

Original Paper

The Prevailing Concept about Family Planning in Mosul, Iraq

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Abstract

The study interviewed 1810 women representing two generations of mothers (grandmothers and younger mothers). Most of the studied families were Muslims (93.9%) and Arabs (83.7%). Proportion of mothers who believed that family planning and contraceptives are beneficial is raised by almost 50% (24.4% to 53.5% and 14.4% to 22.1% in order) between the two generations of mothers. Mis-interpretation of the words “family planning” and “contraceptives” was reported among 65.9% and 13.6% of grandmothers in comparison to 38.6% and 9.8% of younger mothers respectively. It seems that it follows the same trend of formal education. So, it is suggested to saw health education and train the health workers to explain medical terms.

Keywords

concept, family-planning, contraceptives, interpretation

1. Introduction

Family planning refers to a woman's ability to choose if and when she becomes pregnant (WTO, 2018). It allows people to attain their desired number of children and determine the spacing of pregnancies through use of contraceptives.

Family planning has important implications for maternal and infants' health. It reduces the number of high-risk pregnancies, high-parity births and lowers the lifetime risk of maternal death (Christian, Dyer, Fisher, Fisher, George, & Gutestam, 2011) (Note 1), so as can contribute to some of the world's highest infant mortality rates (Potts, 1986). The most recent Mothers' Index Data by an inter-agency group including WHO, UNICEF, UNFPA and the World Bank in 2008 indicated that increased access to and

use of modern contraception can lead to dramatic improvements in maternal and infant survival rates. For example, in Finland, where 75% of women use birth control, the lifetime risk of a mother dying in childbirth is only 1 in 8,200, and 4 out of 1,000 infants do not make it to their first birthday. However, in Niger, 4% of women use birth control, 1 in 7 mothers dies in childbirth, and 156 out of 1,000 infants die before reaching age one year (WHO, 2010).

In addition, family planning has also a role in slowing the unsustainable population growth and the resulting negative impacts on the economy, environment, and national and regional development efforts (Christian, Dyer, Fisher, Fisher, George, & Gutestam, 2011).

However, the prevailing norms and values, and eventually the produced concepts, in human society influence population's perception regarding contraceptive use (European Commission, 2005). Even if family planning services are available, its acceptability will be affected by the existing culture-based resistance. Therefore, understanding women's concepts about family planning, in whichever culture, becomes vital in formulation and implementation of Maternal, Neonatal and Child Health (MNCH) programs in constituency if their morbidity and mortality rates are to be sustainably reduced (Nagdeve, 2007).

The current study is aiming at exploring the prevailing concepts of mothers about family planning program and contraceptive use in Mosul, at the north of Iraq.

2. Subjects and Methods

A formal administrative agreement was obtained from Nineveh Health Directorate to start with a cross-sectional design in Mosul, the center of Nineveh Governorate, at the north of Iraq.

The current study applied a multi-stage stratified sampling method on geographical base by division of the West and East coasts of Mosul transversely into: north east, south east, north west and south west subsets. Each subset was stratifying into three strata according to its closeness to downtown (urban, peri-urban and rural areas).

The concerned population of the current study was determined by the formerly clarified inclusion criteria which was **married women who attended the Primary Health Care Center (PHCCs) for any reason**. It was sought to get oral consents from all participants after comprehending the aim of the study.

The questionnaire started with the socio-demographic characteristics of the studied population. Then, the studied women were allowed to freely share their own beliefs concerning family planning and contraceptives whether beneficial or harmful. They had to clarify type of effect according to their concepts and by their language. The association of the maternal concepts and their behavior regarding contraceptives use was examined by *chi²-test* through judgment on the calculated p-value (it was considered as significant when $p \leq 0.05$ throughout the analysis).

Approximately ten months, from April 1, 2011 till the end of Jan., 2012, thus, were needed to collect the required data.

3. Result

During the study period, 1302 families were studied, 508 of them were visiting the PHCCs with a company of older mothers “grandmothers”. As a result, 1810 women were interviewed representing two generations of mothers:

- Grandmothers (508) who representing 28.0% of interviewed mothers
- Younger mothers (1302) who representing 72.0% of interviewed mothers.

Most of the studied families were Muslims (93.9%) and Arabs (83.7%). Urbanization, i.e., shifting from rural to urban area during the last ten years, was recorded in 14.9% of the studied families. Almost half of families (48.3%) were derived from third social class. Husbands' unemployment was significantly spotted in peri-urban and rural localities (10.5%, $p=0.000$). More than half of the studied families (54.3%) showed extended structure (Table 1).

Table 1. Structural Features of the Studied Families by Area of Residence

Socio-demographic features	Urban		Peri-urban & rural		Total		p-value
	(n=682)		(n=620)		(n=1302)		
	No.	(%)	No.	(%)	No.	(%)	
Religion							
Muslims	631	(92.5)	592	(95.5)	1223	(93.9)	0.025
Christians	51	(7.5)	28	(4.5)	79	(6.1)	
Ethnicity							
Arab	621	(91.0)	469	(75.5)	1090	(83.7)	0.000
Kurd	32	(4.7)	63	(10.2)	95	(7.3)	
Turkmen	23	(3.4)	40	(6.5)	63	(4.8)	
Shabak	6	(0.9)	48	(7.7)	54	(4.1)	
Urbanization							
Present	40	(5.9)	155	(25.0)	46 5	(75.0)	0.000
Absent	642	(94.1)	195	(14.9)	1107	(85.1)	
Social Class							
1 st	13	(1.9)	2	(0.3)	15	(1.0)	0.000
2 nd	29	(4.2)	4	(0.6)	33	(2.6)	
3 rd -A	49	(7.2)	51	(8.2)	100	(7.7)	

3 rd -B	315	(46.2)	213	(34.4)	528	(40.6)	
4 th	124	(18.2)	132	(21.4)	256	(19.7)	
5 th	105	(15.4)	153	(24.6)	258	(19.8)	
Unemployed	47	(6.9)	65	(10.5)	112	(8.6)	
Family structure							
Nuclear	305	(44.7)	236	(38.1)	541	(41.6)	
Extended	356	(52.2)	351	(56.6)	707	(54.3)	0.014
Multigenerational	21	(3.1)	33	(5.3)	54	(4.1)	
Consanguineous marriage							
Present	406	(59.5)	446	(71.9)	852	(65.4)	
Absent	276	(40.5)	174	(28.1)	450	(34.6)	0.000

Table 2 shows the socio-demographic characteristics of studied mothers. It was found that 53.3% of the **grandmothers group** was living in urban areas while 46.7% were residents of peri-urban or rural settings. Their mean age was 53.9 ± 2.7 years with a range of 34-79 years. More than half of them (56.3%) were in their fifth decade. The percent raised to 64.6% is in peri-urban or rural settings. A quarter of grandmothers (25.8%) were younger than fifty years. The majority of the studied grandmothers (74.4%) were illiterate. They were currently married (63.8%) or widowed (34.6%). While 52.4% of **younger mothers** were urban-residents and 47.6% were either in peri-urban or rural areas. Their mean age was 30.0 ± 7.7 years. Almost three quarters of mothers (70.3%) were 20-39 years old. Illiteracy was found among 48.8% of concerned mothers. 10.3% of them were working.

Table 2. Socio-Demographic Characteristics of Studied Mothers

Grandmothers							
Socio-demographic features	Urban (n=271)		Peri-urban & rural (n=237)		Total (n=508)		p-value
	No.	(%)	No.	(%)	No.	(%)	
Age group (years)							
<50	85	(31.3)	46	(19.4)	131	(25.8)	0.001
50-59	133	(49.1)	153	(64.6)	286	(56.3)	
≥60	53	(19.6)	38	(16.0)	91	(17.9)	
Education (years of schooling)							
Illiterate	172	(63.5)	206	(86.9)	378	(74.4)	0.000
≤6	63	(23.2)	26	(11.0)	89	(17.5)	
>6	36	(13.3)	5	(2.1)	41	(8.1)	
Current marital status							
Married	191	(70.5)	133	(56.1)	324	(63.8)	0.001
Widowed	74	(27.3)	102	(43.0)	176	(34.6)	
Divorced	6	(2.2)	2	(0.9)	8	(1.6)	
Younger mothers							
Maternal Characteristics	Urban (n=682)		Peri-urban & rural (n=620)		Total (n=1302)		p-value
	No.	(%)	No.	(%)	No.	(%)	
Age (in years)							
<20	60	(8.8)	36	(5.8)	96	(7.4)	0.059
20-29	298	(43.7)	251	(40.5)	549	(42.2)	
30-39	242	(35.5)	254	(41.0)	496	(38.1)	
40-49	82	(12.0)	79	(12.7)	161	(12.3)	
Education (in years of schooling)							
Illiterate	262	(38.4)	373	(60.2)	635	(48.8)	0.000
≤6	346	(50.7)	238	(38.4)	584	(44.9)	
6-12	14	(2.1)	2	(0.3)	16	(1.2)	
>12	60	(8.8)	7	(1.1)	67	(5.1)	
Occupation							

House wife	612	(89.7)	591	(95.3)	1203	(92.4)
Working	64	(9.4)	29	(4.7)	93	(7.1)
Students	6	(0.9)	---	---	6	(0.5)

Prevalence of contraceptive use was 52.2%. It was higher in urban areas (57.0%) than 46.8% in peri-urban and rural localities ($p=0.000$) (Figure 1).

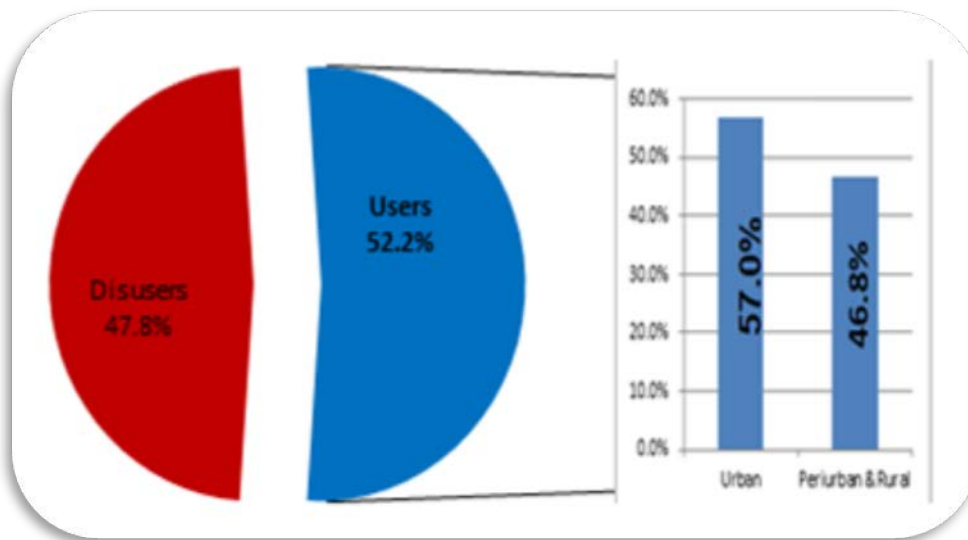


Figure 1. Contraceptive Utilization among Young Mothers by Area of Residence

Maternal concepts about family planning and contraceptives use

Concepts of grandmothers about family planning and contraceptive methods are displayed in Table 4. The majority (65.9%) misinterpreted the word “family planning” specially in peri-urban and rural areas (75.5%) ($p=0.000$). One quarter of them (24.4%) thought that it is benefit particularly urban grandmothers (32.5%). At the same time, 72.0% of participated grandmothers regarded contraceptive methods as harmful, especially in urban areas (78.6%, $p=0.000$). There was 13.6% misinterpreted the word “contraceptive methods”.

Table 3. Concepts of Grandmothers about Family Planning and Contraceptives Use by Area of Residence

Concepts of grandmothers	Urban		Peri-urban & rural		Total		p-value
	(n=271)		(n=237)		(n=508)		
	No.	(%)	No.	(%)	No.	(%)	
Concepts about family planning							
Beneficial	88	(32.5)	36	(15.2)	124	(24.4)	0.000
Harmful	14	(5.2)	21	(8.9)	35	(6.9)	
Nonaligned	13	(4.8)	1	(0.4)	14	(2.8)	
Misinterpretation	156	(57.5)	179	(75.5)	335	(65.9)	
Concepts about contraceptives methods							
Beneficial	37	(13.7)	36	(15.2)	73	(14.4)	0.000
Harmful	213	(78.6)	153	(64.6)	366	(72.0)	
Misinterpretation	21	(7.7)	48	(20.2)	69	(13.6)	

Regarding younger mothers, their concepts about the same topics and association with contraceptive use are displayed in Table 4. More than half of the mothers (53.5%) who believed that family planning are benefit. Such concept significantly associated with increased probability of contraceptive use by two times more (58.8%, OR=1.8, 95%CI=1.4-2.2, p=0.000). Misinterpretation of the word “family planning” was reported among third of mother (38.6%) and this significantly associated with lowering prevalence of contraceptive use (54.7%) (OR=0.6, 95%CI=0.5-0.8, p=0.000).

However, 65.4% of mothers regarded use of contraceptive methods as harmful. Some (2.7%) thoughts that contraception is nonaligned, i.e., having no effect neither beneficial nor harmful as well as misinterpretation of the statement “contraceptive methods”, significantly prevented 82.9% and 89.8% of the studied mothers from using contraceptive methods (OR=0.2, 95%CI=0.08-0.6, p=0.000 and OR=0.1, 95%CI=0.006-0.2, p=0.000 each).

Table 4. Concepts of Young Mothers about Family Planning and Contraceptives Use and Contraceptives Use

Concepts of young mothers	Contraceptives utilization						OR (95% CI)	p-value
	Users		Non-users		Total			
	(n=679)		(n=623)		n=1302			
	No.	(%)	No.	(%)	No.	(%)		
Maternal concepts about family planning								
Beneficial	410	(58.8)	287	(41.2)	697	(53.5)	1.8 (1.4-2.2)	0.000
Harmful	13	(24.1)	41	(75.9)	54	(4.2)	0.3 (0.1-0.5)	0.000
Nonaligned	28	(58.3)	20	(41.7)	48	(3.7)	1.3 (0.7-2.4)	0.4
Mis-interpretation	228	(45.3)	275	(54.7)	503	(38.6)	0.6 (0.5-0.8)	0.000
Maternal concepts about contraceptive methods								
Beneficial	201	(69.8)	87	(30.1)	288	(22.1)	2.9 (2.1-4.0)	0.000
Harmful	459	(53.9)	393	(46.1)	852	(65.4)	1.2 (0.9-1.5)	0.09
No effect	6	(17.1)	29	(82.9)	35	(2.7)	0.2 (0.08-0.6)	0.000
Mis-interpretation	13	(10.2)	114	(89.8)	127	(9.8)	0.1 (0.06-0.2)	0.000

4. Discussion

Medical sociology is an important and relatively new specialty in sociology in particular and behavioural sciences in general. It investigates social (rather than biological) factors in the causation of health events. Installation of medical sociology within medicine represents redirection of medical thinking from the purely clinical and psychological criteria of illness into social facets of health and illness state (Boba, 2008).

Researches in medical sociology are qualitative, i.e. descriptive and subjective with too little quantitative measurements. They are derived from behaviour science where respondents' beliefs and experiences are prioritizing; and where observational works and personal interviews are the most common methods of data collection. However, it requires good communicators who have the art of interviewing in order to get the precise actual information (Al-Youzbaki, 2007). The general methodology of such researches is a cross-section study design so as it had been adopted by the current study.

Concept is an image of a thing held in the mind (Chen-Chung & Jia-Hsung, 2005). They usually slope trans-generationally through the process of socialization (Zborowski, 1992), i.e., learning process wherein the value and attitude system of a culture is internalized (Fredericks, Mundy, & Lennon, 2008). Since the mothers are the key educators of children, their concepts seem to be part of the bedrock of socialization (Joralemon, 2010). They work at different levels to influence care-seeking behaviours and access to advantageous operative use of preventive services besides exposure to risks of unintended

pregnancy and/or sexually transmitted infections (Bongaarts, 2003). So, the current study is interested to inquire about maternal concept about family planning.

The current study found that illiteracy rate among mothers has fallen throughout the past few years from 74.4% of grandmothers to 48.8% of younger mothers. This trend reflected on maternal concepts about family planning and contraceptives. Proportion of mothers who believed that family planning and contraceptives are beneficial is raised by almost 50% (24.4% to 53.5% and 14.4% to 22.1%) between the two generations of mothers.

Iraq had lowered its fertility by almost 44% since early 1950s to become 4.1 children per woman with an average family size of 6.4 persons as estimated by Multiple Indicator Cluster Survey in Iraq (MICS-3) (Ministry of Health/Iraq, 2007). It was about 22% higher in rural areas (5.1 children per woman) than in urban areas (4.0). Later on, MICS-4 (Alalak & Ameen, 2007) stated that the level of fertility was inversely related to women's education, decreasing rapidly from 4.8 children among women with no or primary education to 3.5 children among women who have at least some secondary education.

Effect of education was reported by World Bank in 2009 (World Bank, 2019) that stated that education directly influenced women health status and any restrictions on women's education will affect their ability to make informed choices regarding health practices, to access health care services, to interact with health care personnel and even to participate in treatment regimens. Furthermore, Ban Ki-moon (Ban Ki-moon, 2012) the general secretary of UN in 2012 made it clear that women's education exposes them to information, empowers them and makes them more aware of their own health and the health of their children. He added that educated women are more likely to postpone marriage, have smaller family size, and use contraception than uneducated women do.

The desired family size became smaller with the increase in women's educational levels. Similar association was recorded by Akmam (Akmam, 2002) in 2002 in a study of fertility in Nigeria. He added that female education has an impact on the demand for children via: (1) Desired family size; (2) Son preference; (3) Labour contributions of offspring during childhood; (4) Children as old age support; (5) Children as sources of prestige; and (6) Economic, time and opportunity costs of raising children.

Takyi and Podhisita (Takyi, Gyimah, & Addai, 2006) when studied fertility behaviours of married men and women in Ghana, Sub-Saharan Africa in 2006 witnessed a significant inverse relationship between educational attainment of both men and women and the fertility levels. Those with no education having the highest number of children ever born and the above secondary category having the lowest. Adhikari et al. (Adhikari & Podhisita, 2010) in 2010 stated that the total fertility rate in Nepal has decreased from 6.3 births per woman in 1981 to 3.1 in 2009 mainly due to improvement of women's education and female labor force participation. These two factors in particular were among the fundamental reasons for such fertility change in Nepal since both were negatively associated with the number of children a

woman may have. The study also showed that illiterate women have almost double the crude number of children ever born than do literate women.

However, the present study probably pointed to improvement in performance of family planning program in Mosul since the estimated prevalence of contraceptive use (52.2%) is higher than that previously estimated by other studies. Al-Jawadi and Al-Bakry (Al-Jawadi & Al-Bakry, 2008) carried out a cross-sectional study in Mosul in 2008, found that 40.2% of married mothers had met their needs (women are said to have met their needs for family planning when they use any method of contraception to delay or stop their next birth). However, there were 20.2% of mothers who has been studied in 2008, as the same study reported, were prohibited from using contraceptives and described as having unmet needs. A higher prevalence of contraceptives use (50.4%) among mothers at child bearing age who attended the immunization units at PHCCs was stated by Al-Jawadi and Al-Sammak (Aljawadi & Al-Sammak, 2012) in another cross-sectional study in Mosul in 2010.

Bagheri and Nikbakhsh (Bagheri & Nikbakhsh, 2010) assessed the prevalence of contraception usage and family planning among Iranian women in 2010. They found that 83.8% of their sample agreed to have small family size. Most of women noted that family planning was useful, and stated that family planning protected mothers, children, and future of family. However, the same authors explained that 10.1% of women did not seek family planning services mostly because of their husband's attitude that was against family planning. Such cases were commonly recorded among the low educated women. They explained that religious beliefs as well as a general cultural notion of Iranian women, that is a woman's duty is to support family through large family especially boys, substantially affects a woman's decision about family planning methods. They added that anxieties about the possible risks to infertility may have prevented the use of the systemic methods of contraception.

Shafei et al. (Shafei, Shah, & Ismail, 2012) in 2012 found that prevalence of family planning practice in Malaysia was 38.7% and 36.0% of mothers recorded short birth spacing. They added that in general, knowledge and attitude towards family planning were inadequate. Albeit, knowledge alone did not influence the attitude as wives with a higher percentage of good knowledge did not have a better attitude than control group of Shafei study. They censured low education background of the couples as most of them had completed up to secondary school only.

Al Sheeha (Al Sheeha, 2010) when investigated awareness and the use of contraceptives among Saudi women in 2010 and found out that Saudi wives recorded a period of 2-3 years as a preferred birth interval and most of the couples (83.7 %) showed acceptance of contraceptive use for birth spacing. However, half of the couples had low level of knowledge regarding the types of contraceptive methods and just 44.8% of married women were using or had used a contraceptive method continuously for at least one year. Non-users explained three main reasons: considering the value of children as being a blessing from God (69.5%), the harmful effect of contraceptives (19.5%), and the negative effect on the marital life

(11.0%).

The current study spotlighted the light on a vital dilemma that may face many health workers, which are language variations or known as language embarrassment. Mis-interpretation of the words “family planning” and “contraceptives” was reported among 65.9% and 13.6% of grandmothers in comparison to 38.6% and 9.8% of younger mothers. It seems that it follows the same trend of formal education.

Because the word “family” refers to a social unit that varies from culture to culture, and because traditional birth spacing through abstinence and breastfeeding continues to be practiced in a number of societies, the understanding of the term “family planning” is frequently affected by cultural differences. Even within a monolingual group, the same questions or terms may not be understood by everyone in the same way (Lucas & Ware, 1977). Most of the studied mothers miss-understand the words of “family planning” and “contraceptives” as home-management and house-keeping and cleaning.

The consideration of such problem of “mis-interpretation” stems from its relation with the acceptability of family planning program and consequently the prosperity of the health agenda. The current study highlighted that more than half of young mothers that miss-understood the word “family planning” disuse contraceptives ($p=0.000$). The proportion raised to 89.8% among young mothers who misunderstood the word “contraceptives” ($p=0.000$).

Hanifi and Bhuiya (Hanifi & Bhuiya, 2001) studied Family-planning Services in Rural Area of Bangladesh in 2001 and stated that mis-interpretation of the words “family planning” and “contraceptives” had might act as a barrier in enhancement of family planning program. It was mentioned among the most important factors that are blamed to slow health improving agenda with illiteracy.

5. Conclusion

Maternal concept regarding family planning and contraceptive has been changed positively over the two generations. Expansion of literacy and health education seem to be among various factors that related to such trend.

6. Recommendation

The present study suggests to encourage formal education in general and to include health education within school-curricula. In parallel, health workers need to expand their thesaurus and bypass medical terminology and replace it with common words that have obvious meanings for the recipient’s culture as could as possible.

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Note

Note 1. Life time risk of maternal death is the probability that a 15-year-old female will die from a maternal cause during her reproductive years (up to 49 years old) assuming that current levels of fertility and mortality (including maternal mortality) do not change in the future. Lifetime risk of maternal death is one of the four key indicators used to calculate the well-being status of mothers besides percent of women using modern contraception, skilled attendant at delivery and female life expectancy.