kurdistan region of Iraq were respectively poor quality of medical service, shortage in financing, and poor information technology. Different roles played and services provided by the nurses, including disease prevention, healthcare education, health care, healthcare counseling, management, and supporting, are significant in ensuring public health status.

7.2. Recommendations

Conduction of the present study lead to the following recommendations:

- The most significant barrier to family medicine system was poor quality of family medicine services, which was due to insufficient experience of the staff in the family medicine centers. In other words, most of the nurses and doctors working in the family centers had working experience of less than 1 year in the field of family medicine. In this regard, it is suggested that family healthcare centers should be equipped with more experienced staff.

- The Ministry of Health is recommended to open more healthcare centers that provide services specifically to military forces, which in turn decreases the burden on family healthcare centers which are primarily built to serve families.
- Another barrier to family medicine system was mentioned to be shortage in financing; therefore, the government and the Ministry of Health is recommended to provide this sector with more financial resources.
- The education section of the Ministry of Health need to raise awareness of individuals of all ages and families of the necessity of regular reference to family medicine centers in order to raise the public health in the society.
- Health care policymakers should attain a better understanding of factors affecting people's well-being and satisfaction so as to decide where to allocate the budget in order to enhance client wellbeing and efficiency of the system.
- Family medicine centers need to be equipped with more facilities and equipment in order to meet the needs of different clients.
- Primary healthcare centers should be provided with good signs indicating the emergency location. Moreover, they need to sufficient parking space at or around the facilities.
- Another barrier is poor information technology. In this regard, family medicine centers need to be equipped with more technological facilities and equipment and well-organized registry systems in order to keep the records of single individuals in addition to families so as to figure out the health needs and issue of the individuals, families, and society.
- Physicians who cope with emergency cases need to be more attentive to providing their patients with health education and detailed information about their illness.
- Doctors and nurses working in family medicine centers need to be provided with continuous specialized training on family medicine.
- Healthcare providers should be trained well about humaneness and thoroughness of care.
- Healthcare centers, particularly family medicine centers, are recommended to assign different roles like disease prevention, healthcare education, health care, healthcare counseling, management, and supporting in order to promote public health.
- Future researchers are recommended to carry out similar studies in different family medicine centers in the region and other cities and town in order to figure out the strengths and weaknesses and improve the existing family medicine system in the region.
- Future researchers are also recommended to carry out comparative studies in order to compare the family medicine system operating in the Kurdistan region of Iraq with those of neighboring countries and also developed countries and improve the existing system in the region.

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9. Appendix 1: Questionnaire

1- What is the type of health unit? Please specify.

- a) Headquarters infirmary
- b) 30 infirmary
- c) Other: please explain below

.....

2- What is the name and address of the infirmary?

.....

3. Specify the name and year of the type faculty of graduation?

.....

4- What is the date (day, month, year) that she started working at her current position?

.....

5- What is the school and year your infirmary nurse graduated? Please specify. Graduation year
School

.....

6- What is the marital status of your infirmary nurse? Please specify.

- a) Married
- b) Single
- c) Widow, divorced

7- What is the date (day, month, year) your infirmary nurse started to work at her current position?

.....

8- What is the daily service period of infirmary?

- a) 8 hours
- b) 24 hours
- c) Other (please explain

o- Which of the following population groups serve more?) I do not know e) Other (please explain

.....

10- Indicate the total number of the population served by the infirmary?

.....

11- Indicate the number of the population served by the infirmary according to their status? Say

- a) Subscription
- b) Military Civil Servant
- e) I do not know

.....

12- What is the number of the population served by the infirmary according to age groups? Please specify.

- a) 18-28
- b) 29-39
- c) 40-50
- d) 51 years and older
- e) I do not know

13- What is the number of the population served by infirmary according to gender?

- a) Female
- b) Male
- e) I do not know

14- What is the number of the population served by the infirmary according to the education level?

- a) Not literate
- b) Literate
- c) Graduated from secondary school
- d) Secondary school graduate
- e) High school graduate
- f) I do not know

15 - What is the number of infirmary population according to marital status? Please specify.

- a) Married
- b) Single
- c) Widow, divorced
- d) I do not know

16- What is the distance of the population receiving service from your infirmary to the infirmary?

17- What is the occupation and number of staff currently active in the infirmary? Indicate Yes (if, say)

- a) Specialist physician
- b) Practitioner
- c) Dentist
- d) Pharmacist
- e) Nurse
- f) Midwife
- g) Health petty officer
- h) Other (do not explain)

18- What are the infirmary's properties related to the building according to the following options? Yes (if not, say

- a) Does the infirmary have a separate building?
- b) Same doctor room
- c) Same dentist room c Month same doctor room
- d) Ayn midwife nurse room
- e) Ayn room for other health personnel
- f) Same patient examination room
- g) Ayn patient waiting room
- h) Ayn skreter room
- i) Laboratory emergency room
- j) A separate training room
- k) The same toilet for the patient D-Sickler's vehicle (if you have indicated the purpose of use) Sickle's ambulance

19- Does Sickle's ambulance work? Please specify.

- a) Yes
- e) I do not know

20- What is the purpose and duration of the ambulance of the infirmary? Please specify.

.....

21- What are the medical supplies in the ambulance?

.....

22- Has the driver of the ambulance received special training?

- a) Yes
- b) No
- c) I do not know

23- What medical equipment is available in the infirmary?

- Blood counting instrument
- Light microscope
- Comparator
- Refrigerator
- Beads
- Sediment tube
- Displacement tiger
- Sphygmomanometer
- Densimeter
- Stethoscope
- Laboratory balls Floor press
- Inhalator
- Dil bed
- Reflex hammer
- Baby scale
- Dental device
- Serum suspension
- Small modahale set
- Length measuring instrument
- Centrifugal
- Microscope
- Pipette
- Dental unit
- Trolley
- Sterilizator
- Splint
- Paravan Oscope
- Instrument and medicine cabinet
- Aspirator
- Endotrachial tube
- Oxygen tube
- Hematocrit instrument
- Airway
- Standing portable lamp
- Laryngoscope
- Portable ECG
- Portable instrument
- Computer
- Cavet
- Ambu Tromel

- Defibrillator
- Nasal mask
- Degree
- Other (please explain) Fax machine

24- What are the examination (s) and test (s) performed in the infirmary?

- Blood biochemistry Aclk blood glucose
- Whole blood test) Blood culture
- Bojase culture
- Stool culture
- HB
- HTC
- Simple
- Fairy smear
- ECG
- X-ray
- Urine culture
- Urine microscopy
- Complete urine examination
- (I don't know) Densimeter

25- Are the supplies for infirmary enough?

- a) Yes
- b) No
- c) I don't know

26- Are the inventory materials of infirmary sufficient?

- a) Yes
- b) No
- c) I do not know

27- Are the infirmary supplies sufficient for stationery?

- a) Yes
- b) No
- c) I don't know

28- Are the infirmary construction and repair works done regularly?

- a) Yes
- b) No
- c) I do not know

29- Are the interventions performed recorded on an individual's health voucher?

- a) Yes
- b) If no, explain why

30- Are the interventions recorded in the infirmary's registry? Please specify.

- a) Yes
- b) No, if so, and your suggestions

31- Monthly annual statistics are issued?

- a) Yes
- b) If no, why and your suggestions

32-Is there a statistical yearbook of the last year? Please specify.

- a) Yes
- b) No

33- Is the three-month health report properly filled out and sent on time?

- a) Yes please explain your suggestions
- b) If no, why?

34- Notifiable diseases reported? Please specify.

- a) Yes
- b) If no, explain why and your suggestions

35- Are the steps taken appropriate?

- a) Yes
- b) If it is No, explain why and your suggestions

36- Is the ICT training provided to other health personnel working in the infirmary? Please specify.

- a) Yes
- b) No (if not, go to 39th end)

37- Who gives in-service training in the infirmary? Please specify.

.....

38- How often is in-service training in the infirmary?

.....

39- Please indicate what in-service training issues are provided

.....

40- If in-service training cannot be provided in the infirmary, state why (s) and your suggestions.

.....

41- What are the vaccines available in the infirmary (if there is no vaccine, go to 47th end)? Please specify.

.....

42- How are the vaccines kept in the infirmary? what?

- a) Refrigerator shelf
- b) Refrigerator covers
- c) Other (please explain:

43. Is there a system that will ensure that vaccines remain cold when the electricity is cut off?

- a) If yes, ordinary
- b) No
- c) I do not know

44- Do you have an expired vaccine? what? Please specify.

- a) Yes
- b) No

45 - How is the expired vaccine destroyed? what?

- a) Disposal method

b) I do not know

46- Is the vaccination service routinely given to the population served

- a) Yes
- b) No
- c) Tetanus
- d) BCG
- e) Hepatitis-B
- f) Rabies Influenza in suspected bites
- g) Other (explain):

47- Specify who (s) is vaccinating?

.....

48- Who is given the BCG vaccine?

- a) Infirmary personnel receiving courses / training
- b) Non-infirmary personnel receiving courses / training
- c) Infirmary personnel without courses / training
- d) Infirmary personnel without courses / training
- e) Other (please explain):

49- Routine to the population served If vaccination service cannot be provided, indicate why (s) and suggestions.

.....

50- Is the health training on the population who is served in the Mediterranean? Please specify.

- a) No (if not, go to the end of § 4)
- b) Combat infectious diseases
- c) Personal hygiene
- d) AP / MCH
- e) First aid
- f) Combat harmful habits
- g) Environmental health Protection
- h) Nutrition) - Struggle with stress
- i) Prevention of occupational diseases and work accidents
- j) Other (please explain):

51- Specify who gives health education in infirmary?

.....

52 - Specify how often infirmary education is given in infirmary? If health education cannot be provided, please indicate why (s) are recommended

.....

53- Is there a routine periodic examination of the population served in the infirmary

- a) Yes
- b) No (if not, go to question 60)

54- Who is the periodic inspection performed?

.....

55- What does the periodic examination involve?

.....

56- How long does it take for a routine periodic period for the population served in the infirmary?
.....

57- Is the periodic examination performed in the infirmary recorded on the health receipt of the individuals?
.....

58- If the periodic examination cannot be performed in the infirmary, state the cause (s) and your suggestions.
.....

59- Food, kitchen, such as working in places Erbay-ere portor examination is done?
a) No (if not, proceed to the 63nd end)
b) Yes

60- Who is the porter inspected for the population served in the infirmary?
.....

61- If the porter cannot be examined in the infirmary, state the reason (s) and your suggestions.
.....

62- Is there a routine health screening for the population served in the infirmary? Please specify.
a) Yes
b) No

63) b) Yes (if so, what does it contain?) 65- If health examination cannot be performed in infirmary, please indicate why (s) and your suggestions.
a) Yes
b) If not (explain why):

64- Is it possible to make and control the hair bath of the infirmary?
b) No (if not, go to 70th end)
a) Yes

65- Who (s) controls the hair bath? Please specify.
.....

66- How often is the control of the hair bath done?
.....

67- If hair bathing and control cannot be achieved, please indicate why (s) and suggestions.
.....

68- Is it ensured that the soldier and the servant make the body bath and control?
a) Yes
b) No (if not, skip to 74th end)

69- Who controls the body bath?
.....

70- How much cycle is the body bath done for control? Please specify.

.....
71- If vacut bathing and control cannot be provided, indicate why (s) and your suggestions
.....

72- Is there a hand and foot nail care check in the infirmary or dispensary?
a) Yes
b) No (if not, go to question 78)

73- Hand-foot nail-care control by who (s) at the moment?
.....

74- How often is hand-toe nail care check performed? Please specify.
.....

75- If hand-to-toe-nail care control cannot be provided, please indicate why (s) and suggestions.
Please specify.
a) Yes
b) No (if so, explain why and your suggestions c) I don't know

76- What is the number of the population served by the infirmary according to smoking? Please
specify. Petty Officer Er-Erbas Military Civil Servant Officer
a) Number of users
b) Number not used.
c) I do not know

77- What is the number of the population served by infirmary according to alcohol use? Please
specify. Military Civil Officer Officer Astsubagy Er-Erbas
a) Number of users
b) Number of non-users
c) I do not know

78- Do you know that there is a precaution against the use of smoking and alcohol in the infirmary
and its affiliates?
a) Yes (if so, explain what is happening:
b) No (if so, explain why and suggestions):
c) I do not know

79- Non-smoking is provided in places where smoking is indicated?
a) Yes (if, what is happening Explain):
b) No (if so, please explain why and your suggestions):
c) I don't know

80- Is drinking water and drinking water supplied from the city network together with the
infirmary and chlorinated once a week?
a) No (go to question 86)
b) Yes
c) I don't know

81- Who makes chlorination of drinking water and drinking water once a week? Please specify.
.....

82- If it is not possible to chlorinate infirmary and drinking water together once a week, state the
cause (s) and your suggestions.

.....
83- Is the bacteriological examination of drinking water and drinking water together with infirmary and bagh every fifteen days?

- a) Yes
- b) No (if not, go to question 89)
- c) I do not know

84- Who (s) performs the bacteriological examination of drinking water and drinking water together? Please specify.
.....

85- If the bacteriological examination of the infirmary and drinking water cannot be provided every fifteen days, state the cause (s) and recommendations.
.....

86- Is there a suitable place for quarantine and / or isolation when infectious diseases occur? Please specify.

- a) Place name
- b) No
- c) I do not know with infectious disease in the privates and the rest of my laundry

87- Do you provide appropriate washing in a separate place in the infirmary laundry? Please specify.

- a) Yes
- b) No (if so, explain the reasons and suggestions):
- c) I do not know

88- Does the infirmary and the tied bag have bags of rubbish?

- a) Yes
- b) No (if so, please explain why and your suggestions:
- c) I don't know

89- Do the infirmary and yeast together collect paper waste separately?

- a) Yes
- b) No (if so, explain the reasons and recommendations)
- c) I do not know

90- Do medical and associated medical wastes are collected separately?

- a) Yes
- b) No (if so, explain why and suggestions):
- c) I do not know

91- How does the infirmary and together destroy the injectors?
.....

96- Does the infirmary document together with infirmary within 24 hours?

- a) Yes
- b) No (if so, explain your suggestions):
- c) I do not know

92- How often is the vehicle used for the extermination of infirmary and connective attacks? Please specify.

- a) Yes
- b) No (if so, explain why and your suggestions):
- c) I do not know

93- Infirmery and yachts together 100 ere 4 toilets, 4 urinals falling?

- a) Yes
- b) No (if so, please explain why and suggestions):
- c) I do not know

94- Indicate how to disinfect the toilet together with infirmery and toilet.

.....

95- How is the toilet used to be disinfected together with the infirmery?

.....

96- Is there a hand dryer in toilets and sinks together with infirmery and connected?

- a) Yes
- b) No (if so, explain why and your suggestions):
- c) I do not know

97- What is the method of buying coal for infirmery and related union?

- a) Yes
- b) No
- c) I do not know

98- Does infirmery and ligament use low quality coal which may cause air pollution? Please specify. a) Yes b) No (if so, please explain why and your suggestions: e) I don't know

99- Is infirmery and ligament performed together with poor quality coal control that could cause air pollution?

- a) Yes
- b) No (if so, explain why and your suggestions):
- c) I do not know

100- Do the infirmery and the connected heating chimneys are cleaned once a year?

- a) Yes
- b) No (if so, please explain why and your suggestions):
- c) I don't know

101- Is the person performing the cleaning of infirmery and connected heating chimneys educated / educated?

- a) Yes
- b) No (if, why?)
- c) I do not know

102- Do the infirmery and stand open around the place instead of the fuel?

- a) Yes
- b) No (if so, explain why and your suggestions):
- c) I don't know

103- Are infirmery and measures taken together to combat noise? Please specify.

- a) Yes (if so, explain the precautions):
- b) (if so, explain why and your suggestions):

c) I do not know

104- Who is taking measures in the infirmary and connected with noise?

- a) Yes (if so, explain the measures):
- b) No (if so, explain your suggestions):
- c) I don't know

105- How much is the infirmary with the infirmary and connected?
.....

106- Does the infirmary and yeast together undertake afforestation practices for the protection and development of the environment?

- a) Yes (if so, explain the measures):
- b) No (if so, explain the reasons and suggestions):
- c) I do not know

107- Do you have wires in places like kitchen door, window, food cabinet of infirmary and yeast union? Please specify.

- a) Yes (if so, explain the measures):
- b) No (if so, explain why and suggestions):
- c) I do not know

108- Do infirmary and bagh fight against vectors together regularly? Please specify.

- a) Yes (if so, explain measures):
- b) No (if so, explain why and suggestions):
- c) I do not know

109- Who is taking measures to combat vectors with infirmary and ligament? Please specify.
.....

110- Do the numbers of the soldiers and soldiers in the ward together with the infirmary comply with the instructions? Please specify.

- a) Yes (if so, explain measures):
- b) No (if so, explain why and suggestions):
- c) I do not know

111- Does the infirmary and the attached bunk distance in the ward meet the instruction?

- a) Yes (if so, explain measures):
- b) No (if so, explain why and suggestions):
- c) I do not know

112- Infirmary and tied together in the wardrobe and bed linen once a year pillow, blanket once a year Do you know?

- a) Yes (if so, explain measures):
- b) No (if so, explain why and suggestions):
- c) I do not know

113- Indicate that the public and private officers together with the infirmary bath enough?)

- a) Yes (if so, explain measures):
- b) No (if so, explain why and your priorities):

c) I do not know

114- How is the bathhouse of the infirmary and private soldiers disinfected? your symptoms
.....

115- Who is the disinfection of the infirmary and its affiliated public and private baths?
.....

116- Infirmary and Baghdad together with private and private baths disinfection cannot be done why) Please specify
.....

119- Infirmary and bagh together in food control what is your role?
a) Yes
b) No (if not, go to question 121)
c) I do not know

120- Who is conducting the food control?
.....

121- If the infirmary and ligament cannot be used for food control, please indicate the cause (s) and your suggestions.
.....

122- If these drugs are not available, indicate why (s)
.....

123- Specify whether the emergency tray in the infirmary is ready for use in an emergency?
a) Yes (if so, explain measures):
b) No (if so, explain why and suggestions):
c) I do not know

124- Does the infirmary and infirmary-related nafus fit into the existing referral chain? Please specify.
a) Yes (if so, explain measures):
b) No (if so, explain why and suggestions):
c) I do not know

125- Does the referral chain work properly when further examination-treatment is needed?
a) Yes (if so, explain measures):
b) No (if so, explain why and suggestions):
c) I do not know

126- Do you receive information about the patient's condition from the referral patient or referral institution?
a) Yes (if so, explain measures):
b) No (if so, explain why and suggestions):
c) I do not know

127- Can the control and follow-up of the patient coming from the hospital be made?
a) Yes (if so, explain measures):
b) No
c) I do not know

128- Do you think that the TP training you have received is sufficient to work in the first step?

.....

129- Are you satisfied with working in such a place? Please give reasons.

.....

130- Do you think that your right team is sufficient? Specify your suggestions.

.....

131- What are your problems in the infirmary? indicate your suggestions.

.....

132- What would you like your nurse in infirmary to do in terms of duty? Please specify.

.....

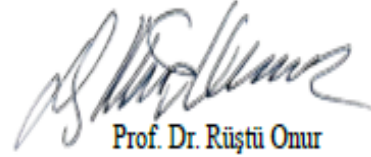


YAKIN DOĐU ÜNİVERSİTESİ
BİLİMSEL ARAŞTIRMALAR ETİK KURULU

ARAŞTIRMA PROJESİ DEĐERLENDİRME RAPORU

Toplantı Tarihi : 30.07.2020
Toplantı No : 2020/81
Proje No :1087

Yakın Dođu Üniversitesi Hemşirelik Fakültesi öğretim üyelerinden Assoc. Prof. Dr. Hatice Bebiş'in sorumlu araştırmacısı olduđu, YDU/2020/81-1087 proje numaralı ve **“To determine of satisfaction from the pilot family medicine system implemented in the Kurdistan Region”** başlıklı proje önerisi kurulumuzca online toplantıda değerlendirilmiş olup, etik olarak uygun bulunmuştur.



Prof. Dr. Rüstü Onur

Yakın Dođu Üniversitesi

Bilimsel Araştırmalar Etik Kurulu Başkanı

PERSONAL INFORMATION



ZANA KHALID SMAIL

Iraq, Erbil, Sarwaran Qt., 88001 Erbil (Iraq)

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zanakhoshnaw@yahoo.com

Sex Male | Date of birth 11 Oct 1983 | Nationality Iraqi

Job member of parliament Health comette

JOB APPLIED FOR

Master Of Public Health

WORK EXPERIENCE

1 Nov 2003–1 Oct 2005

Nurse

Rizgary Teaching Hospital - ENT ward, Erbil (Iraq)

- Taking care of the Patients.
- Doing Follow Up of Patient's Vital sings.
- Cannulation, Injections and Taking blood for investigations.
- Giving Treatments.
- Dressing

1 Oct 2005–1Sep2006

Nurse

Dental treatment Centre , Erbil (Iraq)

- Taking Care of the Patients.
- Assist of dentist
- Doing follow up of the patient's Vital signs.
- Giving Treatment

2Sep2006–1Aug2011

Teacher (Practice)

Medical Institute Nursing Department , Erbil (Iraq)

- Training of Student in Nursing Department
- Practice and teaching Nursing process for student nursing department

2Aug2011- Till Now Paediatric Nurse

- Taking care of the patients.
- Doing Follow Up of patients Vital sings
- Giving Treatments
- Cannulation , Injection, and taking blood investigation
- Dressing and Suturing
- Putting Monitor and Taking ECG

EDUCATION AND TRAINING

1 Nov 1999–1 Jun 2002	Preparatory in Nursing Erbil Preparatory Nursing , Erbil (Iraq)	EQF level 2
1 Nov 2002–1Jun 2004	Diploma in nursing Erbil Polytechnic University / Nursing Department, Erbil (Iraq)	
1 Nov 2014–1 Jun 2017	Bachelor in public health nursing Al Hikma University , Beirut Science Nursing Department (Lebanon)	
1 Nov 2008–15 Dec 2008	Computer (EXcel , Word , Power point) Course Erbil syndicate Nursing , Erbil (Iraq)	
1 Oct 2013–10 Dec 2015	Learning English Language Course Cambridge University , Erbil (Iraq) 1Jun 2009 – 1Jul 2009 Nursing Care Course Rizgary Hospital Erbil (IRAQ) 15.Jun 2010-1Jul2010 First Aid Course Director Of Health , Erbil(Iraq) 20.Feb 2011 – 5.Mar 2011 Psychiatric disease Nursing Course W.H.O Erbil (IRAQ) 1Apr2012-1May2012 Paediatric Nursing Course Raparin Hospital Erbil(Iraq) 10 Nov 2014 – 1 Dec 2014 Hospitals Administration Course Grates Group Beirut (Lebanon) 1Feb 2016- 1Mar2016 Leader ship Course Al Hikma University Beriut (Lebanon)	

PERSONAL SKILLS

Mother tongue(s) Kurdish

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	A1	B1	A1	A1	B1
Certificate in English Language course - Cambridge International language institute					
Arabic	B1	B1	B1	B1	B1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills

- Good and Strong Communication skill gained through my experience as a nurse.
- Excellent contact skills with patients.

Organisational / managerial skills

- The Founder of The Association Of Nursing in 2006.
- The President Kurdistan Nursing syndicate.
- Good Team Leading skills in nursing Conferences.

Job-related skills

- Participant to Health service for Syrian and Middle Iraq Refugee
- Participant to First aid team in war (Isis).

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Independent user	Independent user	Independent user	Independent user	Independent user

[Digital competences - Self-assessment grid](#)

- Good Command in networking and communications.

إقليم كوردستان - العراق
مجلس الوزراء
وزارة الصحة

المديرية العامة للتخطيط
مديرية التخطيط



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ئه نجومه نی وه زیران
وه زاره تی ته ندروستی

به ریوه به رایه تی گشتی پلان دانان
به شی توژی بینه وه ی زانستی

NO: 595
Date: 2020/1/13

ژماره:
رېښه وت ٢٧١٩ / / کوردی

"پشمارگه سومبولی نه ته وه یی و پاریزه ری کوردستانه"

TO WHOM IT MAY CONCERN

Permission Letter

This letter is issued in support of **Zana Khalid Smail** who is a Master's student from **Near East University**. He has been granted permission to collect data and information from Hospitals and Primary Health Care Centers of Kurdistan Region for his research project about: "**Lack of Family Medicine System in Kurdistan Region: Challenges and Solutions**"



Dr. Saman Barzangy

Minister of Health

January 14, 2020

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