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Women's Responsiveness and Utilization of Family Planning and Childhood Immunization Services at Primary Health Care Clinics

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Abstract
Background: Services for family planning **(FP)** and childhood immunization **(CIS)** are essential for the well-being of women and their families. **Aim:** To determine women's responsiveness and utilization of FP and CIS in primary healthcare clinics at Ismailia Governrate. **Method:** A descriptive research design was used in this study. **Setting:** The research was carried out at primary healthcare clinics under the health insurance scheme in the Ismailia governorate. **Sample:** Convenience sample of 366 women. **Tool:** data were collected using a questionnaire composed of four **Parts: Part I:** Women sociodemographic characteristic, **Part II:** Utilization of Primary Health Care **(PHC)** Service under Health Insurance Scheme data, **Part III:** Client Responsiveness Scale, and **Part IV:** Women's Perspectives on FP and Immunization Service Integration. **Results:** All women in the study used primary health care services, and 80.1% of them responded satisfactorily to FP and child immunization services. **Conclusion:** A statistically significant relationship exists between a woman's age, place of residence, family income and how responsive she is to FP and child immunization services. Also statistically significant relationship exists between the women's receptivity to FP and child immunization services and the child age, residence, and ranking at $P < 0.05$. **Recommendations:** Increase awareness by reaching communities through awareness programs and brochures to improve the accessibility of health services and enhance the benefits of their provision.

Keywords: Childhood Immunization, Family Planning, Health Insurance Scheme, Primary Care Clinics, Utilization & responsiveness of women.

Introduction
The assessment of healthcare systems' capacity to meet clients' anticipations has made responsiveness a crucial measure of health system performance. To gauge patients' encounters with the health system, the concept of responsiveness was introduced, focusing on a shared set of non-health-related areas. These consist of the quality of basic amenities, choice, confidentiality, autonomy, communication, and expeditious attention **(Amani et al., 2020).**

Health insurance programs strive to align healthcare delivery with client expectations, playing a crucial role in shaping overall health system outcomes. Although often conflated with patient satisfaction and care quality, responsiveness in healthcare is a unique concept encompassing the manner of patient treatment and the healthcare environment itself. An effectively responsive insurance framework ensures equitable access to health services, prioritizing individual needs and preferences across diverse demographic groups. This approach not only enhances the patient experience but also contributes to the broader goals of health system efficiency and effectiveness (**Alawode & Adewole, 2021).**

The women's health and their families rely on the availability of FP and CIS, which contribute to a nation's efforts to eliminate poverty and facilitate the achievement of development goals. Furthermore, maternal and child health represents significant components of primary healthcare **(Mohamed et al., 2017)**.

A significant proportion of women who have recently given birth face an unmet need for modern contraception worldwide. Research indicates that integrating FP services with childhood immunization programs, which offer regular opportunities for timely engagement, could help address this unmet demand. Despite being vital for contraceptive uptake and continued service utilization, there is limited understanding of clients' experiences with FP services integrated with childhood vaccines **(Hamon et al., 2022)**.

The provision of FP and CIS at primary healthcare clinics plays a crucial role in empowering women to make informed decisions about their fertility and utilize contraceptive methods. Taking certain factors into serious consideration, such as allowing clients to choose their preferred contraception method, providing comprehensive information about contraceptive options, and ensuring positive staff-client interactions, could potentially influence women's fertility-related behavior and empowerment **(Sheahan et al., 2022).**

In addition, childhood immunization has been a foundational element of public health in Egypt for many years, serving as a vital tool in safeguarding children against numerous preventable diseases. The Egyptian government has achieved considerable progress in lowering the rates of diseases like polio, measles, diphtheria, and tetanus **(World Health Organization, 2023).**

Significance of the study

The integration of family planning services with child vaccination programs under Egypt's health insurance system represents a crucial strategy for improving maternal and child health outcomes. This approach leverages the high attendance rates of vaccination clinics to provide comprehensive reproductive health education and services to parents. By offering family planning counseling and resources during immunization visits, healthcare providers can address the unmet need for contraception, promote birth spacing, and enhance overall family health. This integrated model not only improves access to essential health services but also maximizes resource utilization within the health system. In the context of Egypt's ongoing healthcare reforms, such integration could significantly contribute to achieving national health targets, reducing infant and maternal mortality rates, and advancing progress towards universal health coverage **(Mohamed et al., 2022).**

Aim of the study

The study aimed to determine women's responsiveness and utilization of FP and CIS in primary healthcare clinics at Ismailia Governrate.

Objectives:

- Assess the utilization of women for PHC services under the health insurance scheme at the Ismailia governorate.
- Assess the utilization of women for FP and CIS.
- Assess the responsiveness of women to FP and CIS in PHC services under the health insurance scheme at Ismailia governorate.

Research question

- Are women's responsiveness and utilization of FP services in PHC clinics satisfactory?
- Are women's responsiveness and utilization of childhood immunization services in PHC clinics satisfactory?

Research design:

A descriptive design was adopted for this study.

Setting: The study was carried out at PHC clinics under the health insurance scheme in Ismailia governorate, such as El-Shohda Family Medicine Center, Hai El-Salam Family Medicine Center, El Mahsama Family Medicine Center, El Hoda Family Medicine Unit, and El Heish Family Medicine Unit. The number of visitors to the center was approximately 50–70 women per day.

Subjects: Sampling technique:

A multistage sampling technique was used to select each district's PHC centers. The health insurance scheme at the Ismailia governorate focuses on 66 health facilities, including 12 hospitals and 54 family medicine centers and units. The experimental working-stage health insurance scheme includes 32 family medicine centers and units, as well as 4 hospitals **(Abo Deif, 2022)**. In the first stage, 32 family medicine centers and units were selected. In the second stage, from 32 family medicine centers and units, five were randomly selected, including two from the urban area, El-Shohda Family Medicine Center and Hai El-Salam Family Medicine Center, and three from the rural area, El-Mahsama Family Medicine Center, El-Hoda Family Medicine Unit, and El-Heish Family Medicine Unit.

Sample type

A convenient sample was used in the study. The sample fulfilled the following inclusion criteria: women who were in the reproductive age group (aged 15–49 years), Women's families had registered for health insurance coverage, women who received FP and CIS at PHC centers, and women who agreed to take part in the study.

The sample size calculation was determined according to the following equation**:**

$$n = (Z\ \alpha/2)2*P\ (1-P)/d2$$ **(Dawson, 2004)**

Where

- n **=** sample size
- Z α/2 = Z is the statistic corresponding to a confidence level (1.96).
- d = precision (corresponding to effect size) (0.05)
- P is the expected prevalence (43%). **(Mohammed et al., 2013)**

As a result, the sample size was 366.

Study Tools and Data Collection

Based on literature reviews, the researchers created a structured interview questionnaire. It includes the following parts:

Part I: Women sociodemographic characteristic:

a. For women, such as age, area of residence, occupation, and educational levels.
b. For their child's, such as age, gender, type of feeding, and order between siblings.

Part II: **Utilization of PHC services under the health insurance scheme data** includes the following items:

a. Reasons and number of visiting times for PHC services, transportation means, and causes of preference for PHC services **(Al-Shehri, 2021**).
b. FP service utilization includes items about using, time, availability, and types of family contraceptive methods **(Gebreyesus, 2019)**.

c. Childhood immunization service utilization includes items about the history of vaccines received by the child, reasons for delaying vaccination, sources of knowledge about vaccination, side effects of vaccinations, and actions taken when side effects of vaccination occur **(Ahmed et al., 2013)**.

Scoring system

Responses were scored as follows: yes = 1 point, no or don't know = 0-point. Also, the independent variable was analyzed by measuring its constituent parts as a percentage of the total sample **(Gebreyesus, 2019 & Astuti et al., 2024).**

Part III: Client Responsiveness' Scale

The researchers developed this scale based on a literature review by **(Mohammed et al., 2013; Chavane et al., 2017; Hamon et al., 2022).** Responsiveness-related questions focused on 8 structural and behavioral domains. Structural domain questions include “Environment” (e.g., How was the cleanliness and space in the clinic?), “Service continuity” (e.g., how clear was the information about where or when to seek follow-up FP services?), “Choice of provider” (e.g., How was the freedom client had to choose a provider to assist you with FP in the clinic?) and “ease of access” (e.g., How easy was it for client to access this clinic today?) Behavioral domains Questions included: “Dignity” (e.g., How was the respect client received from the provider?), “Confidentiality” (e.g., How was the confidentiality provided to client by the FP provider?), “Communication” (e.g., How clear was the information client received from the provider?), “Counseling” (e.g., How was the attention the provider paid to client reproductive preferences?)

Scoring system:

A five-point Likert scale was used to ask women to rate their experiences in these domains; responses ranged from "very good" to "very bad," with 5 denoting very good, 4 good, 3 moderate, 2 bad, and 1 very bad. The percentage of respondents who rated their response as "very bad," "bad," or "moderate" was used to define poor responsiveness. The mean score was calculated by dividing the sum of the item scores by the total number of items. The mean and standard deviations **(SD)** were calculated, and these results were translated to a percentage. If the women's response rate was higher than 60% , it was deemed satisfactory; if it was 60% or lower, it was deemed unsatisfactory **(Ahmed et al., 2013)**.

Part IV: Women’s Perspectives on FP and Immunization Service Integration: include items and examples of questions such as "It is good to get information about FP options when I bring my baby for vaccination," e.g., "I prefer to get both baby immunization and FP on the same day rather than to come to the health facility on different days", e.g., "If my husband knew I received FP information during immunization service, he would be unhappy" **(Dulli et al., 2016).**

Scoring system: Responses were scored as follows: yes = 1 point, no or don't know = 0-point. Also, the independent variable was analyzed by measuring its constituent parts as a percentage of the total sample **(Gebreyesus, 2019 & Astuti et al., 2024).**

Validity and reliability of the study tools: At Suez Canal University's pediatric, community, and obstetric nursing departments, the study tools were evaluated for validity by a jury of three nursing professionals. Overall, the domains of the responsiveness scale's Cronbach's alpha coefficient of .959 indicated that the item correlation test results were within acceptable bounds.

Pilot study

The pilot study was carried out to evaluate the clarity of the study instruments once they were constructed and data was collected. Also to determine the time needed to fulfilling questionnaire The study included 10% (38 women) of the anticipated sample size. The necessary modifications were made based on the pilot study's findings and the design of the final tool, which excluded the pilot results from the study results.

Ethical considerations: Permission from the research ethics committee was obtained with the protocol code $\frac{160}{8\backslash 2022}$. The target primary care centers granted written permission to conduct the investigation. The women gave informed consent after concisely explaining the study's objectives and methodology. The women were informed of their right to disengage from the study at any time, and their personal information was kept confidential.

Field Work:

The researchers interviewed the women face-to-face to explain the study's aim and objectives. Data were collected from five health centers under health insurance at Ismailia for two days weekly, mainly on Sunday and Tuesday every week. The data were collected for 3 months, from September 2022 to November 2022, in the above settings. Additionally, the client questionnaire document necessitated 15 to 20 minutes to complete.

Statistical design:

The analysis of the study data was done with SPSS version 21. The study used descriptive statistics, such as frequency distribution and percentages, to analyze the nominal data and the demographic information of the women under study. The arithmetic means ± SD, the chi-square test, were used to evaluate the statistical significance and associations. At $p < 0.05$, a significant level was found.

Results:

Table (1): Percentage distribution of the studied sample according to their some socio-demographic characteristics (n = 366)

Items	No.	%
Age (years)		
<18	38	10.4
18-30	173	47.3
>30	155	42.3
Residence		
Urban	255	69.7
Rural	111	30.3
Occupation		
Yes	297	81.1
No	69	18.9
Educational level		
Illiterate	144	39.34
Secondary	49	13.39
Technical	88	24.04
Bachelor	74	20.22
Postgraduate	11	3.01
Monthly family income form the women's perspective to meet family living needs		
Enough	55	15.03
Partly enough	197	53.83
Not enough	114	31.14

Table (2): Percentage distribution of the studied sample according to their child characteristics (n = 366)

Items	No.	%
Child age (years)		
<6	222	60.7
≥6	144	39.3
Gender		
Male	234	63.9
Female	132	36.1
Feeding		
Breastfeeding (child<6)	85	23.2
Bottle (child<6)	102	27.9
Both (child<6)	35	9.6
Ordinary feeding (child ≥6)	144	39.3
Ranking (number of children)		
First	97	26.5
Second	117	32.0
Third	147	40.2
Fourth or more	5	1.4

Table (3): Percentage distribution of the studied sample according to the utilization of PHC services under the health insurance scheme (n = 366)

Items	No.	%
Respondents that utilize PHC services		
Yes	366	100
No	0	0
Frequency of visiting PHCs		
The first time I visit the center	46	12.6
Once a week	45	12.3
Two or more times a week	10	2.7
Once a month	102	27.9
I come to the center when needed.	163	44.5
Causes of visiting PHCs #		
Periodic health check-ups and complete treatment	95	26
To receive first aid or seek treatment	93	25.4
Accompanying a patient	71	19.4
Vaccinate and monitor the growth and development of a child.	175	47.9
Follow-up on pregnancy	158	43.2
To install contraceptives	267	73.0
Request for a medical referral to a hospital	67	18.3
Transportation for visiting PHCs		
Walking on foot	67	18.3
Private car	33	9.0
Public transportation	176	48.1
Another method	90	24.6
Reason for Preference for Utilizing PHCs #		
Provides effective care services at an affordable price	145	39.7
Medical and nursing care that suits my needs	91	24.9
Adherence to pre-booked appointments	28	7.7
Answer the questions clearly and understandably	72	19.7
Ease of access to the center (transportation is available)	87	23.8

#means there is more than one answer

Table (4): Percentage distribution of the studied sample utilizing FP methods (n=366)

Items	No.	%
Using contraceptive methods		
Yes	318	86.9
No	48	13.1
Period/time for using contraceptive methods		
First time using it	175	47.8
Less than One year	67	18.3
From One year to less than Five years	57	15.6
More than Five years	35	9.6
I don't use it.	32	8.7
Contraceptive methods are available		
Yes	171	46.7
No	115	31.4
I don't know	80	21.9
Types of contraceptive methods		
Male Condoms	28	7.7
Female condoms	13	3.6
Emergency contraception	70	19.1
Short-acting hormonal methods (birth control pills, injections, vaginal rings)	145	39.6
Extended-release reversible contraceptives (contraceptive implant and copper IUD)	61	16.7
Permanent means (male and female sterilization)	13	3.6
I don't use it.	36	9.7

Table (5): Percentage distribution of the studied sample regarding utilizing children's vaccines (n=366)

Items	No.	%
Vaccinated children		
Yes	347	94.8
No	19	5.2
Adhere to the recommended vaccination schedule in Egypt.		
Yes	316	86.3
No	50	13.7
The child's vaccination was postponed.		
Yes	61	16.7
No	305	83.3
Women's reasons for delaying children vaccinations #		
Child's illness	88	24.0
Fearing the vaccine's side effects	64	17.5
Long distance to the vaccination site	86	23.5
I don't remember or know the vaccination's time.	143	39.1
Information's source of child vaccinations #		
Pediatrician or pharmacist	67	18.3
Mother or mother-in-law	144	39.3
Friends or neighbors	71	19.4
Internet, social media, and TV	91	24.9
Common side effects after child vaccinations		
Hyperthermia	102	27.9
Severe local pain	154	42.0
Redness and swelling at the injection site	60	16.4
Injection site abscess	50	13.7
Care for side effects after a child's vaccination #		
Go to the doctor.	57	15.6
Making compresses at home	140	38.3
Giving medicines to a child without consulting a doctor	119	32.5
I do nothing.	72	19.7

#means there is more than one answer

Table (6): Mean scores of the studied sample responsiveness regarding FP and CIS (n = 366)

Items	Mean ± SD
1. Environment	21.37 ± 4.95
2. Service continuity	17.58 ± 4.15
3. Choice of provider	10.96 ± 2.72
4. Ease to access	39.87 ± 8.13
5. Dignity	14.86 ± 3.46
6. Confidentiality	7.85 ± 1.91
7. Communication	15.22± 3.54
8. A. Counseling FP	34.53± 6.44
B. Counseling of vaccinations	11.97 ± 2.24
Total Responsiveness	350.08 ± 60.02

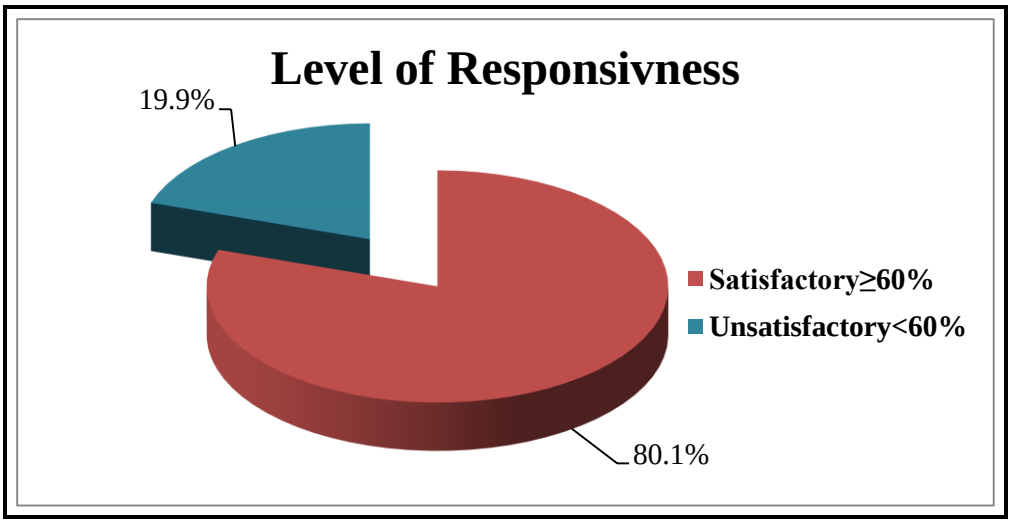

Figure (1): Women's' responsiveness to FP and CIS (n = 366)

Table (7): Percentage distribution of the studied women's perspectives on the integration of FP and immunization services (n = 366)

Items	Yes		No	
	No.	%	No.	%
1. It is good to get information about family planning options when I bring my baby for immunization.	318	86.9	48	13.1
2. I prefer to get baby immunization and family planning done on the same day rather than come to the health facility on different days.	317	86.6	49	13.4
3. If my husband knew I received family planning information during the immunization service, he would be unhappy.	70	19.1	296	80.9

Table (8): Relation between women's demographic characteristics and their responsiveness

Items	Responsiveness				X^2(P value)
	Unsatisfactory		Satisfactory		
	N	%	N	%	
Age (Years)					
<18	16	42.1	22	57.9	53.34(<.001*)
18-30	53	30.6	120	69.4	
>30	4	2.6	151	97.4	
Residence					
Urban	35	13.7	220	86.3	20.37 (<.001*)
Rural	38	34.2	73	65.8	
Occupation					
Yes	59	19.9	238	80.1	.006 (.937)
No	14	20.3	55	79.7	
Educational level					
Illiterate	31	21.5	113	78.5	5.52 (.240) MC
Secondary	11	22.4	38	77.6	
Technical	13	14.8	75	85.2	
Bachelor	18	24.3	56	75.7	
Postgraduate	0	0	11	100.0	
Monthly family income	42	21.3	155	78.7	13.91 (.001*)
Enough Partly enough	19	34.5	36	65.5	
Not enough	12	10.5	102	89.5	

X^2 is the chi-square test, # is the Fisher exact test^{MC} is Monte Carlo for the Chi-square test; the P value is significant <.05

Table (9): Relation between child demographic characteristics and their responsiveness:

Items	Responsiveness				X^2(P value)
	Unsatisfactory		Satisfactory		
	N	%	N	%	
Age (Years)					
<6	53	23.9	169	76.1	5.45(<.02*)
≥6	20	13.9	124	86.1	
Residence					
Urban	58	24.8	176	75.2	9.52 (<.002*)
Rural	15	11.4	117	88.6	
Ranking (number of children)					
First	5	5.2	92	94.8	
Second	18	15.4	99	84.6	34.28(.<.001*)
Third	50	34.0	97	66.0	
Fourth	0	0	5	100.0	

X^2 is chi-square test; P value is significant<.05

Table (1): Showed that 47.3% of women were 18–30, and 69.7% lived in urban areas. Also, 81.1% of them were occupied, but 39.34% of them were illiterate. From the women's perspective, 53.83% indicated that their monthly family income was only partially sufficient to cover their family's living expenses.

Table (2): Displays that 39.3% of children aged ≥6 years were female. Also, 23.2% had breastfed a child under 6, but 40.2% had a third ranking among their children.

Table (3): Shows that 100% of the studied women utilize primary care services, and 44.5% come to the center when needed. According to visiting reasons of PHCs, 73.0% of them install contraceptives, 47.9% and 43.2% to vaccinate and monitor the growth and development of the child and follow-up of pregnancy equally. Data also revealed that 48.1% of the studied women used public transportation to visit PHC services. Also, 39.7% of them clarified their reasons for preference in utilizing PHCs: "provides effective care services at an affordable price."

Table (4): Explains that 86.9% of the studied women used contraceptive methods, and 47.8% of them used and had the availability of contraceptive methods. Also, 39.6% used short-acting hormonal methods (birth control pills, injections, and vaginal rings).

Table (5): Shows that 94.8% of the studied women vaccinated their children, and 86.3% of them adhered to the recommended schedule in Egypt and did not delay the vaccination of their children. Also, 39.1% of the studied women didn't remember or know vaccination time, and 39.3% of them knew information about child vaccination from the mother or mother-in-law and made a compress at home for a child after vaccination. Moreover, 42.0% of children complain of severe pain after vaccination.

Table (6): Indicates that the mean ± SD for ease of access was 39.87 ± 8.13, dignity was 14.86±3.46, confidentiality was 7.85±1.91, and communication was 15.22 ± 3.54. Also, the mean ± SD for counseling (A. FP) was 34.53 ± 6.44, but for the environment, it was 21.37 ± 4.95. & for service continuity was 17.58 ± 4.15, for choice of provider was 10.96 ± 2.72. Data also revealed the mean ± SD of total responsiveness was 350.08 ± 60.02.

Figure (1): Illustrates that 80.1% of the studied women responded satisfactorily to FP and CIS.

Table (7): Clarifies that 86.9% of the studied women prefer to get information about FP when immunizing their baby and to get both baby immunization and FP on the same day. However, 19.1% showed their husband would be unhappy if they received FP information during immunization service.

Table (8): Clarifies a significant relationship (P < 0.05) between women's age, residence and family income and the women's responsiveness to FP and CIS. However, there is no significant relationship between women's educational level, occupation, and women's responsiveness.

Table (9): Clarifies a significant relationship (P < 0.05) between child age, residence, and ranking (number of children) and women's responsiveness to FP and CIS.

Discussion

PHC is the nation's public health system's first point of contact with people, families, and communities. PHC is the initial step in an ongoing healthcare process and attempts to provide feasible healthcare near where people live and work (**Elsayed et al., 2015).** This work aimed to determine women's responsiveness and utilization of FP and CIS in PHC clinics.

The current study showed that nearly half of women aged 18–30, 42.3% were>30, and more than two-thirds live in urban areas. Over three-quarters were occupied, but over one-third were illiterate. Also, The results of the current study showed that over half of women's families have partly enough family income, but more than one-third of children aged ≥ 6 years were female. Less than one quarter of them had breastfed a child under 6 years old, but more than one-third had a third ranking among their children.

The current study's findings align with **Sameh et al. (2017),** who carried out a study in Egypt to "evaluate community awareness, perceptions, and factors influencing service utilization at university-owned Family Practice Centers (FPCs)." They reported that the socio-demographic characteristics of the study participants (n = 900) were comparable. In rural areas, the mean age was 33.0 ± 11.6 years, while in urban areas, it was 36.0 ± 13.9 years. Married respondents comprised the majority in urban locations. According to educational level, in rural areas, less than half of respondents attained the secondary level or higher, while urban areas had a greater educational attainment rate, with three quarters of respondents attaining that level. Regarding employment status, a round half of urban respondents were employed, while less than one-fifth of rural respondents were employed.

In contrast, **Osungbade et al. (2014)** conducted a study titled "Users' Satisfaction with Services provided under the National Health Insurance Scheme in South Western Nigeria" and found that the mean age of women in their study was 42.5 ± 8.0 years. Out of the total participants, the majority, 315 individuals were married. Regarding educational background, the majority, accounting for 326 individuals had completed tertiary education. Furthermore, two-thirds of the participants reported having 3 to 4 children

El Gammal (2014) conducted a cross-sectional study involving 335 mothers who visited PHC centers in the Ismailia Governorate to have their children immunized. The study "explored the relationship between maternal knowledge and their satisfaction with immunization services". Most participating mothers were aged 20 or older. Among the mothers, about half of them had an intermediate level of education (primary or secondary), while one third of them had a higher education (university education). Regarding the number of children, two-thirds of the mothers had one or two children and less than one third had three or four children.

According to the level of PHC services utilization, the current study found that all the studied women utilized primary care services, and approximately half came to the center when needed. According to visiting reasons of PHCs, nearly three-quarters of them install contraceptives, nearly half of them vaccinate and monitor the growth and development of the child and follow-up of pregnancy equally. Data also revealed that nearly half of studied women used public transportation to visit primary care services. About two fifths of them clarified their reasons for preference for utilizing PHCs as "providing effective care services at an affordable price.

The current study's findings are similar to those of **Otovwe & Elizabeth (2017),** who performed a study "investigating the utilization of PHC services in Jaba Local Government Area of Kaduna State, Nigeria". According to their findings, most respondents used PHC services. Among those who utilized these services, the majority of them stated that their primary reason was to monitor their children's health status. Additionally, half of the respondents reported that their last visit to a PHC center was within the past month. Respondents reported different reasons for their visits to the PHC center, for example, one-third of them seek immunization services and a few of them seek FP services. The data also revealed that a large majority of the respondents have utilized primary health care services in the study area.

On the other hand, the results of the study conducted by **Rout et al. (2021)** contradict the current study's findings. Their study titled "Utilization of health care services in public and private healthcare in India: Causes and determinants". According to their findings, the utilized PHC facility was notably low. This low utilization was primarily due to the poor quality of care and extended waiting times.

Conversely, a cross-sectional study titled "Determinants of PHC service utilization in an under-resourced rural community in Enugu State, Nigeria," conducted by **Nwokoro et al. (2022)** presented different findings. During their most recent illness, less than half of participants reported using PHC services. They also reported that reasons for not using primary health care services were lack of availability of doctors, poor quality of health services, long waiting times for patients, and lack of availability of medications as reasons for not seeking care.

According to the level of utilization of FP methods and childhood vaccination, the current study explained that the majority of studied women used contraceptive methods, and nearly half represented first-time use. It also stated the availability of contraceptive methods. Also, about two fifths used short-acting hormonal methods (birth control pills, injections, and vaginal rings). Also, it showed that most studied women vaccinated their children, adhered to the recommended schedule in Egypt, and did not delay the vaccination of their children. Over one-third of the studied women didn't remember the vaccination's time, knew about child vaccination from

the mother or mother-in-law, and made compresses at home for the child after vaccination. Moreover, more than two fifths of children complain of severe pain after vaccination.

Similarly, **Chavane et al. (2017)** introduced a study titled "Assessing Women's Satisfaction with FP Services in Mozambique". They found that the oral contraceptive pill was the most frequently requested They found that the oral contraceptive pill was the most frequently requested FP method, accounting for over half of requests. Injectable contraception followed closely more than two-thirds, while the locational amenorrhea method was chosen by few of participants.

Similarly, the research conducted by **Nasr & Hassan (2016)** discovered that all FP clinics surveyed provided a comprehensive range of FP methods. These methods included condoms, pills, injections, intrauterine devices (IUDs), and Norplant. Furthermore, the study found that the average satisfaction rate among clients was indicating a high level of contentment with the FP services.

From the researchers perspective, it is clear that all FP clinics have fully equipped facilities for providing FP services. This finding is not unexpected because FP is a prioritized program within the Ministry of Health and Population and is an essential component of the reproductive health bundle and overall healthcare services offered by the Egyptian Health Sector Program. Interestingly, individuals within the community who perceived a shortage of healthcare personnel were less inclined to seek PHC services.

According to the structural and behavioral domains of the studied women's responsiveness level to FP and CIS, the current study indicated that high scores level for all domains, such as accessibility, dignity, confidentiality, communication, counseling, environment, continuity of service and choice of service provider.

Consistent with **Hamon et al.'s (2022)** study, the scores for different responsiveness domains varied. With the vast majority of respondents in the dignity area, followed by service continuity, then communication, while ease of access was more than two-thirds, consultation and confidentiality were about two-thirds for each one, environment dominated more than half, and choice of service provider was less than a third. Despite certain domains performing less favorably, a significant majority of clients expressed their willingness to recommend the clinic to friends or relatives interested in FP. Clients' exclusive utilization of a single clinic for FP services was positively correlated with their ratings for choice of provider, communication, confidentiality, and counseling. The study also underscored the significance of how services are organized within the clinics and the behaviors of individual providers in ensuring service responsiveness.

From the researchers perspective, it is evident that patients who receive clear and effective communication from their providers are more likely to comprehend their health status, make appropriate behavioral modifications, and adhere to their medication schedules. The sense of dignity and respect experienced by clients is also attributed to their access to necessary services, the ability to choose contraceptives, positive interpersonal interactions, access to information, and their right to confidentiality. These factors are viewed as integral components of quality care rather than being considered separate entities, as is often done.

The current investigation revealed that most women who participated in the study exhibited satisfactory responsiveness to FP and CIS.

Similarly, the study by **Meskele et al. (2024)** titled "Client satisfaction on family planning, its myths, and misconceptions among women in Wolaita zone, Southern Ethiopia: A mixed methods design" indicated that, around two-thirds of the clients expressed satisfaction with various aspects of the clinic. It is important to note that clients expressed high levels of satisfaction with the hygiene of the examination room, the availability of various FP methods at the clinic, the privacy provided during health education sessions with providers, and the cost of the FP methods.

In the same vein, the study title "Maternal Satisfaction towards Childhood Vaccine Services and Associated Factors in Public Health Facilities at Gondar, Ethiopia" by **Zeleke et al. (2024)**, reported maternal satisfaction with child immunization services was evaluated using 21 factors, categorized into relationships with health workers, attitudes and communication, the physical environment, and the immunization process. The analysis revealed that two-thirds of women reported being satisfied with the services.

In contrast to the findings of the present study, **Mashal et al. (2022)**, in their research titled "Women's Satisfaction Regarding Quality of Family Planning Services at Maternal and Child Health Centers," indicated that the overall quality of family planning services was below two-thirds, and women exhibited a low level of satisfaction with these services.

Furthermore a study by **Uwaibi & Omozuwa (2021)** in Edo State, Nigeria, titled "Maternal Satisfaction with CIS in PHC Centers," reported that out of the surveyed mothers, about one-fifth of them expressed satisfaction with the immunization services, while the majority of them were undecided. Also, the majority

of mothers had an indifferent stance towards the immunization services they received.

The current study explained that, the majority of the surveyed mothers preferred receiving FP information while immunizing their babies and receiving both baby immunization and FP services on the same day. However, only one-fifth indicated that their husbands would disapprove if they received FP information during the immunization service.

These results are consistent with the findings of **Dulli et al. (2016)**, in their study titled "Meeting Postpartum Women's Family Planning Needs Through Integrated Family Planning and Immunization Services: Results of a Cluster-Randomized Controlled Trial in Rwanda" which showed that nearly all women in both groups agreed that the timing of infant immunization services was appropriate for receiving information about FP options. Moreover, more than three-quarters of women preferred receiving FP services when they brought their infants for vaccinations. while one-fifth of them felt that the immunization visit was not an appropriate time to receive FP information.

The current study's findings contradict the findings of **Cooper et al. (2020)** regarding the integration of FP. Cooper et al. found that integrating FP did not significantly impact immunization outcomes, which should reassure the immunization community that integrating services does not harm immunization outcomes. However, these findings conflict with the results of the present study. Some respondents claimed that mothers receiving immunizations did not receive information about FP and that the services were still provided on separate days, despite many customers reporting that integrated services were available at their institution or community location.

The present study elucidated a substantial relationship between women's responses to FP and CIS and their age, residence, and family income. Nevertheless, there is no statistically significant relationship between women's educational level, occupation, and responsiveness. Also, a significant relationship exists between child age, residence, and ranking (number of children) and women's responsiveness to FP and CIS.

The results of the present study are consistent with those of **Sameh et al. (2017)**, who discovered no significant relationship between respondents' satisfaction and educational level. This could be attributed to the fact that the knowledge divide has been reduced across various educational backgrounds due to the widespread access to information provided by modern social media platforms. While, in contrast to these findings, **Alfaqeeh et al. (2017)** conducted a study to identify the barriers and enablers to accessing and utilizing PHCS among a sample of patients in rural and urban areas of Riyadh county. The study clarified that there was no significant relationship between the region in which an individual resides (urban vs. rural) and satisfaction, with the majority of respondents expressing complete satisfaction.

Finally, from the perspective of the researchers, it's possible that many confounding variables played a role in the development of these results, even though research has shown that educational attainment significantly influences patient satisfaction.

Conclusion:

The present study found that all the women surveyed utilized primary health care (PHC) services, with approximately half visiting the center as needed based on their level of PHC utilization at the time. Additionally, the study revealed that most of the women responded favorably to childhood immunization services (CIS) and family planning. The study also identified a significant correlation between women's responses to family planning and CIS and factors such as age, residence, and family income. However, there was no statistically significant relationship between women's educational level, occupation, and their responsiveness. Furthermore, a significant association was found between the number of children, residence, and the child's age in relation to women's responsiveness to CIS and family planning.

Recommendation:

Based on the study findings, it was recommended that**:**

Increase awareness by reaching communities through awareness programs and brochures to improve the accessibility of health services and enhance the benefits of their provision.

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