

Effectiveness of an Instructional Program on Female Secondary Schools Teacher's Knowledge Concerning Contraceptive Methods at Baghdad City.

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Abstract:

Objective: The study aims to assess the effectiveness of an instructional program on Female Secondary Schools Teachers' Knowledge Concerning Contraceptive Methods at Baghdad City.

Methodology: A Self-controlled and crossover trails study design was conducted, included (100) Female married Secondary Schools Teachers aged between (20-49) years,(25)schools in Al Russafa sector, and (25) in Al Karkh sector, from May 22th , 2014 to September 25th 2015, to assess the effectiveness of an instructional program on female secondary schools teachers' knowledge concerning contraceptive methods by using time series approach of data analysis and the application of pre-post tests approach for the study sample. A non-probability (purposive) sample of (100) female married teachers, two from each school were selected. A questionnaire format was used for data collection. The questionnaire validity was determined through a panel of experts. The reliability was estimated through a pilot study. The data was analyzed through the application of descriptive and inferential statistics approaches. All the procedures were tested at $p \leq 0.05$.

Results: The study reveals that most teachers aged 20-49 years, have 6-10 years of experiences, the majority have bachelor degree, and married at (24-28) years old, have (1-3) pregnancy and delivery respectively. History of previous abortion constitute for 24% of teachers, third of these were induced abortion. Concerning teachers' knowledge about contraceptive methods, the results showed that their knowledge in general was good after implementation an instructional program, and they were benefited from the implementation of health instructional program; however, their knowledge were adequately improved and developed., with respect to the total relative sufficiency (RS) which was changing from (71.44 %) in pre- test to (91.49%) in posttest -1, to (92.86%) in post-test 2 respectively.

Recommendations: The study recommends that there is a need for continuous health education in the field of family planning which is necessary, counseling , provision and increase availability of different methods in all primary health care centers of Iraq. Family planning programs should involve men as well as women, and. Increasing Community awareness of family planning and the advantages of child spacing through mass media.

Keyword: Effectiveness, Knowledge, Contraceptive methods.

I. Introduction:

The aims of Family planning are to allow couples to anticipate or attain their desired number of children, control spacing between pregnancies and timing of births. It is achieved through the use of contraceptive methods and the treatment of involuntary infertility. A woman's ability to space and limit her pregnancies has a direct impact on her health and well-being as well as on the outcome of each pregnancy ⁽¹⁾.

There are different family planning methods. Each of these methods suits a particular need, desire or condition of a couple. What is important for each one of us is to choose a family planning method that meets our needs and conditions ⁽²⁾. (Family planning methods can be divided based on several criteria such as natural or artificial, traditional or modern, temporary or permanent, male or female and oral or injectables or IUCDs⁽³⁾).

Lack of the knowledge was the most widely mentioned obstacle about contraception, its use, or its availability, cited by one –quarter of those women with unmet need in developing countries, and reported that effective family planning programs promote wider knowledge about the range of contraceptive methods and their proper uses. The reasons for not using any family planning methods are lack of knowledge and education, religious belief and fear of side effects ^{(4), (5)}.

Knowledge and practice of family planning is strongly related to higher level of education ⁽⁴⁾. In most of the studies it was found that education is the prime influencing factor and education affects the attitudinal and behavioral patterns of the individuals ^{(5), (6)}.

II. Methodology:

The study is conducted at four education directorates in Baghdad City, two in Al Russafa sector, and two in Al Karkh sector. The study included(100) Females' Secondary Schools Teachers, 50 from Al Russafa sector, and 50 from Al Karkh sector, as two teachers were chosen randomly from each school, from May 22th , 2014 to September 25th 2015, to assess of female secondary schools teachers' knowledge concerning contraceptive methods. A questionnaire format was used for data collection. The validity of questionnaire was estimated through a panel of experts related to the field of study, and its reliability was estimated through a pilot study.

A questionnaire format was used for data collection which consisted three major parts; the first part is concerned with teachers' socio- demographic characteristics of (age, level of education, years of experience in teaching, Economic level). The second part is concerned with teachers' reproductive characteristics. While the third part is concerned with teachers' knowledge concerning contraceptive methods (180) items, it consisted four **Domains**, as (14) items for general information about family planning, (12) items about the benefit of contraceptive methods and how it works, (73) items about the teachers' knowledge toward each method, and (81) items for teachers' knowledge concerning the signs and symptoms of different types of contraceptive methods, the risk and complication of each method.

Reliability of the questionnaire was estimated through the use of Alpha Cronbach for the test-retest approach⁽⁷⁾.

Analysis of data was performed through the application of descriptive statistics (frequency, percentage Cum. Percent, Mean of score (M.S.), Standard Deviation (SD), and Relative Sufficiency (R.S.)) and inferential statistics (Alpha Cronbach, Reliability Coefficient, Chi Square, Z-test and Wilcoxon test).The items of knowledge were rated on three level Likert scales; I know, uncertain, and I do not know, and scored as 3, 2 and 1, respectively.⁽⁸⁾. Relative sufficiency (RS) Less than (66.66) was considered low level of knowledge, (66.66-77.77) was considered pass, (77.78-88.88) was considered moderate, while (88.89- 100) was considered high level of knowledge.

III. Results of the study:

Table (1): Distribution of Teachers by Their Demographic Characteristics (N= 100) with Comparisons Significant.(N=100).

SDCv.	Group	No.	%	Cum. %	C.S. ^(*) P-value
Age Groups	20 - 29	9	9	9	P=0.000 (HS)
	30 - 39	60	60	69	
	40 - 49	31	31	100	
Educational levels	Diploma	1	1	1	P=0.000 (HS)
	Bachelor's degree	93	93	94	
	High diploma	1	1	95	
	Master Degree	5	5	100	
Experience in teaching	1 - 5	8	8	8	P=0.000 (HS)
	6 - 10	48	48	56	
	11 - 15	24	24	80	
	16 - 20	7	7	87	
	21 - 25	12	12	99	
	□ 26	1	1	100	
Economic levels	High	8	8	8	P=0.000 (HS)
	Middle	66	66	74	
	Low	26	26	100	

^(*)HS: Highly Sig. at P<0.01; Sig. at <0.05 NS: Non Sig. at P>0.05; Testing based on One-Sample Chi-Square test

Table (1) shows that 60% of the study sample are between (30 – 39) years old, while (31 %) were between (40 – 49) years old. Regarding to the level of education, the vast majority (93%) are Bachelor degree, while only (5%) of them were master degree. Furthermore, this table shows that (48%) of teachers in sample study had (6 – 10) years of experience in teaching.

Concerning Socio-economic level, (66%) of them are (moderate) level while (poor) level constitute (26%) of the study sample.

Table (2) Distribution of Teachers by Information of Pregnancy & Childbirth variables with Comparisons Significant.

Information of Pregnancy & childbirth	Group	No.	%	Cum. %	C.S. ^(*) P-value
Age at Marriage	19 - 23	34	34	34	P=0.000 HS
	24 - 28	45	45	79	
	29 - 33	12	12	91	
	34 - 38	9	9	100	
Age at first Pregnancy	19 - 23	25	25	25	P=0.000 HS
	24 - 28	49	49	74	
	30 - 34	15	15	89	
	□ 35	11	11	100	
Number Pregnancy	1 - 3	53	53	53	P=0.000 HS
	4 - 6	33	33	86	
	7 - 9	14	14	100	
Duration between the present and last Pregnancy/years	<1	41	41	41	P=0.000 HS
	1 - 2	40	40	81	
	3 - 4	10	10	91	
	□ 5	9	9	100	
Number of Birth	1 - 3	85	85	85	P=0.000 HS
	4 - 6	15	15	100	
Type of delivery	N.D.	44	44	44	P=0.000 (HS)
	C.S.	48	48	92	
	Both	8	8	100	
Number of Dead births	No	88	88	88	P=0.000 HS
	Yes	12	12	100	
Number of living Children	1 - 3	1	1	1	P=0.000 HS
	4 - 6	86	86	87	
	7 - 9	13	13	100	
Number of Abortion	No Applicable	76	75	75	P=0.000 HS
	One time	20	83.3	83.3	
	□ 2 times	4	16.7	100	
Type of Abortion	Non Applicable	76	76	76	P=0.000 (HS)
	Spontaneous	16	66.7	66.7	
	Induce	8	33.3	100	
Would you like to become pregnant again?	Yes	68	68	68	P=0.000 HS
	No	32	32	100	

(*)HS: Highly Sig. at P<0.01; Testing based on One-Sample Chi-Square and Binomial tests.

Table (2) shows the distribution of the study sample study concerning marriage and pregnancy status, which clearly reveals that (45%) of them were married between (24 – 28) years old, and nearly half of them get first pregnancy between (24 – 28) years old, while (53%) of them had (1-3) pregnancies until the time of study . Concerning to the duration of last Pregnancy, (41%) of teachers the duration was between 1-4years, while (40%) of them was between 5-9 years.

Furthermore, (85%) of teachers had 1-3 childbirths. With regard to type of delivery, (48%) of them had Caesarean section delivery, while (44%) of them had normal delivery. Concerning to the number of dead births (88%) of them did not get dead birth. Furthermore, this table shows that (86%) of them had from (1-3) living children. While (76%) of them, no abortion was happened to them. Also the study depicted that (24%) of them had abortion, and they are accounted 66.7(66.7%) for Spontaneous type, and accounted 33.3(33.3%) for induce type.

Moreover about tow third of sample study (68%), says that they want to be pregnant again.

Table (3): Source of Information about Contraceptive Methods with Comparisons Significant.

Source of Information	Resp.	No.	%	Cum. %	C.S. ^(*) P-value
Mass media	Yes	10	10	10	P=0.000 HS
Family, relatives & friends	Yes	13	13	23	P=0.057 NS
Health Workers/nurses	Yes	3	3	26	P=0.000 HS
Seminars / Meetings / Training sessions courses	Yes	2	2	28	P=0.000

					HS
Internet	Yes	20	20	48	P=0.000 HS
Books, Magazines, and Newspapers	Yes	8	8	56	P=0.000 HS
Personal Experience	Yes	12	12	68	P=0.764 NS
Doctor / Physician	Yes	32	32	100	P=0.000 HS

^(*)HS: Highly Sig. at P<0.01;NS: Non Sig. at P>0.05; Testing based on One-Sample Chi-Square and Binomial tests.

Concerning to the source of information about contraceptive methods, table (3) shows that nearly one third of them (32%) said that they acquired the information from doctor, while (20%) of them from internet. The other sources of information were the Family, relatives & friends (13%), Personal Experience (12%), Radio& Television (10%), Books, Magazines, and Newspapers (8%), Health Worker and nurses (3%), and Seminars / Meetings / Training sessions courses (2%) respectively.

Table (3): Summary Statistics of teachers concerning overall assessment of contraceptive methods Knowledge.

Parameters	Period	No.	GMS	SD	RS%	Z-value	P-value	C.S.
Total general Information (14) items	Pre	100	1.59	0.25	53.21	-8.686	0.000	L
	Post-1	100	2.71	0.21	90.62	-8.687	0.000	H
	Post-2	100	2.78	0.16	92.98	-6.370	0.000	H
Total knowledge about the Benefits of Contraceptive Methods (12) items	Pre	100	1.93	0.19	64.40	-8.683	0.000	L
	Post-1	100	2.56	0.15	85.36	8.682	0.000	M
	Post-2	100	2.59	0.14	86.39	4.709	0.000	M
Total knowledge of teachers about type of Contraceptive Methods (73) items	Pre	100	2.16	0.17	72.0	-8.682	0.000	P
	Post-1	100	2.79	0.14	93.16	-8.682	0.000	H
	Post-2	100	2.84	0.10	94.67	-7.775	0.000	H
Total knowledge concerning the symptoms, complications and risks factors of different methods of contraception (81) items	Pre	100	2.18	0.15	72.71	-8.661	0.000	P
	Post-1	100	2.72	0.17	90.66	-8.678	0.000	H
	Post-2	100	2.75	0.15	91.67	-7.232	0.000	H
Total knowledge (180) items	Pre	100	2.143	0.121	71.44	-5.696	0.000	P
	Post-1	100	2.745	0.107	91.49	-8.682	0.000	H
	Post-2	100	2.786	0.090	92.86	-8.683	0.000	H

^(*)HS: Highly Sig. at P<0.01; S: Sig. at P<0.05; NS: Non Sig. at P>0.05
MS= Mean of score, Low = Less than (66.66), Pass (66.66- 77.77), moderate (77.78- 88.88), and high (88.89- 100).

Table (4) demonstrate the total mean of knowledge score and the total relative sufficiency (RS) for (180) items for total teachers' knowledge which indicate that there is high level (good knowledge) for them after implementing the instructional program from pre to the post test, with respect to the total mean score (MS) and to the total relative sufficiency (RS) which changing form (71.44%) in pre-test to (91.49%) in posttest -1, and to (92.86%) in posttest -2 respectively with highly significant .

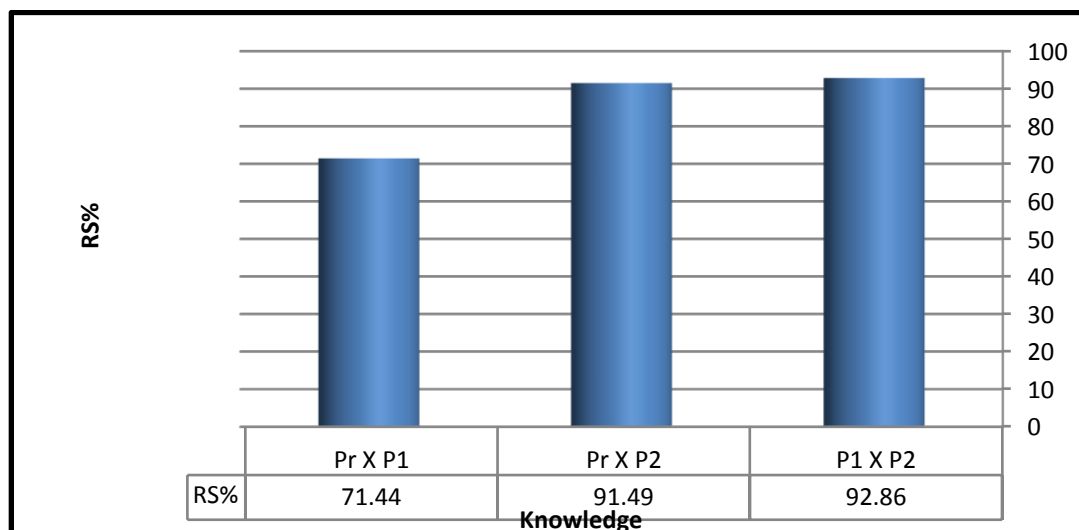


Figure (1): illustrate the overall Assessment for Female Teacher's 'Knowledge concerning Contraceptive Methods at different periods (before and after instructional program).

IV. Discussion:

1. Discussion of demographic characteristics and reproductive health information of study sample.

As it has been shown in table (1) most teachers (60%) their ages ranged between (30-39) years. Regarding to the vast level of education, the vast majority of the study sample (93%) were Bachelor degree. Furthermore, table (1) shows that (48%) of teachers had (6 – 10) years of experience in teaching.

This results are disagree with study had done to assess the impact of education program about family planning among (140) Yemeni Women on their “Knowledge and Attitude” in Sana’a city. It was found that nearly half of the studied women (48.6%) aged 20 years and less than 30 years⁽¹³⁾.

Also this result is disagree with study had done to determine the factor affecting contraceptives use in a sample of women attending Al-kadhymia Primary Health Center, in Baghdad City, the result showed that from(783) married women at the bearing age there were (51.7%) in age group (20-29) years. As foreducation (45.3%) were secondary school while (20.3%) were college. The occupations of most women (79.6%) were housewife⁽¹⁴⁾.

Concerning socio- economic level of the family, (66 %) of them said that the economic level for their families was moderate, while (26%) was low level.

This result is disagree with a study had done in the urban slums in Bangladesh, who found with regard to socioeconomic status measured by household wealth index, that almost two-thirds (65.0%) were poor, one-fifth (19.5%) was middle class and the rest 15.1% was rich⁽¹⁵⁾.

The result in table (2) reveals that (45%) of teachers were married between (24 – 28) years old, and nearly half of them get first pregnancy between (24 – 28) years old, while (53%) of them had (1-3) pregnancies until the time of study .

This result is disagree with a study had done to assess the knowledge, attitudes, and practices of family planning among (500) women of rural Karachi, Pakistan, which found that 345 (69%) of sample study their age at marriage was between 20-24years old.⁽¹⁶⁾

Concerning to the duration between the present and of last Pregnancy, (41%) of teachers the duration was less than 1years, while (40%) of them was between 1-2 years.

Furthermore, (85%) of teachers had 1-3 childbirths. With regard to type of delivery, (48%) of them had Caesarean section delivery, while (44%) of them had normal delivery. Concerning to the number of dead births (88%) of them did not get dead birth. Furthermore, this table shows that (86%) of them had from (1-3) living children. Also the study depicted that (24%) of them had abortion, which accounted 66.7(66.7%) for spontaneous type, and 33.3(33.3%) for induce type.

This result is disagree with a study had don on,2011 in Basrah, Iraq, to assess the knowledge, attitudes, and practices of family planning among (900) married women in south of Iraq. the results indicated that. 51.4% of the women had 4 children and more⁽¹⁷⁾.

Also this result is disagree with a study had done to assess KAP of (500) Palestinian women in refugee camps of Nablus area towards family planning, The mean age was 31years and mean age of first marriage was 18.7 years, 50% were elementary educational level, and 33.8% were with secondary level, 81.8% their income is not enough, the average family size was 5.9⁽¹⁸⁾.

Moreover about two third of the study sample (68%), mentioned that they want to be pregnant again.

Knowledge and practice of family planning is strongly related to higher level of education⁽¹⁹⁾. In most studies it was found that education is the prime influencing factor and education affects the attitudinal and behavioral patterns of the individuals⁽¹⁰⁾

Discussion the source of information that acquired about contraceptive methods.

Concerning to the source of information that acquired about contraceptive methods, table (3) shows that nearly one third (32%) of them says that they acquired the information from doctor, while (20%) of them from internet. The other proportion of the source of information were; (13%);(12%);(10%);(8%);(3%);(2%) to the Family, relatives & friends, Personal Experience, Radio& Television, Books, Magazines, and Newspapers, Health Workers, and Seminars / Meetings / Training sessions courses respectively.

This result is with dis agree with study had done in Basrah, Iraq, which indicated that the main source of knowledge, about different contraceptive methods was from health personnel as reported by 54% of the respondents. Relatives were the source of knowledge in 41.2% of the respondents and 4.8% knew about these methods from friends⁽¹³⁾.

Also this result is disagree with the study had done to assess the knowledge and determinant factors of contraceptive use among (108) married Sudanese Women, which found that their main source of knowledge and information were the neighbors⁽¹⁶⁾.

This result is disagree with the study done in Erbil, Iraq which revealed that the majority of the sample (92.1%) said that personal experience was the main source of information related to the FP. It is evident that the role of doctors and health workers is limited⁽¹⁷⁾.

This result is disagree with the study done in rural tertiary health care center , Madhya Pradesh, India .There was no reliable source of information for majority of participants (72%), while health professionals contributed to only 12% and 16% to media⁽¹⁸⁾.

This result is disagree with the study done in Meghalaya, India, 174 (87%) had knowledge about contraceptive methods and it was mainly obtained from health workers (58.6%) followed by media (24.1%) and (15.5%) to social circle⁽¹⁹⁾ .

3. Discussion of teachers ' knowledge concerning contraceptive methods.

Table (4) and figure (1) demonstrate the total mean of knowledge score and the total relative sufficiency (RS) for (180) items of the study questionnaire for total teachers' knowledge which indicate that there is high level (good knowledge) for them after implementing the instructional program from pre to the post test, with respect to the total mean score (MS) and to the total relative sufficiency (RS) which changing form (71.44%) in pre-test to (91.49%) in posttest -1, and to (92.86%) in posttest -2 respectively with highly significant .

In a study which done to assess of knowledge, practice and attitude for 400 married women between (15-47) years, in Basrah, Iraq, Women had considerable knowledge toward contraception method⁽²⁰⁾.

Concerning the first domain of knowledge which is include (14) items to assess teachers' general Knowledge about family planning, table (4) indicate that there is high level knowledge (good) for teachers after implementing the instructional program to the study sample from pre to the posttest-1, and posttest -2 with respect to the total mean score (MS) and to the total relative sufficiency (RS) which changing from (53.21%) in pre- test to (90.62%) in posttest -1, to (92.98%) in post-test 2 respectively, with highly significant .

This result is disagree with a study had done in urban slums at Mumbai. Included 200 couples, 32% of couples didn't have any knowledge about contraceptives and family planning⁽²¹⁾.

Concerning the second domain of knowledge which is include (12) items to assess teachers' knowledge about the benefits of contraceptive methods and how they work, table (4) indicate that there is high level knowledge (good) for teachers after implementing the instructional program to the study group from pre to the posttest with respect to the total mean score (MS) and to the total relative sufficiency (RS)) which changing from (64.40%) in pre- test to (85.36%) in posttest -1, to (86.39%) in post-test 2 respectively, with highly significant.

This result is supported by a study to assess knowledge, practice and attitude of women towards family planning methods in Tafila city –Jordan. 93% of women showed considerable knowledge about different methods of contraception; and the reason for using contraception as for spacing between births⁽²²⁾.

Concerning the third domain of knowledge which is include (73) items to assess teachers' knowledge concerning the types of contraceptive methods, table (4) indicate that there is high level knowledge (good) for teachers after implementing the instructional program to the study group from pre to the posttest-1, and posttest-2 with respect to the total mean score (MS) and to the total relative sufficiency (RS) which changing from (72.00%) in pre- test to (93.16%) in posttest -1, to (94.677%) in post-test 2 respectively, with highly significant.

This result is supported by a study conducted to assess KAP of (500) Palestinian women in refugee camps of Nablus area towards family planning. The most common recognized modern methods of contraceptive

were IUDs (96.4%), OCs (96.4%), condom (69.8%), and injection (51%), Natural family planning methods were represented by 35.4% and 15.4% for breast feeding and withdrawal respectively⁽¹⁴⁾.

This result is with agreement with the study had done to assess the knowledge, attitude & practices of contraceptives among (200) married women of reproductive age group in Meghalaya, India, 174 (87%) had knowledge about contraceptive methods⁽¹⁹⁾.

Concerning the fourth domain of knowledge which is include (81) items to assess teachers' knowledge concerning the symptoms, complications and risks factors of different methods of contraception, which indicate that there is high level knowledge (good) for teachers after implementing the instructional program to the study group from pre to the posttest-1, and posttest-2 with respect to the total mean score (MS) and to the total relative sufficiency (RS) which changing from (72.71%) in pre- test to (90.66%) in posttest -1, to (91.67%) in post-test 2 respectively, with highly significant.

This result is agree with the study had done to determine the types of contraceptive methods used by Iraqi women, and the types of complications attributed to these methods, and their relationship with different factors. The study included (200) married women of the child-bearing age (15-45 years), collected from the outpatient clinic of Baghdad Teaching Hospital. The complications in case of oral contraceptives were mostly pain (20%), malaise (10.4%), and psychological disturbances (8.55%). IUD users had suffered mainly from bleeding (39.5%) and infection (22.4%). Injectable contraceptive users had suffered from infection only in a rate of (14.3%)⁽²³⁾.

V. Recommendations:

1. It was recommended that a continuous health education in the field of family planning is necessary, counselling, provision and increase availability of different methods in primary health care centers. It could be helpful to conduct health education programs regarding contraceptives; their side effects and safety in all primary health care centers of Iraq. to inform them of the different contraceptive methods available and the probable expected side effects with each method so that they can decide on the appropriate method chose and with the aid of their doctors.
2. Men should not be ignored in receiving health education programs on birth control methods. Family planning program should involve men as well as women. Men involvement in FP counseling will reduce opposition to FP programs and also encourage their wives to use contraceptive methods.
3. It is very important to authorship and teaching of family planning subject and contraceptive methods topics in all secondary schools of Iraq for girls and boys students.

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