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Assessment of Nurses Knowledge towards Expanded Program on Immunization in Primary Health Care Centers at Al-Amara City

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A graduate Project

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اقرار المشرف

نحن الموقعون في ادناه المشرفين على البحث الموسوم (تقييم معرفة الممرضات نحو برنامج موسع للتحصين في مراكز الرعاية الصحية الأولية في مدينة العمارة) وقد تم من قبل الطـــــــــــــــلاب

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بسم الله الرحمن الرحيم
قَالُوا سُبْحَانَكَ لاَ عِلْمَ لَنَا إِلاَّ مَا
عَلَّمْتَنَا إِنَّكَ أَنتَ الْعَلِيمُ الْحَكِيمُ
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الأهداء

احمد الله عزوجل على منه و عونه لإتمام هذا البحث

الى الذي وهبني كل ما يملك حتى احقق له اماله . الى من كان يدفعني قدما نحو الامام لنيل المبتقى.

الى الانسان الذي امتلك الانسانية بكل قوة الى مدرستي الاولى

(ابي الغالي) علي قلبي اطال الله في عمره

الى التي وهبت فلذة كبدها كل العطاء و الحنان. الى التي صبرت على كل شيء.

الى التي رعتني حق الرعاية و كانت سندي في الشدائد و كانت دعواها لي بالتوفيق

تتبعني خطوة خطوة عملي الى من ارتحت كلما تذكرت ابتسامتها في وجهي نبع الحنان

(امي الغالية) اعز ملاك على القلب جزاها الله خير جزاء في الدارين

اليها اهدي هذا العمل المتواضع الذي ادخل على قلبها شيئا من السعادة

الى اخواني و اخواتي الذين تقاسموا معي عبء الحياة حفظهم الله .....

الى الذين ارواحهم مازالت تطوف حولنا بسلام

الى الذين قدموا ارواحهم لينقذوا أرواحاً اخرى

كانوا كالملائكة بأجنحتهم البيضاء لم يثني عزمهم خوف او قلقاً

هبوا من غير تردد ووضعوا ارواحهم على أكفهم

الحياة بكم تستمر وتبقى .....

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الذين لم يبخلوا علينا بتوجيهاتهم ونصائحهم القيمة والتي كانت عونا لنا في
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ABSTRACT

Objective: Assessment of nurses knowledge towards expanded program on immunization in primary health care centers and to find out association between the nurses knowledge with their socio-demographic characteristics (age, gender, level of education, year of experience andnumber of training session).

Methodology: An assessment descriptive study was conducted at primary health care centers in Al-Amara city during Dec. 29th, 2020 until , 2021 7 July in order to assess the nurse's knowledge concerning vaccination in Immunization units. Analysis of data was performed through the application of description statistic and Inferential statistical (Chi-square test) .

Results : The results of the study indicated that more than one third of the age group in the study sample are within the age of (49 years), as they constituted 34% of the study sample, and with regard to gender, more than two thirds of the participants were males, where they constituted a percentage of (68%), as for the educational level, the study showed that most of the participants are secondary school nursing and the Institute of nursing, the percentage of participants for each of them was (42%). As for the number of years of service, (24) nurses included in the study, spent more than 20 years in service, and constituted (48%) of the study sample. With regard to the number of training session in vaccines, one-third of the participants had one training session, as they constituted (32%) of the studied sample.

In conclusion, the study concluded that most of the participants have a moderate level of knowledge, and they constituted (84%) of the study sample. The study showed no significant correlation between nurses'

knowledge about the EPI and their demographic variables (age, gender, education level, years of experience, and training session about EPI).

Recommendations: The study recommended to increase the awareness of nurses through conferences and other educational tools about the expanded program for immunization, an educational program for nurses for continuous knowledge and renewal of their knowledge and skills to maintain and improve the level of practice and encourage and motivate them to update their knowledge and practices by using the reward system.

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List of Abbreviation

Items	Meaning
EPI	Expanded program on immunization
WHO	World health organizatio
TB	Tuberculosis
UNICEF	United nations children's fun
GIVS	Global immunization vision and strateg
DTP	Diphtheria , tetanus , pertussis
MMR	Measles, mumps, and rubella
HCWs	Healthcare workers'
UK	United kngdom
CRS	Congenital rubella syndrom

BCG	Bacille Calmette-Guérin
DTaP	Diphtheria/tetanus/Acellular pertussis
Hib	Haemophilus influenzaeType b
HPV	Human papillomavirus
HIV	Human immunodeficiency viru
HBsAg	Hepatitis B surface antige
HBV	hepatitis B viru
IPV	Inactivated Polio Vaccin
OPV	Oral polio vaccine
Td	Tetanus Diphtheria
RV5	RotaTeq®
RV1	Rotarix®
MCV	Measles-containing vaccin
PPV	Pneumococcal polysaccharide vaccin
PCV	Pneumococcal conjugate vaccin
Penta	Pentavalen
HEXA	Hexavalent
PREV13	PREVENAR vaccine (pneumococcal vaccine 13-valent)
TT	Tetanus Toxoin
Vit	Vitamin
AEFIS	Adverse events following immunization
ILR	Ice lined referigeratators
HCPs	Healthcare providers

List of Figures

Chapter one

Introducation

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Introduction

1.1 Introductions

The vaccines means stimulate the body's immunity to protect the human against subsequent disease or infection. Immunization is the process whereby a human is made resistant or immune to an infectious disease, typically by the administration of a vaccine (Ghazwan ،and Arkan .،2015).

An expanded program on immunization (EPI) was launched in 1974 by the world health organization (WHO) with the aim of controlling vaccine-preventable diseases, such as tuberculosis, diphtheria, pertussis, tetanus, polio and measles.Immunization has been proved to be one of the most cost-effective parts of health promotion since in many countries after achieving high immunization coverage, the morbidity and mortality rates of vaccine-preventable diseases tended to decline (Widsanugorn ، Harun، and Junichi ., 2011).

The implementation of the EPI in the Americas marked the birth of a major success story. Immunization coverage increased from 50 % in the 1970s to over 80 % by 1992 . In 1994, the region of the Americas became the first of the WHO regions to eliminate poliomyelitis. Likewise, in 2015 and 2016, the Region of theAmericas was declared free of measles, rubella, and congenital rubella syndrome , and in 2017, was declared free of neonatal tetanus (Carissa ., 2018) .

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According to the study conducted by SAARC (reports of August 2013), only 36% of children are fully vaccinated before the age of 12 months in India, as per the national immunization schedule.NFHS 3 survey done in 2005-2006 shows that the immunization coverage in Karnataka against six major diseases such as TB, diphtheria, pertussis, tetanus, polio and measles was only 55% as compared to 81% (highest) in Tamilnadu, 79% in Goa, 75% in Kerala and the least in Nagaland which is 21% (Chaitra ، and Yashoda ., 2014).

Through the strategies and initiatives of the world health organization and the united nations children's fund (UNICEF) such as the global immunization vision and strategy (GIVS) rapid disease control and access to each region red major positive achievements such as increasing the number of children reached and vaccines have been achieved diphtheria tetanus pertussis (DTP), measles reduction significantly reduced and polio eradication almost completely (Mohamed et al ., 2020).

Mozambique conducted a mass immunization campaign against smallpox, measles, and tuberculosis over the period 1976-79. Women of childbearing age also received one dose of tetanus toxoid. In 1980, Immunization became part of the routine child healthServices. In 1985, a "pulse immunization" outreach project was developed in Inhambane Province , and immunIzation in rural areas was conducted during monthly Visits by teams from the district centre, over three Consecutive months.In 1986, programme "accelera Tion" began in the major cities (F. Cutts et al ., 1990).

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In Italy, vaccinations against hepatitis B, MMR, varicella,pertussis, and influenza are currently highly recommended for HCWs , and they are also encouraged to receive tetanus and diphtheria booster doses.However, vaccination coverage for HCWs remains suboptimal. For example, the seasonal influenza coverage was 15.6% in 2017 , still falling below the national target of 75% (Concetta et al ., 2020).

Immunization in pregnancy is a promising strategy to reduce infectious disease-related morbidity and mortality in pregnant women and their infants. Pregnant women and their infants are at high risk of adverse pregnancy outcomes from infections e.g. influenza in the last trimester can lead to severe maternal disease and rubella and zika infections in the mother can lead to congenital anomalies, such as congenital microcephaly (Sonali Kochhar ., 2019) .

Since 2010, UK guidelines recommend that women who are pregnant during the influenza (flu) season, regardless of gestation, should be offered inactivated influenza vaccine.Pregnant women, particularly in the last trimester, and young infants, are at increased risk of severe disease and death from influenza.Flu vaccination coverage during pregnancy in England was 42.3% in the 2015/16 winter season compared to 71% in those aged 65 years and over, in whom vaccination is also recommended (Bhavita Vishram ., 2017) .

Approximately 1.8 million children die within the first month of life with many deaths due to infections with the potential to be prevented

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through existing vaccines or vaccines under development for delivery to pregnant women (Sonali Kochhar ., 2019).

The importance of immunization is so great that the American centers for disease control and prevention has named it one of the "ten great public Health achievements in the 20th Centur. Assessment of immunization program is an important tool as it improves the general status of the immunization program, give solutions to the weakness points as well as it enables immunization awardees with the evidence needed to manage programs more effectively and efficiently, assess and improve existing activities, plan and implement new activities, demonstrate value and ensure accountability (Mohammed , Sayed , and Moustafa .,2018).

Nurses or others who administer vaccination should be knowledgeable and receive continuing education in vaccine storage and handling, the recommended vaccineschedule, contraindications, and precautions prior to administering vaccines andadministration techniques, reporting of adverse events, and vaccine benefit(Ghazwa , and Arkan . ،2015).

1.2. Importance of study:

Immunization is characterized as the procedure by which people immune system becomes resistant against pathogens by administration of vaccine (Sidra , and Shahid ., 2018).

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The world health organization (WHO) acknowledges that immunization is one of the most effective health investments, estimated at preventing between two and three million deaths each year (Heba , Gehan ,and Sanaa. ., 2019).

The creation of the EPI program in 1974 by the World Health organization (WHO) resulted in the global eradication of smallpox and reduced the burden of many infectious diseases, including poliomyelitis, measles, tuberculosis, tetanus, and diphtheria majority of the world (Mohamed et al ., 2020).

Immunizations are a cornerstone of public health .The WHO estimates that, in 2006, immunizations Saved two to three million lives. Nonetheless, in that Same year 1.4 million children are estimated to have Died from vaccine preventable diseases (measles, Haemophilus influenza type B, pertussis, tetanus,yellow Fever, and poliomyelitis), a reflection of incomplete Coverage with existing vaccines that persists in many Parts of the world (Hewaida et al ., 2015).

Despite slow progress in increasing vaccination access and immunization coverage, the expanded immunization program reported 83% coverage of infants worldwide from the three doses of diphtheria tetanus dysentery vaccine in 2011 similar to coverage in 2009 by 82% and 2010 (85%). The expansion and delivery of life-saving vaccines in the 2010-2020 "vaccine’s decade " is expected to save 6.4 million people,

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valued at hundreds of billions of dollars in low- and middle-income countries (Mohamed et al ., 2020).

WHO declared the purpose of the evaluation is to examine the EPI in the context of the health system and its broader surroundings. The evaluation looks at the program's strengths and weaknesses, the efficiency and effectiveness of its activities and its impact. It also assesses the program's capacity to adapt to new demands، both those generated from health sector reform and decentralization, as well as those arising in response to the population's need for access to new vaccines and technologies(Mohammed. , Sayed. , and Moustafa Mahmoud .,2018).

In some areas where immunization coverage is not high. In 2008, WHO ascertained that the number of deaths due to vaccine-preventable diseases among children under five years from all over the world was about 1.7 million per year, and most of the deaths were in developing countries(Teklay et al ., 2006).

Published studies have shown inadequate knowledge and practices of healthcare workers regarding EPI and the cold chain system in many places in the world, especially in remote areas. A previous study found that increasing knowledge regarding EPI and the cold chain system for personnel could increase vaccination coverage and increase the efficiency of EPI and cold chain practices.Some published studies found that vaccine-preventable disease outbreaks in areas that had high

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immunization coverage may have occurred due to primary vaccine failure.(Michalik et al.,2008).

Vaccine failure can be divided into two categories: primary and secondary vaccine failure. Primary vaccine failure means no immunity after immunization due to lack of initial seroconversion. Secondary vaccine failure means loss of immunity after initial seroconversion. Primary vaccine failure can happen by either an inactive vaccine or inadequate host response. Insufficient cold chain systems and practices are possible causes of primary vaccine failure due to inactive vaccines (Pannuti et al.,2004).

The misconceptions related to the administration of the vaccine, and may include things such as vaccine schedules, various beliefs and myths related to the administration of the vaccine in addition to knowledge about each of the vaccines. For this reason, primary health care nurses must be equipped with the knowledge and skills related to immunization to provide the required education that encourages uptake of the vaccine to reduce transmission of vaccine-preventable diseases(Bhavita et al ., 2017).

1.3. Problem statement

Assessment of nurses knowledge towards Expanded program on immunization in primary health care centers at Al-Amara city.

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1.4. Objective of study

1. Assess the nurses knowledge about expanded program on immunization.

2. To found out association between the nurses knowledge with their socio-demographic characteristics such as age, gender, year of experience, number of training session.

1.5. Definition of terms:

1.5.1. Assessment:

Theoretical definition

Assessment is any effort to gather, analyze and interpret evidence which describes institutional departmental divisional or agency effectiveness (Henning ., 2010).

Operational definition:

Process of collection of information about nurses' knowledge of the vaccine schedule, vaccine storage, contraindications and precautions before administering the vaccine and the benefits ofthe vaccine.

1.5.2. Knowledge:

Theoretical definition

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Is the facts, feelings or experiences known by a person or group of people, In organizations, analysis of the word 'knowledge' is more relevant than other social settings (Ekore., 2014).

Operational definition

It refers to the awareness or information that the nurse possesses regarding a program with the vaccination schedule, methods of administering the vaccine, the benefits of the vaccine, methods of preserving the vaccine, and misconceptions to prevent vaccinations.

1.5.3.Expexpanded program on immunization (EPI)

Theoretical definition

An expanded program on immunization (EPI) is one kind of evidence based tool for controlling and even eradicating infectious diseases. It protects against childhood communicable diseases, which can result in death and severe debilitation(Maria Mona .،2014).

Operational definition

It is one of the programs of the world health organization. The expanded program of immunization provides immunization services for children and pregnant women .

1.5.4. Primary health care

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Theoretical definition

Is typically the first contact an individual with a health concern has with the health system. ‘Primary health’ broadly encompasses health care that is not related to a hospital visit, and includes activities such as health promotion, prevention, early intervention, treatment of acute conditions, and management of chronic conditions (Department of Health .,2015).

Operational definition

Institutions that provide comprehensive health care services for all members of society and prevent infectious and non-communicable diseases and provide many services for children and pregnant women.

Chapter Two

Review Of Literatures

Outline

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2	Defination of immunization
3	Immunity
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6	Schedule of vaccinations for children
7	Tetanus vaccine for pregnant women
8	False contraindications
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Chapter Two

Review Of Literatures

2.1. History of Vaccine Development

Edward Jenner and vaccines

Prevention is better than cure is the common proverb of the public across the world. Preventing infectious diseases by the vaccine is the most successful medical invention in the modern therapeutic era(Foziyah Zakir .,2019).

It is unlikely that Jenner was the first person to inoculate cowpox. Claims were later Made on behalf of those who were said to have priority. Particular attention was Paid to Benjamin Jesty, a Dorsetshire farmer, who is reliably believe to have inocu-Lated his wife and family with cowpox in 1774 . However, all these early claims Came to light only after Jenner published in Inquiry, and so had no influence on the Theory or practice of medicine(Stanley ., 2011).

The miracle of vaccines improved the status of public health across the world. This miracle was invented accidentally by Edward Jenner between 1749-1823.On May 14, 1796, Jenner took material from a lesion on the hand of Sarah Nelmes , who had become infected from her master's cows, and inoculated two sites on the arm of 8-year-old James Phipps The lesions developed in about a week, Phipps had some slight indisposition, but recovered uneventfully (Foziyah Zakir .,2019).

Figure(1): **Dr Edward Jenner performing his first vaccination on James Phipps, a boy of age 8 .14 May 1796.**

Jenner variolated him on July 1, but “no disease followed.” At this stage, Jenner submitted his work to the Royal Society for the publication. They declined and suggested that he need more information(Stanley ., 2011).

Undaunted, Jenner experimented on several other children, including his own 11-month-old son. In 1798, the results were finally published and Jenner coined the word vaccine from the Latin 'vacca' for cow .After these findings, Jenner spent the rest of his professional life by supplying cowpox material to others across the world and explained the scientific background. He himself called him“ Vaccine Clerk to the World” (Foziyah .,2019).

”Golden era of vaccines ''Post-Jenner period

Louis Pasteur (1822–1895) is an exceptional scientist who opened a new era in medicine and biology.It was interested in developing various fermented products. His experiences gave a new theory by stopping the old version of automatic generations (P. Berche .,

2012).

The contribution of Pasteur in developing Vaccine laid as a new branch.of medical science termed Immunology Pasteur discovered a vaccine against fowl cholera and presented his work in French academicdes sciences, which can be considered as an origin of Immunology he coined the phenomenon of vaccination in honor of Edward Jenner . After this contribution, Pasteur was interested in the prevention of anthrax. He demonstrated the efficacy of anthrax in cattle and reduced anthrax morality in France (Foziyah Zakir .,2019) .

Figure(2): **Louis Pasteur-Vaccine development**

Robert Koch (1843-1910), a physician from Germany He contributed significantly to microbiology, isolating also cholera and anthrax pathogens, and introducing several postulates in this field (Andrzej Grzybowski et al ., 2014) .

During the time 1878-1880 Pasteur published various research papers on Anthrax.However, Pasteur and Koch were continuously working on anthrax independently providing various experimental data about the causative agent of Anthrax. Pasteur was conducting a large scale immunization programme in 1881 at Pouilly-le-Fort by utilizing 70 sheep. He designed the vaccination schedule at 2 steps.

1. The primary immunization was performed with low virulence culture.
2. After 12 days the secondary immunization was performed with less attenuated culture (Foziyah Zakir .,2019) .

Then after a period of two weeks, the sheep were challenged by inoculating with virulent anthrax strain in vaccinated and unvaccinated sheep. After a few days, the unvaccinated sheep have died but vaccinated sheep were healthy. This finding made Pasteur more successful in vaccinology. Moreover, the concept of booster vaccine also originated later which helped to understand the immune mechanism(Hervé Bazin ., 2011).

Later,in 1885 Pasteur developed a vaccine against rabies, which was the last discovery of Pasteur which ,was the last discovery of Pasteur.

Behring Kitasato in 1902 developed tubercle vaccine prepared from human tubercle Bacilli by attenuation process. Behring termed the vaccine “Bovo. vaccine" which was the first vaccine against tuberculosis. However, the vaccine was inducing a good immune response but offered the risk of human infection from immunized animals. (Foziyah Zakir .,2019).

In 1908 Albert Calmette and Camille Guérin discovered a vaccine against tuberculosis prepared from a strain of live attenuated bovine tuberculosis bacillus, Mycobacterium bovis, and named it Bacillus Calmette-Guérin Trials have demonstrated that the BCG vaccine provides highly variable protection against lung disease , which is the main burden of global TB deaths and is implicated worldwide (Helen ., 2011) .

Figure (3):BCG Calmette Guérin

In 1890 Knud Faber has demonstrated the existence of tetanus toxins . In the same year, Behring and Kitasato demonstrated the production of antitoxins against tetanus antitoxin after immunizing the rabbits . The concept of toxoid vaccine was found out by Ramon and. Descombey in 1920. Albert Sabin in 1961 developed oral Polio vaccine and thus termed as Sabin vaccine It is also called trivalent oral polio vaccine (Foziyah Zakir .,2019).

Figure(4):**Albert Sabin**

Following a widespread epidemic of rubella infection in 1940, Norman Gregg, an Australian ophthalmologist, reported in 1941 the occurrence of congenital cataracts among infants born following maternal rubella. This was

the first published recognition of congenital rubella syndrome (CRS). Rubella virus was first isolated in 1962 by two independent groups, Paul D. Parkman and colleagues and Thomas H. Weller and Franklin A. Neva. The first rubella vaccines were licensed in 1969 (Tatiana Lanzieri et al ., 2020).

Measles is a contagious disease that is caused by a virus Belonging to Paramyxoviridae. A vaccine against measles was first introduced in 1963 and improved in 1968. Vaccination against measles was introduced by Maurice Hilleman and Colleagues . Measles vaccine is usually administered in Combination with other live attenuated vaccines of mumps and rubella (Foziyah Zakir .,2019).

2.2.Defination of immunizations

The World Health Organization (WHO) has defined immunization as the process whereby a person is made immune or resistant to an infectious discuse, typically by the administration of a vaccine. These vaccines help to stimulate the body's own immune system to protect the parson aguinst subsequent infection or discase. WHO also stated that immunization is a proven tool for controlling and eliminating life-threatening infectious disease (WHO.,201 3).

Immunization therefore depicts the ability to develop immunity. Immunity being the stute of having sufficient biological defenses to avoid infection, disease, or other unwanted biologikal invasion (Gherardi .,1989).

The immunization can also be defined a process by which a person becomes protected against a disease through vaccination. This term is often used interchangeably with vaccination or inoculation (CDC ., 2018).

Immunization is one of the most successful and cost effective public health interventions in the constant effon of human beings against discases that affect our wellbeing. Immunization has prevented nre deaths in the past years than any other health intervention globally (Awosika., 2012).

Figure(5) : immunizations

2.3.immunity

Immunity is the ability of the human body to protect itself from infectious disease. The defence mechanisms of the body are complex and include innate(non-specific, non-adaptive) mechanisms and acquired (specific, adaptive) systems (David,Mary,and karen.,2006).

Immunity to a disease is achieved through the presence of antibodies to that disease in a person's system. Antibodies are proteins produced by the body to neutralize or destroy toxins or disease-carrying organisms. Antibodies are disease-specific. For example, measles antibody will protect a person who is exposed to measles disease, but will have no effect if he or she is exposed to mumps (CDC ., 2017).

2.3.1.Active immunity

Active immunity is protection that is produced by an individual's own immune system and is usually long-lasting. Such immunity generally involves cellular responses, serum antibodies or a combination acting against one or more antigens on the infecting organism. Active immunity can be acquired by natural disease or by vaccination. Vaccines generally provide immunity similar to that provided by the natural infection, but without the risk from thedisease or its complications. Active immunity can be divided into antibody-mediated and cell-mediated components (David,Mary,and karen.,2006).

2.3.2.passive immunity

Passive immunity is the transfer of antibody produced by one human or other animal to another rather than being produced by the immune system. Passive immunity Provides protection against some infections, but this Protection is temporary. The antibodies will degrade during a period of weeks to months, and the recipient will no longer be protected (Siegrist C-A ., 2008).

A newborn baby acquires passive immunity from its mother through the placenta. A person can also get passive immunity through antibody-containing blood products such as immune globulin, which may be given when immediate protection from a specific disease is needed.

This is the major advantage to passive immunity; protection is immediate, whereas active immunity takes time (usually several weeks) to develop (CDC ., 2017).

Figure(6) : acquired immunity

2.4.Defination of vaccin

Vaccines are biologics that provide active adaptive immunity against specific diseases. Vaccines usually contain drugs that resemble the microorganisms responsible for the disease and are often made from one of the killed or attenuated microorganisms, their toxins, or their

surface proteins, introduced by mouth, by injectio, or by nasal spray to stimulate the immune system in us and recognize the foreign agents and destroy them(Behbehani, 1983).

Vaccines are usually administered through needle injections, but can also be administered by mouth or sprayed into the nose(CDC ., 2018).

The vaccine can also be defined are a proven tool for controlling and eliminating life threatening infectious diseases and are estimated to prevent between 2 and 3 million deaths each year. It is one of the most cost-effective health investments, with proven strategies that make it accessible to even the most hard-to-reach and vulnerable populations(WHO., 2015).

2.5. type of vaccines

There are four main types of vaccines that act in different ways:

- Live-attenuated vaccines
- Inactivated vaccines
- Toxoid vaccines.
- Subunit, recombinant, conjugate, and polysaccharide vaccines

(Lois zoppi.,2020).

2.5. 1.Live attenuated vaccines

Live attenuated virus vaccines, such as MMR, usually promote a full long-lasting antibody response after one or two doses. To produce an response, the live organism must replicate (grow) in the immune over a period of time (days or weeks). The immune vaccinated individual system responds in the same way as it does to natural infection(David,Mary,and karen.,2006).

Live attenuated vaccines are fragile and can be damaged or destroyed by heat and light . They must be handled an stored carefully. measles, mumps, Currently available live attenuated viral vaccines are rubella, rotavirus , intransal influenza, oral plio . Live attenuat bacterial vaccines are BCG and oral typhoid (Stanley., 2003).

2.5.2. inactivated vaccines

An inactivated vaccine uses a strain of a bacteria or virus that has been killed with heat or chemicals. This dead version of the virus or bacteria is then injected into the body. But this type of vaccine does not trigger a strong immune response like that caused by live attenuated vaccines. Inactivated vaccines do not provide lifelong immunity and need to be increased over time, but they may cause fewer side effects than live attenuated vaccines(Lois zoppi.,2020).

Inactivated vaccines are used to protect against hepatitis A , flu ,polio and rabies (Xiaoxia Dai et al ., 2019).

2.5.3.Toxoid vaccines

Toxoid vaccines use toxins created by the bacteria or virus to create immunity to the specific parts of the bacteria or virus that cause disease, and not the entire bacteria or virus. The immune response is focused on this specific toxin(Lois zoppi.,2020).

Toxoid vaccines tend not to have a duration of immunity comparable to attenuated viral vaccines; therefore, toxid vaccines, like some other types of vaccines, may need booster shots to get ongoing protection against diseases. Revaccination (booster) may be required multiple times in a single year depending on individual patient risk factors.Toxoid vaccines are used to protect against diphtheria and tetanus (Xiaoxia Dai et al ., 2019).

2.5.4. Subunit, recombinant, conjugate, and polysaccharide vaccines

Subunit, recombinant, conjugate, and polysaccharide vaccines use particular parts of the germ or virus. They can trigger very strong immune responses in the body because they use a specific part of the germ. Although the immune responses are strong, these types of vaccines may need topping up over time. They are suitable for people with weakened immune systems and long-term health conditions(Lois zoppi.,2020).

These vaccines are used to protect against haemophilus influenzae type b (Hib) disease, hepatitis B, human papillomavirus (HPV),whooping cough (part of the DTaP combined vaccine),pneumococcal disease meningococcal disease, and shingles (Xiaoxia Dai et al ., 2019).

2.6.Schedule of vaccinations for children

Vaccination schedule is a series of vaccinations, including the timing of all doses (David,Mary,and karen.,2006).

2.6.1.BCG vaccine

This vaccine was named after its inventors Albert and Calmette Guérin in 1908. It was prepared from the attenuated bovine tuberculosis bacillus(Joung ,Ryoo. , 2013).

BCG, a live attenuated tubercle bacillus, is the most widely used vaccine in the world and is also a useful vaccine vehicle for delivering protective antigens of multiple pathogens (C. K stover et al . , 1991).

The vaccine is basically used for Prevention of TB; however other applications have been reported for it, including:protection against leprosy , Protection or delay in Buruli ulcer Immunotherapy of cancers such as bladder cancer, colorectal cancer lung cancer Malignant peripheral nerve sheath tumor and Melanoma diseases such as multiple sclerosis and Parkinson's in animal models(setia et al .,2006).

BCG vaccination should be given to all infants as soon as possible after birth(Jun Liu et al ., 2009).

The standard dose of BCG vaccine is 0.05 ml(Aggarwal et al ., 1995).

The method to administer the BCG vaccine is intradermal (Alice zwerling et al ., 2011).

The World Health Organization recommends that children known to be infected with HIV, even if it is without symptoms, it should not be immunized with BCG(Jun Liu et al ., 2009).

Figure(7): BCG Vaccine

2.6.2.Hepatitis B Vaccine

Neonates exposed to hepatitis B surface antigen (HBsAg) positive mothers are at an increased risk of hepatitis B virus(HBV) infection. Depending on the mother's hepatitis B envelope antigen (HBeAg) statu

.Recommendations of various expert panelsfrom international societies primarily include timely activeand passive immunization with the goal of preventing vertical transmission of HBV to the child(Markus et al ., 2015).

Hepatitis B vaccination is recommended for all infants soon after birth and before hospital discharge. Infants and children younger than 11 years of age should receive 0.5 mL . Primary vaccination consists of three intramuscular doses of vaccine. The usual schedule is 0, 1 to 2, and 6 to 18 months. Infants whose mothers are HBsAg positive or whose HBsAg status is unknown should receive the last (third or fourth) dose by 6 months of age(CDC ., 2005).

Hepatitis B vaccines are routinely given intramuscularly in the upper arm or anterolateral thigh. The buttock must not be used because vaccine efficacy may be reduced.For individuals with a bleeding disorder,vaccines should be given by deep subCutaneous injection to reduce the risk of bleeding(David,Mary,and karen.,2006)

Hepatitis B vaccine is available in combination with haemophilus influenzae type b (Hib) vaccine as Comvax(CDC., 2005) .

The vaccines should be given at a separate site, preferably in a different limb. If given in the same limb, they should be given at least 2.5cm a apart . The site at which each vaccine was given should be noted in the individual’s records(David,Mary,and karen.,2006).

2.6.3.The poliomyelitis vaccination

Polio vaccines are vaccines used to prevent poliomyelitis (polio)(WHO., 2016).

Poliomyelitis is usually caused by a viru transmitted through oral discharge and gets multiplied in the oral larynx and small intestine upon entry into human body. It attacks local lymphoid tissues and then enters blood system, while attacking on nervous system(Ahmad Ali et al ., 2018).

Two types are used an inactivated poliovirus given by injection (IPV) and a weakened poliovirus given by mouth (OPV).The world health organization (WHO) recommends all children be fully vaccinated against polio(WHO., 2016).

A primary series of IPV consists of three doses. In infancy, these primary doses are integrated with the administration of other routinely administered vaccines. The first dose may be given as early as 6 weeks of age but is usually given at 2 months of age, with a second dose at 4 months of age. The third dose should be given at 6–18 months of age. The recommended interval between the primary series doses is 2 months (CDC. , 2009).

The polio vaccine is only given as part of combined product(DTaP/IPV/Hib) vaccine , (DTaP/IPV or dTaP/IPV) vaccine , (Td/IPV) vaccine (David,Mary,and karen.,2006).

When DTaP-IPV/Hib (Pentacel) is used to provide 4 doses at ages 2, 4, 6, and 15-18 months, an additional booster dose of age-appropriate IPV-containing vaccine (IPV or DTaP-IPV [Kinrix]) should be administered at age 4-6 years. This will result in a 5-dose IPV vaccine series, which is considered acceptable by ACIP. DTaP-IPV/Hib is not indicated for the booster dose at 4-6 years of age. ACIP recommends that the minimum interval from dose 4 to dose 5 should be at least 6 months to provide an optimum booster response (CDC .,2009).

The standard dose of the polio vaccine is 0.5 ml.Vaccines are routinely given intramuscularly into the upper arm or anterolateral thigh. This is to reduce the risk of localised reactions, which are more common when vaccines are given subcutaneously . However, for individuals with a bleeding disorder,vaccines should be given by deep subcutaneous injection to reduce the risk of bleeding (David,Mary,and karen.,2006).

2.6.4. Rotavirus Vaccines

Rotavirus vaccine is a vaccine used to protectagainst rotavirus infections, which are the leading cause of severe diarrhea among young children (WHO ., 2013).

oral live attenuated human rotavirus vaccine (Vesikari et al ., 2007).

Two rotavirus vaccines are currently licensed for infants in the United States:RotaTeq (RV5) is given in 3 doses at ages 2 months, 4 months, and 6 months , Rotarix(RV1) is given in 2 doses at ages 2 months and 4 months. The

first dose of either vaccine should be given before a child is 15 weeks of age (CDC ., 2018).

These vaccines should not be administered after 7 months of age because of insufficient data on vaccine safety in children who are 8 months of age and older (Ragaa ., 2017).

2.6.5. Measles vaccine

This vaccine protected children from measles and was licensed in March 1963(Diane , William , and Chien .,2008).

A number of live, attenuated measles vaccines are available, either as monovalent vaccine or as measles-containing vaccine (MCV) in combination with rubella, mumps or varicella vaccines, or some combination of these. When using the combined measles–rubella vaccine, measles–mumps–rubella (MMR) vaccine, or measles–mumps–rubella–varicella (MMRV) vaccine, the protective immune responses to eachindividual vaccine antigen as well as vaccine-associated adverse events remain largely unchanged (WHO ., 2009).

The vaccine is recommended to be given at 9 months. This was soon changed when greater efficacy was observed with older age at vaccination because of concern about possible interference from residual. maternal measles antibody.Because maternal antibodies wane over time, interference diminished with age(Nicole Boulianne et al., 2013).

Measles vaccine administered subcutaneously or intramuscularly (Diane , William , and Chien .,2008).

2.6.6.MMR vaccine

Measles, rubella, and mumps are acute viral diseases that can cause serious disease and complications of disease but can be prevented with vaccination. Vaccines for prevention of measles, rubella, and mumps(Amy Parker et al .,2013).

MMR vaccines are freeze-dried preparations containing live, attenuated strains of measles, mumps and rubella viruses. The three attenuated virus strains are cultured separately in appropriate media and mixed before being lyophilised (David,Mary,and karen.,2006).

MMR vaccine is given in two doses, where the first dose is given at the age of 15 months and the second dose is given at the age of 4-6 years(WHO ., 2017).

Two doses of 0.5ml at the recommended interva vaccines are routinely given intramuscularly into the upper arm or anterolateral thigh.However, for individuals with a bleeding disorder, vaccines should be given by deep subcutaneous injection to reduce the risk of bleeding. The vaccine should not be given to: those who are immunosuppressed , sever allergic reaction to vaccine component or following dose and those who have had a confirmed anaphylactic reaction to neomycin or gelatin (David,Mary,and karen.,2006).

2.6.7. Pneumococcal vaccine

Pneumococcal vaccines are vaccines against the bacterium Streptococcus pneumoniae(WHO. , 2012).

There are two types of pneumococcal vaccine: pneumococcal polysaccharide vaccine (PPV) ،pneumococcal conjugate vaccine (PCV) (David,Mary,and karen.,2006).

The vaccine is given at ages 2, 4 and 6 months(Elisabetta et al .,2015).

The dose of the vaccine is 0.5 ml.Vaccines are routinely given into the upper arm in children and adults or the anterolateral thigh in infants under one year of age. This is to reduce the risk of localised reactions, which are more common when vaccines are given subcutaneously. Vaccines should be stored in the original packaging at +2˚C to +8˚C and protected from light (David,Mary,and karen.,2006).

2.6.8.Pentavalent vaccine

The advent of combination vaccines significantly reduced the volume of immunization activities by decreasing the number of injections, amount of pain and cumulative exposure to preservatives and stabilizers that may contribute to adverse events. In addition, it has facilitated incorporation of additional vaccines into immunization schedule, thereby higher immunization coverage(Mohan Bairwa et al ., 2012).

Pentavalent vaccine is a combination vaccine , offers protection against diphtheria, tetanus, pertussis (DPT), hepatitis B, and Haemophilus influenza type B (Hib) (Sreelakshmi , Neethu , and Anil ., 2014).

The first booster dose is given at the age of 18 months and a second booster dose is given at the age of 4-6 years(Iraqi Ministry of Health., 2014).

The dose of pentavalent vaccine is 0.5 ml The pentavine vaccine dose is 0.5 ml and is given intramuscular injection(David,Mary,and karen.,2006).

DTP and HBV vaccines comes in liquid form and Hib in lyophilized form. Hib and HBV vaccines are mixed to DTP just before administration together(Sreelakshmi , Neethu , and Anil ., 2014).

2.6.9.The hexavalent vaccine

Infanrix hexa is a combination vaccine used for primary vaccination of infants to protect against diphtheria, tetanus, pertussis, hepatitis B, poliomyelitis and disease caused by Haemophilus influenzae type b. Infanrix hexa can also be used for catch-up immunisation for children up to their 10^{th} birthday where these children have missed out on doses of primary immunisations. Multiple studies have shown Infanrix hexa to be safe and highly immunogenic for all its component toxoids/antigens (Sohita Dhillon ., 2010).

multivalent vaccines are of great public health and economic value, as they improve vaccine coverage, reduce costs and potential outbreaks, and allow incorporation of new antigens without increasing the number of injections.The dose of the hexavalent vaccine is 0.5 ml.Primary series consisted of three vaccine doses administered at age 2, 4, and 6 months (Yahiya .,2019).

Table 1 :National immunization schedule for infants and children

Age	vaccine
After birth(First week)	BCG, OPV0 dose, HepB1
2 Months	HEXA 1, OPV1 , ROTA1, PREV13-1
4 Months	HEXA2,ROTA2,PREV13-2 + OPV2
6 Months	HEXA3,ROTA3,PREV13-3 + OPV3
9 Months	Measles + VIT A 100,000 unit
15 Months	MMR first dose (Measles , Mumps , Rubella)
18 Months	Penta vaccine booster first dose , OPV first booster dose, VIT

	A200,000 unit
4-6 years	Penta vaccine booster second dose, OPV second booster, MMR(Measles , Mumps , Rubella) Second dose, VIT A 200,000 unit

(Iraqi Ministry of Health., 2014).

2.7. Tetanus vaccine for pregnant women

Tetanus is an acute infection, non-communicable disease with a high case fatality rate, caused by Clostridium tetani (C. tetani). Tetanus is a disease resulting from a specific toxin produced at site of injury by the anaerobic, spore forming organism C. tetani which is finding in soil and feces. Tetanus has been a major cause of death worldwide, largely due to inadequate vaccination and poor wound prophylaxis(Hassan et al ., 2019).

Tetanus can cause severe morbidity Neonatal tetanus usually occurs in newborns through infection of the unhealed umbilical stump, especially when the stump is cut with a non-sterile instrument. Tetaus is prevented only through vaccination. The tetanus vaccine contains noninfectious toxoids. Tetanus toxoids appear safe during pregnancy and are administered in

many countries of the world to prevent neonatal tetanus (Ramesh , Mukesh , and Pardeep ., 2015).

The tetanus vaccine contains noninfectious toxoids. Tetanus toxoids appear safe during pregnancy and are administered in many countries of the world to prevent neonatal tetanus. The world health organization (WHO) reported that neonatal tetanus kills over 200,000 newborns each year; almost all these deaths occur in developing countries while it is very rare in developed nations(WHO. , 2015).

To maximize the maternal antibody response and passive antibody transfer to the infant, the national immunization schedule in India recommends the 2 doses of tetanus toxoid (TT) for unknown immunization status of pregnant women i.e the first dose of tetanus toxoid should be administered as soon as pregnancy is detected and the second dose is given 4 weeks after the first dose (Ramesh , Mukesh , and Pardeep ., 2015).

The third dose at least six months later(Vittorio et al ., 2015).

The third dose of tetanus vaccine provide protection for at least 5 years After TT vaccination, the antibodies formed in mother are transferred to baby and protect baby for a few months after birth. TT vaccination also helps to prevent premature birth or delivery (Ramesh , Mukesh , and Pardeep ., 2015).

Then one dose in each subsequent pregnancy (or at intervals of at least one year), to a total of five doses (Vittorio et al ., 2015).A shown in the table below

Table(2):The vaccination schedule for pregnant women with tetanus toxoid vaccine.

Dose	The date of the vaccine	Duration of protection
The first dose	The fourth month of pregnancy	It does not provide any protection
The second dose	Fifth month of pregnancy	Provide protection for 3 years
The third dose	Six months after the date of the dose the second	Provides protection for 5 years
Fourth dose	One year after the date of the dose the third	Provides protection for 10 years
Fifth dose	One year after the date of the dose the fourth	Provides protection for 15 years

(Iraqi Ministry of Health., 2014).

Figure(8):Tetanus Toxoid (TT) Injection during pregnacy

2.8.False contraindications

False contraindications have been identified as one of the primary reasons for under-vaccination of children in the world. During an immunization session, some scheduled shots are intentionally delayed or withheld due to erroneous judgment of a contraindication, or a misperceived harm stemming from the doubts carried by healthcare providers. This has a direct impact on the immunization coverage and indirectly contributes to vaccine hesitancy among caregivers, creating a false safety concern(Rivero et al ., 2019).

False contraindications General for all vaccines Mild acute illness with or without fever mild-to-moderate local reaction (i.e., swelling, redness, soreness) ،Low-grade or moderate fever after previous dose ، Current antimicrobial therapy, Convalescent phase of illness ، Preterm birth (hepatitis B vaccine is an exception in certain circumstances)(CDC ., 2011).

Recent exposure to an infectious disease، History of penicillin allergy, other non-vaccine allergies, relatives with allergies, or receiving allergen extract immunotherapy(R. Opri et al ., 2018).

2.9.vaccine cold chain

The cold chain is the interconnection of equipment or people that ensure vaccine Potency by keeping vaccine cold all the way from the manufacturer to the Mother/child. Equipment Materials that are used in the cold chain include: thermometers , ice packs ,vaccine carriers , cold boxes , refrigerators and freezers(Amsalu Feleke et al .,2002).

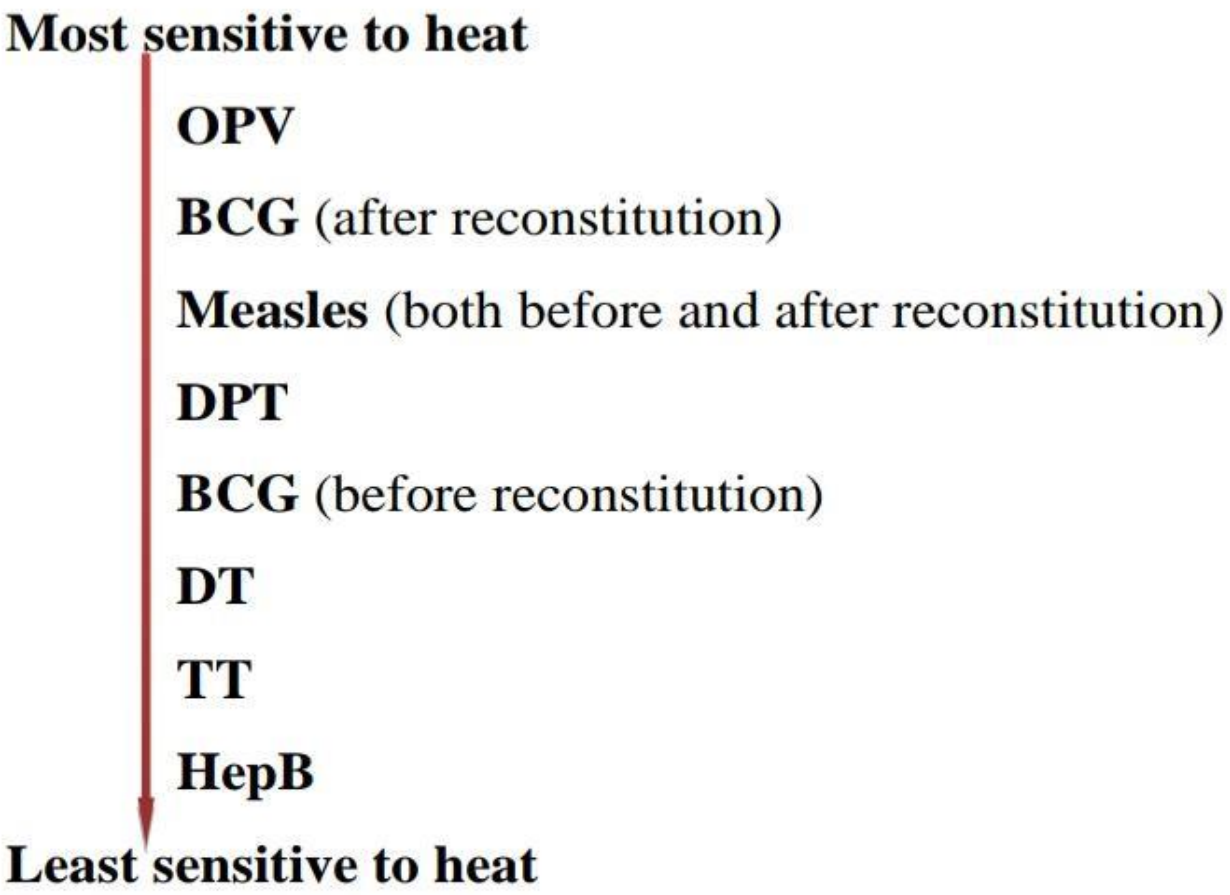
The maximum times and temperatures for storage of EPI vaccines at different levels of the cold chain as recommended by WHO (WHO ., 1998).

During transport between one level and the next, all vaccines must be maintained at a temperature between $^{+}2\ ^{0}C$ and $^{+}8\ ^{0}C$; vaccines should kept for a maximum of 6 months, 3 months and 1 month at national, regional, district and health facility levels respectively and from national to district levels; OPV , measles, and mumps vaccines should be stored at $^{-}15$ to $^{-}25\ ^{0}C$; hepatitis B, DPT , DT , TT, and BCG at 0 to $^{+}8\ ^{0}C$; and at health facility level all vaccines should be stored at 0 to $^{+}8\ ^{0}C$ (Abebe ., 2015).

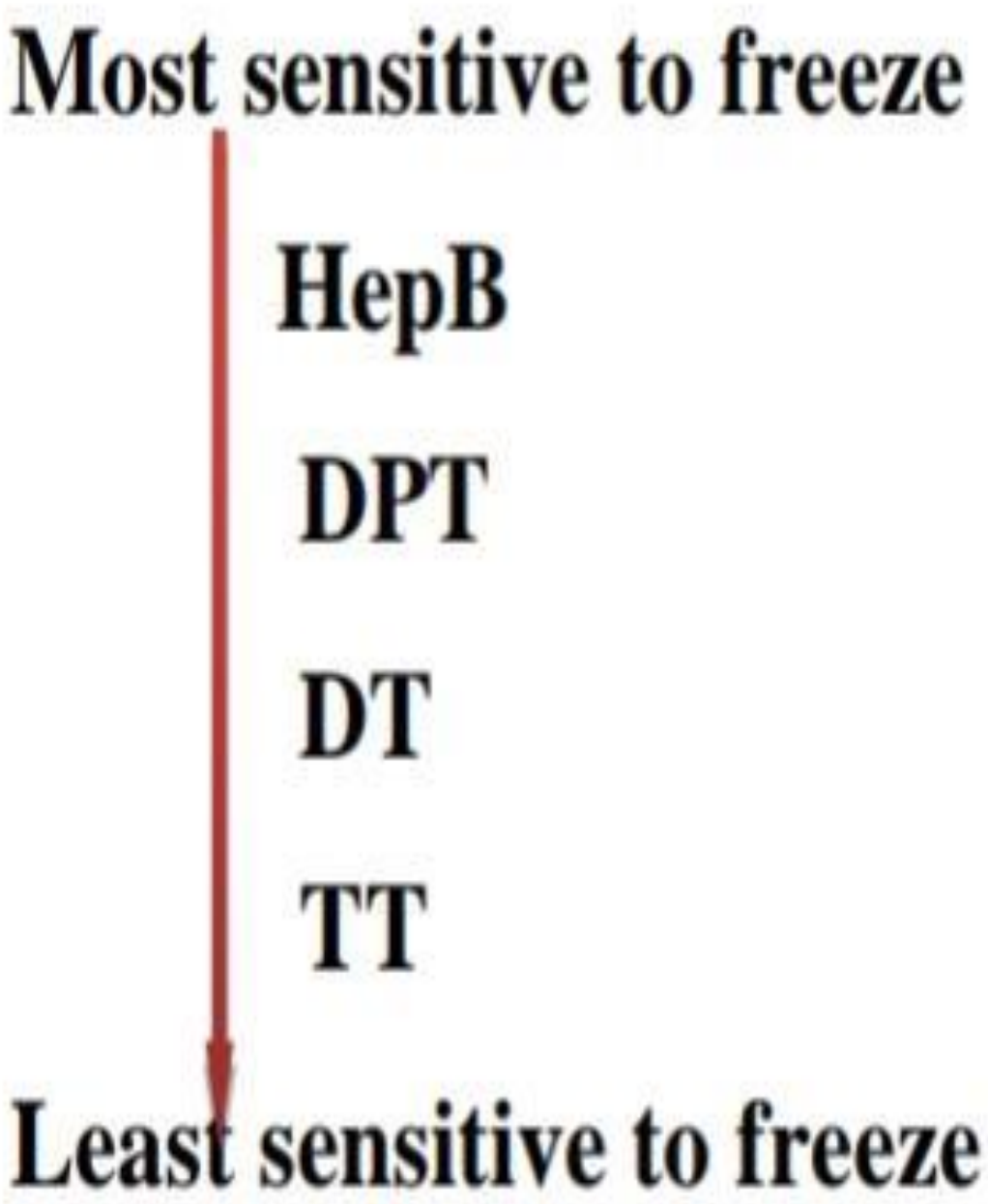
All vaccines are heat sensitive. Reconstituted BCG and measles are the most sensitive to heat and light. Since these vaccines do not contain preservatives, there is risk of contamination (increases chances of AEFIs (Adverse events following immunization). Therefore, BCG and Measles should not be used after 4 hours of reconstitution(Yogindra Samant et al ., 2007).

In ILR, BCG, mumps, polio and measles vaccines if not kept in a separate freezer should be kept In the bottom, where it is coldest and DPT, DT and hepatitis B vaccines should be kept in the baskets, nearer to the top. Do not put these vaccines within 15cm of the bottom of the Compartment to avoid the risk of accidental freezing. Those vaccines other than these should be Kept at the middle part of the ILR (Abebe ., 2015).

Ideally, the fridge containing vaccines should not be used to store other drugs in order to prevent two potential dangers: problem of not maintaining the recommended temperature range and wrongly administering drugs that have been packaged in similar color vials as the vaccine vials (WHO ., 2002).



Figure(9):Heat sensitivity of some vaccines



Figure(10) : Freeze sensitivity of some vaccines

Figure(11): vaccine carriers

Figure(12): thermomete

Figure(13):Ice lined referigeratators (ILR)

Figure(14):Deep freezer

2.10.previous studies

Several studies that similar to our study have been showed different results, for example In 2014, it was conducted Ghazwan and Arkan study about Evaluation of the Nurses' Practices Concerning Vaccination at Primary Health Care Centers in Al-Amarah City . A non-probability sample of 70 nurses was selected.

The results of this study indicated that the majority of the sample members are within the age group (40 to 49) years, where they formed 54,3 % . With regard to gender, it was found that most of the participants were males, as they were formed 70 %. Concerning to their educational level, the highest percentage of the sample was technician institute graduate who represented (58.6%). Concerning the number of training courses (63.3%) of the subjects had between 1 to 3 training courses regarding to vaccination.

Findings of the study had demonstrated that majority of the participants had correct practice concerning vaccination; and showed there were a significant association between the nurse's practices and their demographic characteristics of age, gender, education, and training crosses.

The study recommended the need to develop the skills necessary to perform the process of vaccination for nurses in order to improve their practices; in addition, the study recommended the establishment of.

scientific conferences and development courses for nurses working in immunization units.

And in another study conducted Hewaydah and others Study about Knowledge and practice of health care providers regarding routine vaccination of children in primary health care facilities in Quesna district, Menoufia governorate, Egypt in 2014 .

This cross-sectional study included 140 HCPs and 14 primary healthcare units and one center in Quewisna District, Menoufia, Egypt. A self-administered questionnaire and observational checklist were applied to collect data.

The questionnaire assessed the knowledge of HCPs about the storage, handling, administration, scheduling, doses, routes, and contraindications of the different vaccines routinely used for children under 5 years of age in primary healthcare facilities. The checklist assessed the practice of HCPs as regards cold chain, room layout, preparation for vaccination session, and general and specific practice related to each vaccine.

The total knowledge score was higher among high nurses (nurses with nursing bachelor degree) and HCPs who received training courses. The postvaccination practice was poor compared with prevaccination and during-vaccination practice. According to these findings, the knowledge of HCPs as regards all vaccines is satisfactory, except for Hib vaccine. A regular training course to improve the HCPs' knowledge about immunization is highly recommended.

Chapter Three

Methodology

Chapter Three

Methodology

3.1. Design of the Study:

A descriptive design is carried throughout the present for the period from 29 December 2020 to 7 July 2021 to assessment of nurses' knowledge towards expanded program on immunization in primary health care centers at Al-Amara City.

3.2. Administrative Arrangements:

We submitted a request to the deanship of the college of Nursing concerning of address the health department of Maysan about facilitating the task of collecting samples, where the deanship issued a letter to the department of health of Maysan entitled facilitation of the task and the case of receipt of the book to the department of health Maysan approved and refer to its primary health care centers (PHC) tofacilitate the task of researchers to collect samples. The centers which selected from first primary health care sector as in **(Appendix A).**

3.3. Setting of the Study:

A study was conducted to assess the nurses' knowledge of the direction of immunization in Maysan Governorate Center, Maysan Health Department, Public Health Department, First Architecture Sector, and

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included the distribution of samples to 10 primary health care centers **(Appendice B).**

3.4. Sample of the Study:

A purposive non probability sample of (50) nurses who were actually responsible to give vaccines at PHC centers who were selected for the purpose of this study.

3.4.1.Inclusion criteria

1. Nurses who work in Immunization unit.
2. The nurses who agreed to participate in the study.
3. Male and female nurses.
4. Nurses who have at least one year of experience or more.

3.4.2. Exclusion criteria

1. The pharmacist.
2. The doctor.
3. Nurses who work in other programs.
4. Nurses who refused to participate in a study.

3.5.Selection of the sample

The sample was randomly selected for nurses who work in the first architecture sector during the study period, and they met the study criteria and agreed to participate. The sample assigned to the current study consisted of (6) nurses from AL-Ameer health center Model , (3) nurses

from -Askan PHC , (4) nurses from Ali –Alhadi PHC , (6) nurses from AL-Alsidarin PHC , (5) nurses from AL-Haya alwahdat al islami PHC , (4) nurses from AL- Aleuruba PHC , (6) nurses from Hayi Alhusayn PHC , (5) nurses froma typical Degla health center, (6) nurses from Alhasan Aleaskarii health center، (5) nurses from Al-Jawadin Health Center

3.6. The Study Instrument:

For the purpose of the present study, the questionnaire had been designed and constructed by the investigator, depending on guideline of vaccination at health institutions 2011, which were under supervision of MOH in Iraq, and after extensive review of relevant literature and studies concerning knowledge of nurses' in vaccination.

Questionnaire has been constructed consisting of (25) items with two parts **(Appendix C).**

Part I : demographic characteristics:

The first part of the questionnaire is related to demographic characteristics and includes (5) items of age, gender ,level of education and number of immunization courses.

Part II:

The questionnaire Sheet for assessment of nurses' knowledge towards expanded program on immunization; These questions have been constructed to assess of nurses knowledge toward expanded program on Immunization It comprises(4) section as the following :

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Section one : It consist of (5) items concerned with general information of vaccines.

Section tow: It consist of (5) items concerned with schedule of vaccinations.

Section three: It consist of (5) items concerned with The dose and the method of administration.

Section four: It consist of (5) items concerned with False contraindications in administration of vaccines.

The items are classified according to multiple options. Each question consists of 4 options. The questions were scored as correct (1) point and incorrect (0) points .

3.7. Validity of the Questionnaire:

Content validity of the questionnaire has been determined through the use of panel of experts, to investigate the content of the questionnaire for clarity and adequacy in order to achieve the present study objectives. A preliminary questionnaire designed to collect the data, to be presented to has been (4) experts in order to determine validity. These experts have been asked to review the questionnaire relative to their responses all of them have agreed on the content and structure of the questionnaire and the change makes according to their suggestions **(Appendix D).**

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3.8.Methods of Data Collection :

After permission was obtained from Maysan health department. The data were collected for the original study through applying a constructed questionnaire format and interview technique as mean of data collection.Data collection began on February 7, 2021, until February 18, 2021.

3.9. Pilot Study:

A pilot study was conducted on samples (10) of nurses who were excluded from the study sample to determine the reliability of the questionnaire The study aimed at:

3.9.1. Obtaining the clarity and the content adequacy of the questionnaire and observation.

3.9.2.Estimating the time required for the data collection.

3.9.3. Identifying the barriers that may be encountered during the data collection process.

3.10. Reliability Indicators Inter and Intra examiner

the questionnaire reliability is concerned with the consistency and dependability of the research instrument. Determination of reliability of the questionnaire is based on Cronbach's Alpha reliability, the result of the nurses' knowledge about vaccines is (25) items (r= 0.87). The finding of the pilot study indicates that the instrument is adequately reliable for the present study as shown in **(Table3)**.

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Table (3): Reliability of the Questionnaire or the Studied Criteria "Knowledge through Alpha (Cronbach)

Methods of Reliability	Studied criteria	Standard lower bound	Actual values	Assessment
Alpha (Cronbach)	Knowledge	0.60	0.865	Pass

This table is statistically formed to show the reliability coefficient for the instrument of the present study. Its results show that there is an acceptance level of alpha cronbachs' value for the questionnaire, and then there is a high acceptance level of reliability for instrument.

3.11.Statistical Analysis:

Data are analyzed through the use of SPSS (Statistical package for Social Sciences) version 24.0 application Statistical analysis system and Excel application the following statistical data analysis approaches were used in order to analyze and assess the results of the study:

3.11.I. Descriptive data analysis:

1- Tables (Frequencies and Percentages).

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2- Summary Statistics tables including: Arithmetic Mean ($\bar{x}$) with their standard deviation (SD).

3.11.II. Inferential data analysis:

These were used to accept or reject the statistical hypotheses, which included the following:

1- Chi-square test for testing the different of distribution of the observed frequencies and their non restricted of an expected outcomes .

3.12. Limitations of the Study:

The present study has experienced the following limitations:

1. The small sample size could be a major limitation of this study.

2. The lack of research and studies related to this study.

3. The finding of the study is limited only to the nurses' selected from PHC centers in Al-Amara city

Chapter four

Results and Findings

Chapter four

Results and Findings

This chapter presents the findings of the data analysis systematically in tables and these correspond with the objectives of the study as follows:

Table (4): Distribution of the nurses by their demographic data

No.	Variables	Characteristics	F	%
1.	Age (year)	≤ 25	8	16.0
		26-30	8	16.0
		31-35	2	4.0
		36-40	7	14.0
		41-45	8	16.0
		≥ 46	17	34.0
		Total	50	100.0
		$\bar{x} \mp$ Std. Dev.	29.95 ± 8.048	
2.	Gender	Male	34	68.0
		Female	16	32.0
		Total	50	100.0
3.	Level of Education	School Nursing	4	8.0
		Secondary School Nursing	21	42.0
		Nursing Institute	21	42.0
		College of Nursing	4	8.0
		Total	50	100.0
4.	Years of Experience	< 5 years	10	20.0
		5-9 years	7	14.0
		10-14 years	5	10.0
		15-19 years	4	8.0
		≥ 20 years	24	48.0
		Total	50	100.0
5.	Training Sessions	None	11	22.0
		1sessions	16	32.0
		2 sessions	6	12.0
		3 sessions	5	10.0
		4 sessions	5	10.0
		5 sessions	3	6.0
		6 and more	4	8.0
		Total	50	100.0

No. = number of Variable , F= Frequencies , % = Percentages, Arithmetic Mean ($\bar{x}$) and Std. Dev.= Standard. Deviation.

The results of this table show that the more of one-third of age group in the study sample were within (46 years) it presented 17(34%), with arithmetic mean and standard deviation (29.95 ± 8.048). The above table also shows that the more two-third of participants 34(68%) were male. Also with regard to level of education,the results showed that the majority of the participants were secondary school nursing and the institute of nursing, where the percentage of each 21(42%). In addition, years of experience of nurses 24 (48%) have (≥ 20 years) in the service. In addition, the number of immunization training sessions was approximately one-third of the participants 16 (32%) have (1sessions).

Table (5): Assessment of Nurses Knowledge towards Expanded Program on Immunization in Primary Health Care Centers at Al-Amara City

No	Items	Correct		Incorrect		Mean	S.D.	Ass.
		F	%	F	%			
1	The BCG vaccine is a type of vaccine	37	74.0	13	26.0	**0.74**	0.443	G
2	The third dose of tetanus vaccine given to pregnant women can provide protection for	36	72.0	14	28.0	**0.72**	0.454	G
3	The interval between a dose of hex vaccine and another dose of not less than	20	40.0	30	60.0	**0.40**	0.495	M
4	Active immunity consists of	8	16.0	42	84.0	**0.16**	0.370	P
5	One of the vaccines below should be placed at the bottom of the refrigerator	46	92.0	4	8.0	**0.92**	0.274	G
6	The second dose of the Hexagonal vaccine is given at the age of	34	68.0	16	32.0	**0.68**	0.471	G
7	The fourth dose of tetanus vaccine is given to pregnant women after	45	90.0	5	10.0	**0.90**	0.303	G
8	The first booster dose of OPV is given at	48	96.0	2	4.0	**0.96**	0.198	G

9	**The first dose of the pneumococcal vaccine is given at**	47	94.0	3	6.0	**0.94**	0.240	**G**
10	**The first booster dose of the pentavalent vaccine is given at**	49	98.0	1	2.0	**0.98**	0.141	**G**
11	**The BCG vaccine dose is**	19	38.0	31	62.0	**0.38**	0.490	**M**
12	**The MMR vaccine is given by**	16	32.0	34	68.0	**0.32**	0.471	**P**
13	**The dose of oral polio vaccine is**	50	100.0	-	--	**1.00**	0.000	**G**
14	**The BCG vaccine is given by**	20	40.0	30	60.0	**0.40**	0.495	**M**
15	**The dose of the pentavine vaccine is**	35	70.0	15	30.0	**0.70**	0.463	**G**
16	**BCG vaccination is prohibited in all of these cases, except for**	3	6.0	47	94.0	**0.06**	0.240	**P**
17	**The MMR vaccine is prohibited in all of these cases, except for**	2	4.0	48	96.0	**0.04**	0.198	**P**
18	**The pneumococcal vaccine is prohibited in all of these cases, except for**	7	14.0	43	86.0	**0.14**	0.351	**P**
19	**The pentavalent vaccine is prohibited in all of these cases, except for**	12	24.0	38	76.0	**0.24**	0.431	**P**
20	**Vaccines are prohibited in all of these cases, except for**	7	14.0	43	86.0	**0.14**	0.351	**P**

No. = number of item , F=frequencies , % = Percentages, M.S.= mean of score. Ass.= assessment; assessment levels : (0.00-0.33) = Poor; (0.34-0.67) = Moderate; (0.68-1.00) = Good.

Table (5) reveals that there are good level of arithmetic mean in items related to assessment of nurses' knowledge towards expanded program on immunization in primary health care centers at the study sample, except items (4, 12, 16, 17,18,19,&20) show that poor level of knowledge. While items (3, 11& 14) reveals that there are moderate level.

Table (6): Overall assessment of nurses' knowledge regarding the expand immunizations program at health care center

Levels of Assessment	Frequency	Percent
Poor: (0.00 - 0.33)	2	4.0
Moderate: (0.34 - 0.67)	42	84.0
Good: (0.68 - 1.00)	6	12.0
Total	**50**	**100.0**
$\bar{x} \mp$ Std. Dev	**0.54 ± 0.113**	

Arithmetic Mean ($\bar{x}$) and Std. Dev.= Standard. Deviation.

This table reveals that the majority of participants have a moderate level of nurses' knowledge toward expand program on immunizations at primary health care center at the study sample (n=50; 42(84%).

Table (7): Association between the nurses' knowledge and their ages

Age		Nurses' Knowledge			Total
		Poor	Moderate	Good	
20-25	**F**	0	7	1	8
	%	0.0%	14.0%	2.0%	16.0%
26-30	**F**	1	7	0	8
	%	2.0%	14.0%	0.0%	16.0%
31-35	**F**	0	2	0	2
	%	0.0%	4.0%	0.0%	4.0%
36-40	**F**	0	5	2	7
	%	0.0%	10.0%	4.0%	14.0%
41-45	**F**	1	6	1	8
	%	2.0%	12.0%	2.0%	16.0%
≥ 46	**F**	0	15	2	17
	%	0.0%	30.0%	4.0%	34.0%
Total	**F**	2	42	6	50
	%	4.0%	84.0%	12.0%	100.0%

chi-square	χ^2obs.= 7.385	χ^2crit. =18.13	df=10	P < 0.01	P value=0. 689

F= Frequencies , % = Percentages, χ^2obs. = chi-square observed, χ^2crit = chi-square critical , df= degree of freedom, p = probability value, P > 0.05=None significant.

Table (7) indicates that there was non- significant relationship between nurses' knowledge toward expand program on immunizations and their age at (P > 0.05), when analyzed by chi-square test.

Table (8): Association between the nurses' knowledge and their gender

Gender		Nurses' knowledge			Total
		Poor	Moderate	Good	
Male	F	2	29	3	34
	%	4.0%	58.0%	6.0%	68.0%
Female	F	0	13	3	16
	%	0.0%	26.0%	6.0%	32.0%
Total	F	2	42	6	50
	%	4.0%	84.0%	12.0%	100.0%
χ^2obs.= 1.856	χ^2crit. =5.99	df=2	P > 0.05	p-value=0. 395	

F= Frequencies , % = Percentages , χ^2obs. = chi-square observed, χ^2crit = chi-square critical , df= degree of freedom, p = probability value, P > 0.05= non-significant.

The data analysis presented in table (8) shows that there was no a significant relationship between nurses' knowledge toward expand program on immunizations and their gender at (P > 0.05), when analyzed by chi-square test.

Table (9): Association between the nurses' knowledge and their educational level

Level of educational		Nurses' knowledge			Total
		Poor	Moderate	Good	
School Nursing	F	0	4	0	4
	%	0.0%	8.0%	0.0%	8.0%
Secondary School Nursing	F	1	19	1	21
	%	2.0%	38.0%	2.0%	42.0%
Nursing Institute	F	1	16	4	21
	%	2.0%	32.0%	8.0%	42.0%
College on Nursing	F	0	3	1	4
	%	0.0%	6.0%	2.0%	8.0%
Total	F	2	42	6	50
	%	4.0%	84.0%	12.0%	100.0%
χ^2obs.= 3.628[a] χ^2crit. =12.59 df=6 P > 0.05 p value=0.727					

F= Frequencies , % = Percentages, χ^2obs. = chi-square observed, χ^2crit = chi-square critical , df= degree of freedom, p = probability value, P > 0.05= non-significant.

The findings in table (9) revealed that there was a non-significant relationship nurses' knowledge toward expand program on immunizations and their educational level at (P > 0.05),when analyzed by chi-square test.

Table (10): Association between the nurses' knowledge and their years' experience

Years' Experience		Nurses' knowledge			Total
		Poor	moderate	Good	
Less than 5	F	0	10	0	10
	%	0.0%	20.0%	0.0%	20.0%

5-9	F	1	4	2	7
	%	2.0%	8.0%	4.0%	14.0%
10-14	F	0	5	0	5
	%	0.0%	10.0%	0.0%	10.0%
15-19	F	0	4	0	4
	%	0.0%	8.0%	0.0.%	8.0%
20 and more	F	1	19	4	24
	%	2.0%	38.0%	8.0%	48.0%
Total	F	2	42	6	50
	%	4.0%	84.0%	12.0%	100%
χ^2obs.= 8.177[a]		**χ^2crit. =15.51**	**df=8**	**P > 0.05**	**P value=0. 416**

F= Frequencies , % = Percentages , χ^2obs. = chi-square observed, χ^2crit = chi-square critical , df= degree of freedom, p = probability value, P > 0.05= non-significant

The results of data analysis, as presented in table (10) revealed that there was not a significant relationship between years of experience and their nurses' knowledge toward expand program on immunizations at (P > 0.05), when analyzed by chi-square test.

Table (11): Association between the nurses' knowledge and their training sessions

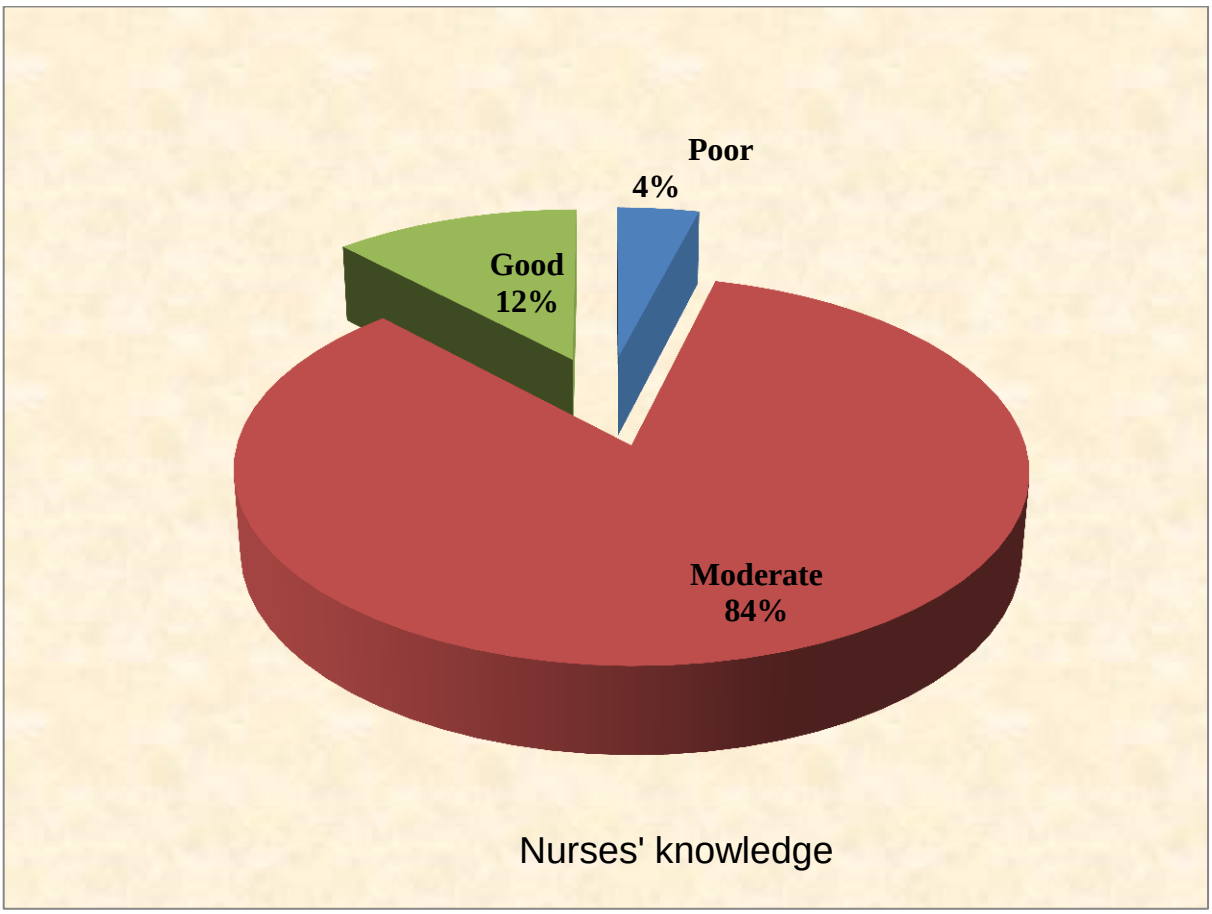
Training Sessions		**Nurses' knowledge**			**Total**
		Poor	**moderate**	**Good**	
None	**F**	0	10	1	11
	%	0.0%	20.0%	2.0%	22.0%
1	**F**	2	14	0	16
	%	4.0%	28.0%	0.0%	32.0%
	F	0	4	2	6

2	**%**	0.0%	8.0%	4.0%	12.0%
3	**F**	0	4	1	5
	%	0.0%	8.0%	2.0%	10.0%
4	**F**	0	3	2	5
	%	0.0%	6.0%	4.0%	10.0%
5	**F**	0	3	0	3
	%	0.0%	6.0%	0.0%	6.0%
6	**F**	0	4	0	4
	%	0.0%	8.0%	0.0%	8.0%
Total	**F**	2	42	6	50
	%	4.0%	84.0%	12.0%	100.0%
χ^2obs.= 13. 763[a]	**χ^2crit. =21.0 3**		**df= 12**	**P < 0.01**	**p value=0.316**

F= Frequencies , % = Percentages, χ^2obs. = chi-square observed, χ^2crit = chi-square critical , df= degree of freedom, p = probability value, P > 0.05= None significant

The table (11) indicates that there is not significant relationship between nurses' knowledge toward expand program on immunizations and their training courses at (P > 0.05), when analyzed by chi-square test.

Figure (15): Pie chart illustrate levels of nurses' knowledge about expand program on immunizations



This figure is show that the majority of participants have a moderate level of nurses' knowledge regarding expand program on immunizations at the study sample.

Chapter five

Discussion of the study results

Chapter Five

Discussion of the Study Results

This chapter presents a systematically organized observation and reasonably derived discussion from the results, with the support of the available literature and related studies.

5.1.Distribution of the study sample according to demographic data:

The data analysis revealed that the more of one-third of age group in the study sample were within (46 years) it presented 17(34%) .This result is disagree a study conducted by Ebtesam et al (2018) that study assessing primary health care nurses' knowledge toward immunizations where it found that the majority of the samples ranged in age (25- 33)years , where they constituted(60.6 %) of the study sample.

The results of the study showed that more than two-thirds of the participants were 34 (68%) were male. This result is consistent with a study conducted by Ghazwan and Arkan (2015) , which studied evaluation of the nurses' practices concerning vaccination at primary health care centers in Al-Amarah city where they found the majority of participants were male (49) where they constituted(70 %) of the study sample .

As for the educational level, the results showed that the majority of participants are from secondary school, nursing the Institute of nursing, where the percentage of participants of each 21 (42%) .This result is

disagree a study conducted by Ebtesam et al (2018) that study assessing primary health care nurses' knowledge toward immunizations where it found that the majority of the samples the highest level of education for the majority of participants was bachelors' level 54 where they constituted(81.8%) of the study sample .

In addition, years of experience of nurses 24 (48%) have (≥ 20 years) in the service. This result is disagree a study widsanugorn et al (2015) and studied healthcare workers' knowledge and practices regarding expanded program on immunization in Kalasin, Thailand. Where the results of a study showed that the majority of participants (72) have experience in immunization work less than 61.5% .

Finally , the number of immunization training sessions was approximately one-third of the participants 16 (32%) have (1sessions) This study corresponds to a study by Ghazwan and Jarkan (2015) , which studies the knowledge of nurses related to primary health centers in the city of Al - Amara where the majority of sample members was 63.3% they have one to three training .

5.2 Assessment of Nurses Knowledge towards Expanded Program on Immunization in Primary Health Care Centers at Al-Amara City

The result of (Table4) show that (100%) of nurses' know the dose of oral polio vaccine , While, just (4%) of nurses' knowledge about misconceptions about preventing the administration of the vaccine MMR .However regarding this result 84% of the participants have a moderate level of knowledge and 12% have a good level of knowledge. This was

helped by the higher education level of the majority of the participants. As the majority of the study participants are certificate holder secondary school nursing and the institute of nursing.Also, the majority of participants have One training sessions on immunization.

These results are consistent with its study by by Mohammed et al (2018) that studies assessment of expanded program of immunization provided for children less than five years in family health centers at Cairo governorate where the results of the study revealed that the general knowledge towards different vaccines was accepted and the majority of HCPs recorded an average level of knowledge by percentage of 71%, followed by the high level of knowledge by percentage of 27%.

These results are close to a study he conducted Eman et al (2020) that studies nurses knowledge and practice regarding adverse events of vaccines in expanded program on immunization in health care centers Where did this study appear the 96.9% of the studied nurses have satisfactory knowledge.

As a result of our study disagrees with a study conducted by concetta et al (2020) that studies healthcare workers' knowledge, attitudes, and practices about vaccinations: a cross-sectional study in Italy where the results of the study that the HCWs had a poor level of knowledge, since only 14.1% were aware and knowledgeable about all vaccines recommended for them. It is well known that HCWs have a crucial role in vaccinations, and they should have adequate knowledge in order to correctly inform the population and the most fragile and susceptible

client.

5.3. Association between the nurses knowledge about expanded program on immunization with their socio-demographic:

5.3.1 .Association between the nurses' knowledge and their ages:

Our study indicates that there was non- significant relationship between nurses' knowledge toward expand program on immunizations and their age .

As a result of our study disagrees with a study conducted by Eman et al (2020) that studies nurses knowledge and practice regarding adverse events of vaccines in expanded program on immunization in health care centers where the results indicated there were statistically significant difference between the overall knowledge with age.

5.3.2. Association between the nurses' knowledge and their gender:

Our study indicates that there was no a significant relationship between nurses' knowledge toward expand program on immunizations and their gender.

As a result of our study consistent with study conducted by José et al (2021) that studies knowledge, attitudes, and sources of iformation on vaccines in Spanish Nursing Students: A cross-sectional study Where the results indicated no a significant relationship between nurses' knowledge and gender .

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5.3.3.Association between the nurses' knowledge and their educational level:

Our study indicates that there was a non-significant relationship nurses' knowledge toward expand program on immunizations and their educational level .

As a result of our study disagrees with a study conducted by Hewaida et (2016) that studies knowledge and practice of healthcare providers as regards routine children vaccination in primary healthcare facilities of Quewisna district, Menoufia governorate this study confirmed that nurses with a bachelor's degree in nursing have better knowledge compared to nurses with a nursing diploma, health workers and doctors. This may be due to higher qualifications and more practice around vaccination.

And also disagrees with a study conducted by fatma et al (2019) that studies assessment of nurses role in vaccination sessions in primary health care units in El-Hossania city at Sharkia governorate this study showed there was statistical significant relation between adequate knowledge and bachelors .

5.3.4. Association between the nurses' knowledge and their years' experience :

Our study indicates that there was not a significant relationship between years of experience and their nurses' knowledge toward expand program on immunizations .

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As a result of our study disagrees with a study conducted by Mohammed et al (2018) that studies assessment of expanded program of immunization provided for children less than five years in family health centers at Cairo governorate Where this study showed that there was a significant positive correlation between total knowledge score with duration of experience years.

5.3.5.Association between the nurses' knowledge and their training sessions:

Our study indicates that there not significant relationship between nurses' knowledge toward expand program on immunizations and their training courses . As a result of our study disagrees with a study conducted by Mohammed et al (2018) that studies assessment of expanded program of immunization provided for children less than five years in family health centers at Cairo governorate Where this study showed that reception training sessions have a significant positive impact on the overall knowledge of HCPs about vaccination.

Chapter six

Conclusions and Recommendations

Chapter six

Conclusions and Recommendations

6.1. Conclusions:

Here are the conclusions of the present study:

- The results of our study show that the more of one-third of age group in the study sample were within (46 years) , More than two-thirds participants were male , the majority of participants are from high school, nursing institute of nursing , years of experience of nurses 24 have (≥ 20 years) in the service and third of the participants had one training session.
- The majority of the nurses in the study sample have moderate level of Knowledge about expanded program on immunization.
- Our study indicates that there was not a significant relationship between nurses' knowledge toward expand program on immunizations and their demographic variables (age, gender, level of education, years' experience , training sessions about EPI).

6.2. Recommendations

Based on the conclusion, the present study recommends that:

6.2.1. Raising nurses' awareness through conferences and other educational tools about the expanded program for immunization.

6.2.2. An educational program for nurses for continuous knowledge and renewal of their knowledge and skills to maintain and improve the level of practice.

6.2.3. Encouraging and motivating them to update their knowledge and practices by using the reward system.

Reference

❖ المصادر العربية

❖ القران الكريم ـ سورة البقرة – الآية (٣٢)

❖ English references

- Abd Al, G. A. A. H., & Nagi, A. B. (2015). Evaluation of the Nurses' Practices Concerning Vaccination at Primary Health Care Centers in Al-Amarah City. kufa Journal for Nursing sciences, 5(1).
- Aggarwal, A., & Dutta, A. K. (1995). Timing and dose of BCG vaccination in infants as assessed by postvaccination tuberculin sensitivity. Indian Pediatr, 32(6), 635-639.
- Ahmed, S. M., Abd-El Rahman, T. A., & Masoed, E. S. (2013). Mothers' awareness and knowledge of under five years children regarding immunization in Minia city Egypt. Life Science Journal, 10(4), 1224-1232.
- Ali, A., Ali, L., Shah, M., Khan, N., Shafee, M., & Jan, S. K. (2018). POLIO VACCINATION; AN ANALYSIS OF CULTURAL AND TRADITIONAL BARRIERS. Professional Medical Journal, 25(1).
- Aljedry, Z. A. H. S., Shaib, A. A., Al-Shamahy, H. A. H., & Al-Jaufy, A. Y. (2019). Tetanus immunization among pregnant women: coverage rate and rate of protection at time of delivery. Universal Journal of Pharmaceutical Research, 4(1), 12-16.
- Awosika, D. M. D. (2012). Access to immunization and other public health interventions through the pharmacist. West African Journal of Pharmacy, 23(1).
- Bairwa, M., Pilania, M., Rajput, M., Khanna, P., Kumar, N., Nagar, M., & Chawla, S. (2012). Pentavalent vaccine: a major breakthrough

in India's Universal Immunization Program. Human vaccines & immunotherapeutics, 8(9), 1314-1316.

- Bazin, H. (2011). Pasteur and the birth of vaccines made in the laboratory. In History of Vaccine Development (pp. 33-45). Springer, New York, NY.
- Berche, P. (2012). Louis Pasteur, from crystals of life to vaccination. Clinical Microbiology and Infection, 18, 1-6.
- Borella, E., Agmon- Levin, N., Doria, A., & Shoenfeld, Y. (2015). Pneumococcal vaccines and autoimmune phenomena. Vaccines and autoimmunity, 191-196.
- CDC. A comprehensive immunization strategy to eliminate transmission of hepatitis B virus infection in the United States: recommendations of the Advisory Committee on Immunization Practices (ACIP). Part 1: Immunization of infants, children, and adolescents. MMWR 2005;54(No.RR-16):1–32.
- CDC, Vaccines & immunization, 2018 available by https://www.cdc.gov/vaccines/vac-gen/imz-basics.htm
- CDC. Tracking Progress Toward Global Polio Eradication-Worldwide, 2009–2010. MMWR 2011;60(No. 14):441-5.
- CDC, Types of Immunity to a Disease , 2017 available be https://www.cdc.gov/vaccines/vac-gen/immunity-types.htm
- Centers for disease control and prevention, Pronounced (row-tuh-virus) , 2018 available by https://www.cdc.gov/vaccines/vpd/rotavirus/index.html
- Chaitra, K. M., & Yashoda, H. T. (2014). Knowledge of vaccination among the nursing students. Journal of Evolution of Medical and Dental Sciences, 3(20), 5637-5642.

- Cutts, F. T., Soares, A., Jecque, A. V., Cliff, J., Kortbeek, S., & Colombo, S. (1990). The Use of evaluation to improve the Expanded Programme on Immunization in Mozambique/F. Cutts...[et al.]. In The Use of evaluation to improve the Expanded Programme on Immunization in Mozambique/F. Cutts...[et al.].
- Dai, X., Xiong, Y., Li, N., & Jian, C. (2019). Vaccine Types. In Vaccines-the History and Future. IntechOpen.
- Defay, F., De Serres, G., Skowronski, D. M., Boulianne, N., Ouakki, M., Landry, M., ... & Ward, B. J. (2013). Measles in children vaccinated with 2 doses of MMR. Pediatrics, 132(5), e1126-e1133.
- Demicheli, V., Barale, A., & Rivetti, A. (2015). Vaccines for women for preventing neonatal tetanus. Cochrane Database of Systematic Reviews, (7).
- Department of Health (2015d). Primary care. Canberra: Department of Health.Viewed 7 October 2015, <http://www.health.gov.au/internet/main/publishing.nsf/Content/primarycare>.
- Dhillon, S. DTPa-HBV-IPV/Hib vaccine (Infanrix hexa). A review of its use as primary and booster vaccination, 2010, 70.
- Ekore, J. O. (2014). Impact of key organizational factors on knowledge transfer success in multi-national enterprises. Management-Journal of Contemporary Management Issues, 19(2), 3-18.
- El Shazly, H. M., Khalil, N. A., Ibrahem, R. A., & Wahed, S. A. A. (2016). Knowledge and practice of healthcare providers as regards routine children vaccination in primary healthcare facilities of

Quewisna District, Menoufia Governorate. Menoufia Medical Journal, 29(4), 1018.

- El Shazly, H. M., Khalil, N. A., Ibrahem, R. A., & Wahed, S. A. A. (2016). Knowledge and practice of healthcare providers as regards routine children vaccination in primary healthcare facilities of Quewisna District, Menoufia Governorate. Menoufia Medical Journal, 29(4), 1018.
- Etienne, C. F. (2018). Expanded Program on Immunization in the Americas: 40 years.
- Gherardi, E. (2013). The concept of immunity, history and applications. Immunology course Medical school, University of Pavia. The Columbia Electronic Encyclopedia, 6.
- Griffin, D. E., Pan, C. H., & Moss, W. J. (2008). Measles vaccines. Front Biosci, 13, 1352-1370.
- Grzybowski, A., & Pietrzak, K. (2014). Robert Koch (1843-1910) and dermatology on his 171st birthday. Clinics in dermatology, 32(3), 448-450.
- Henning G. , Laying the Assessment Foundation ,Dartmouth College [online](2010),Mar.18th, available from: https://www.dartmouth.edu
- Iraqi Ministry of Health, Expanded Program on Immunization Handbook, First Edition, 2014.
- Joung, S. M., & Ryoo, S. (2013). BCG vaccine in Korea. Clinical and experimental vaccine research, 2(2), 83.
- Kebede, A. (2015). Assessment of vaccine cold chain management status at public health facilities in dawuro zone, south west Ethiopia (Doctoral dissertation).
- Kidane, T., Yigzaw, A., Sahilemariam, Y., Bulto, T., Mengistu, H., Belay, T., ... & Olusegun, B. (2008). National EPI coverage survey

report in Ethiopia, 2006. Ethiopian Journal of Health Development, 22(2), 148-157.

- Kochhar, S., Edwards, K. M., Alvarez, A. M. R., Moro, P. L., & Ortiz, J. R. (2019). Introduction of new vaccines for immunization in pregnancy programmatic, regulatory, safety and ethical considerations. Vaccine, 37(25), 3267-3277.
- Lois zoppi, What are the Different Types of Vaccines? , 2020 available by https://www.news-medical.net/health/What-are-the-Different-Types-of-Vaccines.aspx
- Maria Mona ، Goal of Expanded Program on Immunization (EPI) ، 2014 ، Available by: http://nursingexercise.com/expanded-program-immunization-epi/
- McLean, H. Q., Fiebelkorn, A. P., Temte, J. L., & Wallace, G. S. (2013). Prevention of measles, rubella, congenital rubella syndrome, and mumps, 2013: summary recommendations of the Advisory Committee on Immunization Practices (ACIP). Morbidity and Mortality Weekly Report: Recommendations and Reports, 62(4), 1-34.
- McShane, H. (2011). Tuberculosis vaccines: beyond bacille Calmette–Guérin. Philosophical transactions of the royal society B: Biological Sciences, 366(1579), 2782-2789.
- Michalik, D. E., Steinberg, S. P., LaRussa, P. S., Edwards, K. M., Wright, P. F., Arvin, A. M., ... & Gershon, A. A. (2008). Primary vaccine failure after 1 dose of varicella vaccine in healthy children. The Journal of infectious diseases, 197(7), 944-949.
- Mohmmed, R. G. A. (2017). Assessing Mother's Knowledge Regarding the Importance of Rotavirus Vaccine for their Children. Int J Novel Res Healthcare Nurs, 4(1), 204-12.

- M Selim, E. S., Elmazahy, M. A., Hassan, M. A. E. S., & Hafez, F. E. (2020). Nurses knowledge and practice regarding adverse events of vaccines in expanded program on immunization in health care centers. Port Said Scientific Journal of Nursing, 7(1), 213-230.
- Pannuti CS, Morello RJ, Moraes JC, Curti SP, Afonso AM, Camargo MC, Souza VA. Identification of primary and secondary measles vaccine failures by measurement of immunoglobulin G avidity in measles cases during the 1997 Sao Paulo epidemic. Clin Diagn Lab Immunol, 2004; 11: 119–122.
- Pelullo, C. P., Della Polla, G., Napolitano, F., Di Giuseppe, G., & Angelillo, I. F. (2020). Healthcare workers' knowledge, attitudes, and practices about vaccinations: A cross-sectional study in Italy. Vaccines, 8(2), 148.
- Plotkin, S. A. (2011). History of rubella vaccines and the recent history of cell culture. In History of Vaccine Development (pp. 219-231). Springer, New York, NY.
- Plotkin S. Vaccines, vaccination, and vaccinology. J. Infect Dis 2003; 187:1347–59.
- Salisbury, D., Ramsay, M., & Noakes, K. (Eds.). (2006). Immunisation against infectious diseases. The Stationery Office.
- Samant, Y., Lamjewar, H., Block, L., Parker, D., Stein, B., & Tomar, G. (2007). Relationship between vaccine vial monitors and cold chain infrastructure in a rural district of India. Rural and Remote Health, 7(1), 1.
- Setia MS, Steinmaus C, Ho CS, Rutherford GW. The role of BCG in. prevention of leprosy: a meta-analysis. Lancet Infect Dis. 2006;6(3):162-70.doi:10.1016/S1473-3099(06)70412-1.

- Shehata, H. B., El-Samman, G. A., & Ahmed, S. M. Effect of Educational program for nurses on their knowledge and Practiceregarding obligatory vaccination for children.
- Siegrist C-A. Vaccine immunology. In Plotkin SA, Orenstein WA, Offit PA. Vaccines, 5th ed. China: Saunders,2008:17–36.
- Sreedhar, S., Antony, A., & Poulose, N. (2014). Study on the effectiveness and impact of pentavalent vaccination program in India and other south Asian countries. Human vaccines & immunotherapeutics, 10(7), 2062-2065.
- Stover, C. K., De La Cruz, V. F., Fuerst, T. R., Burlein, J. E., Benson, L. A., Bennett, L. T., ... & Bloom, B. R. (1991). New use of BCG for recombinant vaccines. Nature, 351(6326), 456-460.
- Syed, Y. Y. (2019). DTaP-IPV-HepB-Hib vaccine (Hexyon®): an updated review of its use in primary and booster vaccination. Pediatric Drugs, 21(5), 397-408.
- Tatiana Lanzieri et al , Epidemiology of Vaccine Preventable Diseases , 2020 , available by https://www.cdc.gov/vaccines/pubs/pinkbook/index.html .
- Verma, R., Khanna, P., & Dhankar, M. (2016). Vaccination during pregnancy: Today's need in India. Human vaccines & immunotherapeutics, 12(3), 668-670.
- Vesikari, T., Karvonen, A., Prymula, R., Schuster, V., Tejedor, J. C., Cohen, R., ... & Bouckenooghe, A. (2007). Efficacy of human rotavirus vaccine against rotavirus gastroenteritis during the first 2 years of life in European infants: randomised, double-blind controlled study. The Lancet, 370(9601), 1757-1763.

- Vishram, B., Letley, L., Jan Van Hoek, A., Silverton, L., Donovan, H., Adams, C., … & Campbell, H. (2018). Vaccination in pregnancy: attitudes of nurses, midwives and health visitors in England. Human vaccines & immunotherapeutics, 14(1), 179-188.
- Waitz, M., Hopfner, R., Hummler, H. D., & Heininger, U. (2015). Hepatitis B postexposure prophylaxis in preterm and low-birth-weight infants. AJP reports, 5(1), e67.
- WHO. Safe vaccine handling, cold chain and immunizations, a manual for the newly independent states. Geneva; 1998.
- WHO/V&B/02.16, Vaccine and Biological; Ensuring the quality of vaccines at country level, Guidelines for health staffs, WHO 2002.
- Widsanugorn, O., Suwattana, O., Harun-Or-Rashid, M., & Sakamoto, J. (2011). HEALTHCARE WORKERS'KNOWLEDGE AND PRACTICES REGARDING EXPANDED PROGRAM ON IMMUNIZATION IN KALASIN, THAILAND. Nagoya journal of medical science, 73(3-4), 177.
- World Health Organization (WHO) Immunization (2013) Available by www.who.int/topics/immunization/en. Assessed February 19th 2013.
- World Health Organization: Immunization in practice a guide for health workers who give vaccines. Oxford Medical Publications 1989.
- World Health organization (WHO) Expanded programme on immunization. Tetanus Neonatal Tetanus (NT) 2015. Available from: http://www.wpro.who.int/immunization/factsheets/tetanus_nt/en/
- World Health Organization (2017). "Measles vaccines: WHO position paper – April 2017". Wkly. Epidemiol. Rec. 92 (17): 205–27. hdl:10665/255149. PMID 28459148. Lay summary (PDF).

- World Health Organization (March 2016). "Polio vaccines: WHO position paper". Weekly Epidemiological Record. 91 (12): 145 - 68. hdl:10665/254399. PMID 27039410. Lay summary (PDF).
- World Health Organization (2013). "Rotavirus vaccines : WHO position paper — January 2013". Weekly Epidemiological Record. 88 (5): 49–64. hdl:10665/242024. PMID 23424730. Lay summary (PDF).
- World Health Organization (April 2012). "Pneumococcal vaccines WHO position paper--2012". Relevé Épidémiologique Hebdomadaire. 87 (14): 129–44. hdl:10665/241904. PMID 24340399. Lay summary (PDF).
- Zakir, F., Islam, F., Jabeen, A., & Moni, S. S. (2019). Vaccine development: A historical perspective.
- Zwerling, A., Behr, M. A., Verma, A., Brewer, T. F., Menzies, D., & Pai, M. (2011). The BCG World Atlas: a database of global BCG vaccination policies and practices. PLoS Med, 8(3), e1001012.

Appendixes

Appendix A

Administrative Agreements

appendix

Republic of Iraq
Ministry Of Higher Education&
Scientific Research
Misan University
College of Nursing
Registration and Student Affairs

جمهورية العراق
وزارة التعليم العالي والبحث العلمي
جامعة ميسان
كلية التمريض
التسجيل وشؤون الطلبة

Misan University
College of Nursing
١٤٣٢ ٢٠١٢

العدد: ش ط / ١٢٠
NO:

التاريخ: ١/٢/٢٠٢١
Date:

الى/دائرة صحة ميسان/ قطاع العمارة الاول

م/تسهيـــل مهمـــة

نحييكم أطيب التحيات

يرجى التفضل بالسماح للطلبة المدرجة أسمائهم في أدناه في المرحلة الرابعة الدراسة الصباحية في كليتنا بالدخول الى (مركز قطاع العمارة الاول) وذلك لغرض إكمال إجراءات بحث التخرج الخاص بهم .

مـــــع التقدير...

الأسماء
١ - سجاد كريم حزام
٢ - فاطمة مهدي فاخر
٣ - عذراء جبار عذيب

م. مصطفى سالم عبد الرضا
معاون العميد للشؤون العلمية
/ ٢/ ٢٠٢١

نسخة منه الى:
- مكتب السيد العميد مع التقدير.
- مكتب السيد المعاون العلمي مع التقدير .
- شعبة التسجيل و شؤون الطلبة مع كافة الأوليات.
- ملفة الطلبة.
- الصادر.

www.uomisan.edu.iq Nur.coll@uomisan.edu.iq

مطبعة جامعة ميسان / كلية التمريض

appendix

Republic of iraq
Ministry of Health
Misan Health Directorate
Training & Human Development Center
Research and knowledge division

جمهورية العراق
وزارة الصحة
دائرة صحة ميسان
مركز التدريب والتنمية البشرية
شعبة البحوث و أدارة المعرفة

العدد// ٤٤
التاريخ/ ٤ / ٢ /٢٠٢١

إلى /قطاع العمارة الأول
م/ تسهيل مهمة

تحية طيبة ...

استنادا الى كتاب جامعة ميسان / كلية التمريض المرقم ش ط /١٣٠ في ٢٠٢١/٢/١ يرجى تسهيل مهمة طالب البكالوريوس (سجاد كريم حزام) لغرض لحصول على المعلومات الخاصة ببحثه الموسوم ب (تقييم معرفة الممرضين أتجاه برنامج التحصين الموسع في مراكز الرعاية الصحية الاولية في مدينة العمارة) وفق الضوابط واصوليا

مع التقدير ...

الدكتورة الصيدلانية
انعام صدام لفته
مدير المركز
٤ / ٢ / ٢٠٢٠

صورة عنه الى :
- وحدة المكتب مع التقدير.
- شعبة إدارة المعرفة / للحفظ مع الأوليات.

TDD.MAYSAN@gmail.com البريد الالكتروني لمركز التدريب والتنمية البشرية / ميسان

بسمه تعالى

جمهورية العراق
وزارة الصحة
دائرة صحة ميسان
قطاع العمارة الأول
العدد / ٢٥١
التاريخ / ٤ / ٢ / ٢٠٢١

وزارة الصحة العراقية
Iraqi Ministry of Health
Founded 1920

دائرة صحة ميسان
قطاع العمارة الأول
الصادر
العدد /
التاريخ / /

إلى / المراكز الصحية كافة

م/ تسهيل مهمة

اشارة الى كتاب مركز التدريب والتنمية البشرية شعبة البحوث وإدارة المعرفة المرقم ٤٤ في ٢٠٢١/٢/٤ واستنادا الى كتاب جامعة ميسان / كلية التمريض المرقم ش ط /١٣٠ في ٢٠٢١/٢/١

يرجى تسهيل مهمة طالب البكالوريوس (سجاد كريم حزام) لغرض الحصول على معلومات الخاصة ببحثه المرسوم بتقييم معرفة المرضين اتجاه برنامج التحصين في مراكز الرعاية الصحية الأولية في مدينة العمارة وفق الضوابط وأصولها .

.. للتفضل بالعلم مع التقدير..

الدكتور
حسين رحيم شنيور
مدير قطاع العمارة الأول

الصيدلاني
محمد رحيم شنوك

نسخة منه إلى:-
الموما الية
الاضبارة

مهند ٤ – ٢

Appendixes B

Primary health care centers

اسماء المركز المشترك في دراسة

ت	اسم المركز المشترك في دراسة
-1	مركز الصحي دجلة النموذجي
-2	مركز الصحي الصدرين
-3	مركز الصحي العروبة
-4	مركز الصحي حي الوحدة الاسلامية
-5	مركز صحي الامير
-6	مركز علي الهادي الصحي
-7	مركز الصحي الجوادين
-8	مركز الصحي الحسن العسكري
-9	مركز الصحي الاسكان
-10	مركز الصحي حي الحسين

Appendix C

Questionnaire

Maysan Health

A questionnaire about

Assessing of the nurses' knowledge towards expanded program of immunization in primary health care centers at Al-Amara city

Axis I: Demographic data

- **Age: ..... a year**
- **Gender.....:**
- **Education level:……..**

  1. School of Nursing

  2. Junior high nursing

  3. Nursing Institute

  4. College of Nursing

    - **Number of immunization courses:**

  …….

Questions regarding nurses' knowledge

Axis II : Nurses knowledge toward Expanded program on Immunization

Mark (✓) for the correct answer:

A/ General information of vaccines:

1- The BCG vaccine is a type of vaccine:

A) Inactivated vaccines.

B) Toxid vaccines.

C) polysaccharide vaccines.

D) Live attenuate

2- The third dose of tetanus vaccine given to pregnant women can provide protection for:

A) 3 years.

B) 5 years.

C) 10 years.

D) It does not provide any protection.

3- The interval between a dose of hex vaccine and another dose of not less than:

A) 5-6 weeks.

B) 6-8 weeks.

C) 5-9 weeks.

D) 8- 10 weeks

4-Active immunity consists of:

A) Placenta

B)After immunization

C)Breastfeeding.

D) All of the above.

5- One of the vaccines below should be placed at the bottom of the refrigerator:

A)Tetanus vaccine.

B) Quadruple vaccine.

C)Hepatitis B Vaccine

D)MMR Vaccine

B) Schedule of vaccinations

6-The second dose of the Hexagonal vaccine is given at the age of:

A)4 years.

B) 18 months.

C) 6 months.

D) 4 months.

7. The fourth dose of tetanus vaccine is given to pregnant women after:

A) 6 months after the date of a third dose.

B) After 8 months from the date of the third dose.

C)After 10 months from the date of the third dose.

D) One year after the date of the third dose.

8. The first booster dose of OPV is given at:

A)4 years.

B)18 months.

C) 15 months.

D) 12 Months.

9. The first dose of the pneumococcal vaccine is given at:

A) The first week after birth

B) two months.

C) 4 months.

D) 6 months.

10. The first booster dose of the pentavalent vaccine is given at:

A) 9 months.

B) 18 months.

C) 15 months.

D)5 years

C) The dose and the method of administration

11.The BCG vaccine dose is:

A) 0.5 ML.

B) 0.05 ML.

C) 0.1 ML.

D)0.01 ML.

12. The MMR vaccine is given by:

A) subcutaneous

B)Oral

C) Intradermal

D) Intramuscular

13. The dose of oral polio vaccine is:

A)4 drops.

B)5 drops.

C) Two drops.

D) One drop.

14. The BCG vaccine is given by:

A) subcutaneous

B)Oral

C) Intradermal

D)Intramuscular

15.The dose of the pentavine vaccine is:

A)0.5 ML

B) 0.05 ML

C)0.3 ML.

D)0.01 ML.

D)False contraindications in administration of vaccines.

16. BCG vaccination is prohibited in all of these cases, except for:

A) A child with acquired immunodeficiency disease.

B) A baby who weighs less than 2.5 kg.

C)The mother of the infant is a carrier of the hepatitis virus.

D)People over the age of 14.

17. The MMR vaccine is prohibited in all of these cases, except for:

A)A child with tuberculosis who is undergoing treatment.

B)Hypersensitivity after the previous dose of the vaccine.

C) A child with encephalopathy and unresponsive to treatment.

D)A blood transfusion three months before the vaccine dose.

18. The pneumococcal vaccine is prohibited in all of these cases, except for:

A) fever .

B) Severe illness.

C) Giving other vaccines of a viral or bacterial origin.

D)History of severe allergy to the components of the vaccine.

19. The pentavalent vaccine is prohibited in all of these cases, except for:

A)Encephalopathy seven days after the previous dose.

B)The child has epileptic seizures and is unresponsive to treatment.

C) A child with acquired immunodeficiency disease.

D)A family history of epilepsy.

20. Vaccines are prohibited in all of these cases, except for:

A) Fever.

B)A blood transfusion three months before the vaccine dose.

C)Antibiotic treatment.

D) Severe illness.

دائرة صحة ميسان

استبانة تقييم معارف الممرضين في مراكز الرعاية الصحية الأولية حول البرنامج الموسع لتحصين في مدينة العمارة.

المحور الاول : المعلومات الديمغرافية

- **العمر: .....سنة**
- **الجنس: .....**
- **سنوات الخدمة: ..... سنة**
- **المستوى العلمي: .....**

١ـ مدرسة التمريض

٢ـ إعدادية تمريض

٣ـ معهد التمريض

٤ـ كلية التمريض

- **عدد الدورات الخاصة بالتحصين :.....**

المحور الثاني: معرفة الممرضات تجاه البرنامج الموسع للتحصين

ضع علامة (✓) للإجابة الصحيحة:

أ) معلومات عامة عن اللقاحات

1- لقاح بي سي جي هو نوع من :

أ) اللقاحات الحية مضعفة.

ب) اللقاحات المقتولة.

ت) اللقاح متعدد السكريات.

ث) اللقاحات السمية.

2-الجرعة الثالثة من لقاح الكزاز التي تعطى للحوامل يمكن ان توفر حماية لمدة:

أ) ٣ سنوات.

ب) ٥ سنوات.

ت) ١0 سنوات.

ث) لا توفر اي حماية.

3- الفترة الفاصلة بين جرعة لقاح السداسي و جرعة اخرى لا تقل عن :

أ) 6-5 اسابيع.

ب) ٦- 8 اسابيع.

ت) 5 -9 اسابيع.

ث) 8- 10اسابيع

4- تتألف المناعة النشطة من خلال:

أ) المشيمة.

ب) بعد التلقيح.

ت) الرضاعة طبيعية.

ث) كل ما ذكر اعلاه.

5- أحد اللقاحات أدناه يوضع في أسفل الثلاجة :

أ) لقاح الكزاز.

ب) لقاح الرباعي.

ت) لقاح الالتهاب الكبد الفيروسي نوع بي.

ث) لقاح الحصبة المختلطة.

ب) جدول اللقاحات

6-تعطى الجرعة الثانية من لقاح السداسي في عمر:

أ) 4 سنوات.

ب) ١٨شهر.

ت) ٦ اشهر.

ث) ٤ اشهر.

7- الجرعة الرابعة للقاح الكزاز تعطى للحوامل بعد:

أ) بعد ٦ اشهر من تاريخ جرعة ثالثة.

ب) بعد ٨ اشهر من تاريخ الجرعة الثالثة.

ت) بعد ١٠ اشهر من تاريخ جرعة الثالثة.

ث) بعد سنه من تاريخ جرعة الثالثة.

8- الجرعة المنشطة الاولى من لقاح شلل الاطفال الفموي تعطى في عمر:

أ) ٤ سنوات.

ب) 18 شهر.

ت) 15 شهر.

ث) 12 شهر.

9-الجرعة الاولى من لقاح المكورات الرئوية تعطى بعمر:

أ) الاسبوع الاول بعد الولادة

ب) شهرين.

ت) 4 اشهر.

ث) ٦ اشهر.

10-تعطى الجرعة المنشطة الاولى للقاح الخماسي بعمر:

أ) 9 اشهر.

ب) 18 شهر.

ت) 15 شهر.

ث) 5 سنوات.

ج) مقدار الجرعة وطريقة الإعطاء

11- جرعة لقاح بي سي جي تبلغ:

أ- 5،٠ وحدة.

ب- 0,05 وحدة.

ت- 0,1 وحدة.

ث- 0,01 وحدة.

12- يعطى لقاح الحصبة المختلطة عن طريق:

أ- تحت الجلد.

ب- فموي.

ت- تحت الادمة.

ث- في العضلة.

13- جرعة لقاح شلل الأطفال الفموي تبلغ :

أ- 4 قطرات.

ب- 5 قطرات.

ت- قطرتين.

ث- قطرة واحدة.

14- يعطى لقاح بي سي جي، عن طريق :

أ- تحت الجلد.

ب- فموي .

ت- تحت الادمة.

ث- في العضلة.

15- جرعة لقاح الخماسي تبلغ:

أ- 0,5 وحدة.

ب- 0,05 وحدة.

ت- 0,3 وحدة.

ث- 0,01 وحدة.

د) الموانع الخاطئة في ادارة اللقاحات

16- يمنع إعطاء لقاح بي سي جي في كل هذه الحالات، باستثناء :

أ- الطفل الذي يعاني من مرض نقص المناعة المكتسب.
ب- الرضيع الذي يزن اقل من٢،5 كيلو غرام.
ت- والدة الرضيع حاملة لفيروس الالتهاب الكبد فايروسي.
ث- الاشخاص الذين تبلغ اعمارهم اكبر من 14 عاما.

17- يمنع اعطاء لقاح الحصبة المختلطة في كل هذه الحالات، باستثناء:

أ- الطفل المصاب بمرض السل و يخضع للعلاج .

ب- حساسية مفرطة بعد الجرعة السابقة من اللقاح.
ت- طفل يعاني من اعتلال الدماغ وغير مستجيب لعلاج.
ث- نقل الدم قبل ثلاثة اشهر من جرعة اللقاح.

18- يمنع اعطاء لقاح المكورات الرئوية في كل هذه الحالات، باستثناء:

أ- الحمى .
ب- المرض الشديد.
ت- اعطاء لقاحات اخرى من اصل فيروسي او بكتيري.
ث- تاريخ حساسية شديدة لمكونات اللقاح.

19- يمنع اعطاء لقاح الخماسي في كل هذه الحالات، باستثناء :

أ- اعتلال الدماغ بعد سبعة ايام من الجرعة السابقة.
ب- الطفل مصاب بنوبات صرع و غير مستجيب للعلاج.
ت- الطفل الذي يعاني من مرض نقص المناعة المكتسب.
ث- تاريخ عائلي للإصابة بالصرع.

20- يمنع اعطاء اللقاحات في كل هذه الحالات، باستثناء :

أ- الحمى.
ب- نقل الدم قبل ثلاثة اشهر من جرعة اللقاح.
ت- العلاج بالمضادات الحيوية.
ث- المرض الشديد

Appendixes D

Expert`s Panel

استمارة الخبراء

ت	اسم الخبير	اللقب العلمي او الشهادة	الاختصاص	عدد سنوات الخدمة	مكان العمل
1 -	حمود ماضي حسن	طبيب اختصاص اقدم	بورد عراقي طب مجتمع	20 سنة	دائرة صحة ميسان - قسم الصحة العام
2 -	عقيل عزيز عرار الرسيتم	مدرس	دكتوراه تمريض بالغين	15 سنه	جامعة ميسان / كلية التمريض
3 -	سعد صبري شامخ	مدرس	ماجستير تمريض صحة مجتمع	15 سنة	جامعة ميسان / كلية التمريض
4 -	حيدر علي حسين	ممرض جامعي اختصاص	دكتوراه تمريض بالغين	10 سنوات	معهد المهن الصحية العالي / ميسان
5 -	مصطفى سالم عبد الرضا	مدرس	ماجستير تمريض أطفال	7 سنوات	جامعة ميسان / كلية التمريض

الخلاصة

الأهداف : تقييم معرفة الممرضات حول البرنامج الموسع للتحصين في مركز الرعاية الصحية في قطاع العمارة الاول وايجاد العلاقة بين المعرفة بالممرضات مع خصائصهم الاجتماعية والديموغرافية (العمر، الجنس. ، مستوى العلمي ، سنوات الخبرة وعدد الدورة التدريبية).

المنهجية: اجريت دراسة وصفية تقويمية في مراكز الرعاية الصحية الاولية في مدينة العمارة للفترة من 29 كانون الأول 2020 لغاية ٧ تموز. ٢٠٢١وذلك تقييم معارف الممرضين المتعلقة باللقاحات في وحدات التحصين . اختيرت عينة غير احتمالية(غرضية) مكونة من(50) ممرض .وقد تم جمع البيانات خلال الفترة 7 اذار 2021 لغاية 18 اذار2021 . تم تحليل البيانات من خلال تطبيق الوسائل الاحصائية الوصفية و الاحصاء الاستدلالي (اختبار مربع كاي)

النتائج : أشارت النتائج التي توصلت إليها الدراسة إلى أنّ أكثر من ثلث الفئة العمرية في عينة الدراسة هم ضمن عمر(49عاما)، حيث شكلوا نسبة (34%) من عيّنة الدراسة، وفيما يتعلق بالجنس، فانّ أكثر من ثلثي المشاركين كانوا من الذكور حيث شكلوا نسبة (68%)، أمّا بخصوص المستوى التعليمي، فقد أظهرت الدراسة أنّ أغلب المشاركين هم من الحاصلين على شهادة إعدادية التمريض ومعهد التمريض، فقد بلغت نسبة المشاركين لكل منهما (42%). أمّا بالنسبة لعدد سنوات الخدمة فان (24) ممرض ممن شملتهم الدراسة، أمضوا أكثر من 20 سنة في الخدمة، وشكّلوا نسبة (48%) من عينة الدراسة. وفيما يتعلق بعدد الدورات التدريبية على اللقاحات، فأن ثلث المشاركين لديهم دورة تدريبية واحدة حيث شكلوا نسبة (32%) من العينة المدروسة. وفي الختام استنتجت الدراسة أنّ أغلب المشاركين لديهم مستوى معتدل من المعرفة، وقد شكّلوا نسبة (84%) من عينة الدراسة. وأظهرت الدراسة عدم وجود ارتباط وثيق بين معرفة الممرضين حول البرنامج الموسع للتحصين والمتغيرات الديموغرافية الخاصة بهم

(العمر، والجنس، ومستوى التعليم، وسنوات الخبرة، والدورات التدريبية حول البرنامج الموسع للتحصين).

التوصيات: اوصت الدراسة الى زيادة وعي الممرضين من خلال المؤتمرات والأدوات التعليمية الأخرى حول البرنامج الموسع لتحصين، برنامج تثقيفي للممرضين من أجل المعرفة المستمرة والتجديد المعرفة لهم والمهارات اللازمة للحفاظ على مستوى الممارسة وتحسينها و تشجيعهم وتحفيزهم لتحديث معارفهم وممارساتهم باستخدام نظام المكافآت.

وزارة التعليم العالي والبحث العلمي

جامعة ميسان

كلية التمريض

تقييم معارف الممرضين في مراكز الرعاية الصحية الأولية حول البرنامج الموسع لتحصين في مدينة العمارة

مشروع تخرج مقدم

من قبل

فاطمة مهدي فاخر

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سجاد كريم حزام

الى

كلية التمريض كجزء من متطلبات لنيل– جامعة ميسان

شهادة البكالوريوس في علوم التمريض

اشراف

م . د. غزوان عبد الحسين

م.م. موحان حسن صبيح

١٤٤٢ ذو القعدة

٢٠٢١ تموز