

Improving the Knowledge and Attitude on ‘Standard Days Method’ of Family Planning Through a Promotional Program Among Indian Postgraduate Students

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Abstract

Introduction The ‘Standard Days Method’ is a fertility awareness-based method of family planning that identifies

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day 8 through day 19 of the menstrual cycle as fertile days during which a woman is likely to conceive with unprotected intercourse.

Objective The study was aimed to determine the effectiveness of a promotional program on the ‘Standard Days Method’ in terms of improving the knowledge scores and attitude scores.

Design A pre-experimental one-group pretest–posttest research design was adopted. The samples included 365 female postgraduate students from selected colleges of Udupi Taluk, Karnataka. The data was collected using self-administered questionnaires. The plan for the promotional program was also established.

Results The findings of the study were analyzed using the descriptive and inferential statistics. The mean pretest and posttest knowledge scores were computed, and it was found that there was an increase in the mean knowledge score from 8.96 ± 3.84 to 32.64 ± 5.59 , respectively. It was observed that the promotional program on ‘Standard

Days Method' was effective in improving the knowledge ($p < 0.001$) and attitude ($p < 0.001$) of the postgraduate students.

Conclusion The promotional program on Standard Days Method of family planning was effective in improving the knowledge and attitude of the postgraduate female students. This will enable the women to adopt this method and plan their pregnancies naturally and reduce the side effects of using oral contraceptives.

Keywords Attitude · Knowledge · Standard Days Method · Family planning · Promotional program

Introduction

Family planning allows an individual or couple to anticipate and attain the desired number of children and have adequate spacing and timing of their births. It has got a direct impact on the health and well-being of the woman and plays a major role in reducing the maternal as well as infant mortality rates worldwide. The choice of deciding a particular method of family planning is to be made by the individual or the couple keeping in mind various factors such as knowledge of the method, effectiveness, efficacy, safety, comfort, cost, availability and limitations of the method of family planning [1]. Failure to adopt or practice methods of family planning results in the incidences of women getting pregnant at a time undesirable to them. Some of the factors that have been identified for not practicing a method of family planning are lack of awareness to the methods of family planning, limited accessibility to services, expensive methods and fear of side effects [2]. The issue of unplanned births is still a major cause of increasing population in today's world. Unintended pregnancy also has a public health impact: Births resulting from unintended or closely spaced pregnancies are associated with adverse maternal and child health outcomes, such as delayed prenatal care, premature birth, and negative physical and mental health effects for children [3].

An estimated 222 million women in developing countries desire to delay or stop childbearing but are not using any method of contraception. The reason is inability to access affordable and effective method of contraception. A cost-effective as well as an assuring method of family planning identified by the WHO is the natural family planning. Natural family planning yields impressively low pregnancy rates when it is practiced correctly. The rate of getting pregnant can be compared with many hormonal contraceptive methods [4].

The method of natural family planning that helps in identifying the fertile days of the menstrual cycle is the

fertility awareness-based method of family planning. The two methods included in the fertility awareness-based method are 'Standard Days Method' and Two-Day Method. Surveys carried out worldwide suggest that women prefer a fertility awareness-based method of family planning as it has less side effects and health consequences of other contraceptive methods [5]. It is reported that about 3.6% women worldwide use fertility awareness-based method of family planning [6].

In 2001, the Institute for Reproductive Health, Georgetown University developed 'Standard Days Method' of family planning. This is based on the concept of the fertile period in the menstrual cycle of 26 and 32 days. According to this method, 12 days in the menstrual cycle are referred to as standard days when a woman can probably conceive with unprotected intercourse. These days range from day 8 to day 19 of a 26- to 32-day menstrual cycle. The 'Standard Days Method' has better efficacy rates when compared to the barrier methods. With the correct use of the 'Standard Days Method' the pregnancy rate is 4.8 (per 100 women years), and with the typical use it is 12 (per 100 women years). 'Standard Days Method' gains its superiority over other methods of family planning in that it can be suggested for the uneducated women using the cycle beads. Cycle beads are a commercially available color-coded string of beads that help to track the fertile days of a menstrual cycle. 'Standard Days Method' has not reported any incidents of side effects among its users, and moreover, it saves the economy in a way of preventing the ill effects of an unwanted pregnancy [7].

The need of the hour is to provide accurate information on the family planning methods to the young adults [8]. There is an existing gap between knowledge and practice of contraceptive methods in young adults. Strategies to improve the female education, awareness to public through suitable communication media and better access to service can solve the problem. The study was undertaken by the researcher as it was felt that educating the young adult women regarding 'Standard Days Method' along with an orientation to the use of cycle beads would be effective as they would be going to be playing a major role in controlling the population of the nation in the future.

Materials and Methods

The study used an evaluative approach using a pre-experimental one-group pretest–posttest design. The required sample size was determined, and a total of 365 women of the age group of 21–25 years pursuing a Master's degree in arts, commerce or social work from selected postgraduate colleges of Udupi Taluk, Karnataka, were included for the study.

The data collection tools comprised of demographic proforma, structured knowledge questionnaire on ‘Standard Days Method’ and Likert scale on attitude toward ‘Standard Days Method.’ The structured knowledge questionnaire was developed by the investigator. It had 42 multiple choice questions in the area of female and male reproductive system (3 items), menstrual cycle (12 items), family planning (4 items), fertility awareness (5 items), fertility signs (6 items), Standard Days Method of family planning (8 items) and cycle beads (4 items). The validity and reliability of the structured knowledge questionnaire were determined by giving it to the subject experts. They were asked to evaluate the item in terms of appropriateness, relevance and accuracy. The content validity index (CVI) was computed, and it was 0.9. Split half method and Spearman–Brown formula were used for computing the reliability of the structured knowledge questionnaire ($r = 0.8$). The Likert scale on attitude toward Standard Days Method was developed by the investigator. It had 24 items of both positive and negative statements. The rating was in terms of strongly agree, agree, uncertain, disagree and strongly disagree. The content validity was established by giving it to the experts. The reliability was computed using Cronbach’s alpha formula. The reliability of the Likert scale was 0.83. The data were collected for a period of four weeks in the month of January 2015. The study was approved by the institutional ethical committee. Informed consent from the participants was obtained. The baseline assessment was carried out. Following this, the students attended the promotional program on ‘Standard Days Method’ which comprised of various interactive sessions such as discussions, games, power point presentation and demonstrations. It was given in two divided sessions of one and a half hour each for two consecutive days. On the eight day following the intervention, the posttest was administered to the students. The anonymity of the students was maintained throughout the study.

The data were analyzed based on the objectives and hypothesis of the study using the SPSS version 16. Both descriptive statistics and inferential statistics were used.

Results

The data presented in Table 1 show that the mean posttest knowledge scores in all areas of the knowledge questionnaire were higher than the mean pretest knowledge scores. The mean pretest and posttest knowledge scores were computed, and it was found that there was an increase in the mean knowledge score from 8.96 ± 3.84 to 32.64 ± 5.59 . The mean posttest knowledge scores were highest in the area of menstrual cycle 83.42% (10.01), followed by the area of the ‘Standard Days Method’ 71.40% (5.71). The total posttest mean knowledge score 77.72% (32.64) was higher than that of the total pretest mean knowledge score 21.37% (8.96) of the knowledge questionnaire on the ‘Standard Days Method.’ The standard deviation of the pretest and posttest knowledge scores was 3.84 and 5.59. The difference in pretest and posttest knowledge was analyzed using Wilcoxon signed-rank test, and it was found to be significant ($p < 0.001$).

The data presented in Table 2 gives the actual and modified gain scores in different knowledge areas. The mean percentage pretest knowledge scores ranged from 0.09 in the area of cycle beads to 61.91 mean percentage in the area of family planning. This indicated that the students had some initial knowledge about family planning; however, they were ignorant about Standard Days Method using cycle beads. After the intervention, there was apparent increase in the knowledge in all areas, and it ranged from 71.40 mean percentage in the area of standard days method using cycle beads to 89.31 mean percentage in the area of family planning.

The attitude scores regarding Standard Days Method were assessed prior and postintervention program. There

Table 1 Areawise mean, standard deviation and standard error of the pretest and posttest knowledge scores ($n = 365$)

Knowledge area	Maximum possible score	Pretest		Posttest	
		Mean \pm SD	Mean \pm SD	Pretest	Posttest
Reproductive system	3	0.64 ± 0.75	2.27 ± 0.85	21.18	75.61
Menstrual cycle	12	2.77 ± 1.84	10.01 ± 1.78	23.08	83.42
Family planning	4	2.48 ± 1.15	3.57 ± 0.66	61.91	89.31
Fertility awareness-based method	5	1.14 ± 0.91	3.62 ± 1.09	22.79	72.49
Fertility signs	6	0.67 ± 0.88	4.28 ± 1.31	13.42	71.41
‘Standard Days Method’	8	0.89 ± 1.05	5.71 ± 1.96	11.09	71.40
Cycle beads	4	0.38 ± 0.62	3.17 ± 0.89	0.09	79.24
Total	42	8.96 ± 3.84	32.64 ± 5.59	21.37	77.72

* $Z = 16.572$, $p < 0.001$ (Wilcoxon signed-rank test)

Table 2 Areawise actual and modified gain ratio in knowledge ($n = 365$)

Knowledge area	Mean percentage score (%)		Actual gain	Modified gain	Possible gain
	Pretest	Posttest			
Human reproductive system	21.18	75.61	54.43	0.69	78.82
Menstrual cycle	23.08	83.42	60.34	0.78	76.92
Family planning	61.91	89.31	27.40	0.71	38.09
Fertility awareness-based method of family planning	22.79	72.49	49.70	0.64	77.21
Fertility signs	13.42	71.41	57.99	0.66	86.58
‘Standard Days Method’ of family planning	11.09	71.40	60.31	0.67	88.91
Cycle beads	0.09	79.24	79.15	0.79	99.91
Total	21.37	77.72	56.35	0.71	78.63

Table 3 Wilcoxon signed-rank test to determine the difference in the attitude scores $N = 365$

Attitude scores	Mean \pm SD	Median	IQR	Wilcoxon signed-rank test	p value
Pretest	52.09 \pm 8.03	53	11	16.377	0.001
Posttest	69.69 \pm 7.57	71	10		

was also a significant increase in the mean attitude score from 52.09 ± 8.03 to 69.69 ± 7.57 ($p < 0.001$). The maximum possible attitude score was 96 (Table 3).

Thus, it was concluded that the promotional program on ‘Standard Days Method’ was effective in improving the knowledge and attitude regarding ‘Standard Days Method’ of family planning among women studying for postgraduation program.

Discussion

It was found that the promotional program on ‘Standard Days Method’ improved the knowledge and attitude of the students. The findings are supported with an experimental study conducted in Iran among 200 women who were engaged and attending a pre-marital course. The study design adopted was a pretest posttest control group design. The intervention of the study was to provide health education to the experimental group by trained personnel using AV aids and different instructional methods within a duration of four weeks, whereas for the control group education was given using the traditional methods. The knowledge and attitude were assessed using questionnaires prepared by the investigators. The study findings were analyzed using the paired t test. It was found that a significant improvement in knowledge ($p < 0.001$) and attitude ($p < 0.001$) was present in the intervention group and was absent for the control group. There was an enhancement in the knowledge score from 3.97 ± 4.04 to 9.67 ± 3.15 and attitude score baseline from 4.20 ± 3.20 to 9.73 ± 22.40 [9].

The effectiveness of health education on improving the attitude toward family planning is also supported by a quasi-experimental pretest–posttest study carried out in South Nigeria. The study had a total of 400 undergraduate students out of which 200 were assigned to the experimental group and the remaining 200 allotted to the control group. The study finding was computed using ANOVA. It was reported that a reproductive health education package improved the attitude towards family planning among the experimental group ($F = 3.5983$, $p < 0.05$) [10].

Thus, it is recommended that young adults should be provided with cogent information on family planning in order to be empowered.

Conclusion

It was observed that there was a significant gain in the knowledge scores and attitude scores on ‘Standard Days Method’ of family planning among women studying for a postgraduation program. This would enable them to interpret the standard days of a menstrual cycle and identify the fertility signs and thus helping them to be independent to take decisions of Planned Parenthood in the future.

Compliance with Ethical Standards

Conflict of interest None.

Ethical Approval The study was approved by the institutional ethics committee, Kasturba Medical College and Hospital (IEC716/2014). The administrative permission was obtained from the concerned authorities, and informed written consent was taken from the subjects.

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