

## RESEARCH ARTICLE

# Knowledge and Attitude on “Standard Days Method” of Family Planning among Female Postgraduate Students: A Cross-sectional Study

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## ABSTRACT

**Background:** “Standard Days Method” is a fertility awareness method of family planning that helps to identify the fertile days in a menstrual cycle during which a woman is likely to get pregnant. It is calculated to be 12 days ranging from day 8 through 19 in a menstrual cycle of 26 to 32 days. This study aimed to assess the knowledge and attitude on the “Standard Days Method” of family planning, correlation between knowledge and attitude, and the association between knowledge and attitude with the selected demographic variables.

**Materials and methods:** A cross-sectional survey was carried out among 540 female students aged 21 to 25 years from selected postgraduate colleges of selected district in Karnataka State of South India. Self-administered questionnaires were used to collect the data.

**Results:** Majority (94%) of the students surveyed had poor knowledge regarding “Standard Days Method” but majority (54.2%) of them favored the “Standard Days Method”. There was significant weak positive correlation between knowledge and attitude scores ( $r = 0.292$ ,  $p < 0.001$ ). The knowledge scores and attitude score had significant association with certain demographic variables.

**Conclusion:** Awareness program on fertility awareness-based methods of family planning is essential to provide cogent information to young adults, thus empowering them to take wise decisions on planned parenthood.

**Keywords:** Attitude, Family planning, Fertility awareness-based method, Knowledge, Standard days method.

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## BACKGROUND

Family planning means limiting the number of pregnancies and family size and hence, controlling the population. This allows an individual or couple to anticipate and attain the desired number of children and the 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.<sup>1</sup> 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.<sup>2</sup> The issue of unplanned births is still a major cause of increasing population in today's world.<sup>3</sup>

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 World Health Organization 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.<sup>4</sup> 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 compared with other contraceptive methods.<sup>5</sup> It is reported that about 3.6% women worldwide use fertility awareness-based method of family planning.<sup>6</sup>

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 19 of a 26- to 32-day menstrual cycle. The “Standard Days Method” has better efficacy rates when compared with 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 Cycle Beads. Cycle Beads is 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 incidence of side effects among its users, and moreover, it saves the economy in a way of preventing the ill effects of an unwanted pregnancy.<sup>7</sup> Apart from the benefit of it being easy to use and no side effects, “Standard Days Method” empowers the woman by giving her adequate knowledge on her menstrual cycle and fertility signs.

The need of the hour is to provide accurate information on the family planning methods to the young adults.<sup>8</sup> 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 because 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 play a major role in controlling the population of the nation in future.

## MATERIALS AND METHODS

The study was conducted using the survey approach designed with the cross-sectional survey design. Cluster sampling technique was used for the study. A total of 540 women in the age group of 21 to 25 years pursuing a Master’s degree in arts, commerce, or social work from six postgraduate (PG) colleges of Udupi Taluk, Karnataka,

India, were surveyed. The data collection tools comprised demographic proforma, structured knowledge questionnaire on “Standard Days Method” of family planning, and Likert scale on attitude toward “Standard Days Method” of family planning. The tools were validated by experts and the necessary modifications were made. The tools were pretested on five students having similar characteristics as that of the population, and it was found that there were no difficult items. The structured knowledge questionnaire and Likert scale on attitude was administered to 20 students to test the reliability. Split half method was used to find the reliability of the structured knowledge questionnaire and it was calculated to be 0.8, whereas for the Likert scale on attitude, the Cronbach alpha was 0.83. Thus, the tools were found to be reliable. Administrative permissions were taken from the principals of the selected colleges and ethical clearance was considered from the institutional ethics committee. The data were collected for a period of 2 weeks in the month of January 2015. After providing an explanation on the purpose of the survey and taking an informed consent from the participants, the data collection tools were administered. The anonymity of the students was maintained throughout the study.

The data were analyzed based on the objectives and hypothesis of the study. The data were analyzed using Statistical Package for the Social Sciences version 16. Both descriptive statistics and inferential statistics were used. The sample characteristics as well as the knowledge scores and attitude were described using frequency, percentage mean, and standard deviation (SD). The correlation between knowledge and attitude was computed using the Pearson product-moment correlation coefficient. The association between knowledge and attitude with the selected demographic variables, such as age, stream of PG course studying, religion, type of family, marital status, income in family per month, area of residence, presence of a married sibling, awareness on family planning, and awareness on the methods of natural family planning, was computed using Chi-square. A p-value of 0.05 or less was considered statistically significant.

## RESULTS

The data shown in Table 1 describe the sample characteristics. It was found that majority (86.7%) of students were of the age of 21 to 23 years. Most (41.6%) of the students were enrolled for Master of Commerce (MCom) program and the remaining in Master of Arts (MA) (34.1%) and Master of Social Work (MSW) (24.3%). Most of the students were Hindus (78%) and belonged to a joint family type (50.7%). Most (96.3%) of the students were unmarried. The total percentage of the married students was 3.7%. The monthly family income for most (78.5%) of

**Table 1:** Distribution of sample characteristics in frequency and percentage (n = 540)

Sample characteristics	Frequency (f)	Percentage
<i>Age (in years)</i>		
21–23	468	86.7
24–25	72	13.3
<i>Stream of PG course studying</i>		
MA	184	34.1
M.Com	225	41.6
MSW	131	24.3
<i>Religion</i>		
Hindu	421	78
Christian	89	16.4
Muslim	29	5.4
Jain	1	0.2
<i>Type of family</i>		
Joint family	274	50.7
Nuclear family	245	45.4
Extended family	21	3.9
<i>Marital status</i>		
Single	520	96.3
Married	20	3.7
<i>Income in family per month in rupees</i>		
Between 7,000 and 17,000	424	78.5
Between 17,001 and 27,000	94	17.5
Above 27,000	22	0.04
<i>Area of residence</i>		
Rural	479	88.7
Urban	61	11.3
<i>Presence of a married sibling</i>		
Yes	79	14.6
No	461	85.4
<i>Sibling who is married (n = 79)</i>		
Brother	13	16.4
Sister	57	72.3
Both	9	11.3

the students was between Rs. 7,000 and 17,000. Majority (88.7%) of them came from a rural area and the remaining came from the urban area. Most (85.4%) of the students did not have a sibling who was married in their family, and out of the students who had a married sibling, almost 57 (72.3%) of them reported that they had their sister married in the family.

The majority of the students, about 68.3 and 78.3% respectively, were not aware of family planning and the methods of natural family planning. Some (31.7%) of the students had listed the methods, such as condom, oral pills, sterilization, and calendar method as known methods when asked with an open-ended question (Table 2).

Out of 540 students, only 117 reported that they received information from various sources on the method of natural family planning. The frequency of students who reported on the different sources of information on natural family planning method was determined using

**Table 2:** Frequency and percentage distribution of students based on their awareness to family planning (n = 540)

Variables	Frequency (f)	Percentage
<i>Awareness on family planning</i>		
Yes	171	31.7
No	369	68.3
<i>Awareness on natural family-planning methods</i>		
Yes	117	21.7
No	423	78.3
<i>Awareness on the "Standard Days Method"</i>		
No	540	100

multiple response options. Out of 540 students, 55(10.1%) students reported that teachers were the major source of information on natural family planning method. A total of 40 (7.4%) students reported that their family provided them information on natural family planning method. Friends were a source of information to 30 (5.55%) students. Almost 46 (8.51%) and 42 (7.77%) students acquired information on natural family planning from educational books and television respectively. Newspaper was reported to be the source of information by 32 (5.92%) students, and none got any information from the mobile applications.

The finding reveals that among 540 students, 510 (94%) had poor knowledge and none of the students had good knowledge regarding "Standard Days Method" of family planning. The mean and the SD of the knowledge scores were 8.03 and  $\pm 3.76$  respectively.

The majority (54.2%) of the students had favorable attitude toward the "Standard Days Method" of family planning. The mean attitude score was 49.16 with the SD of  $\pm 8.489$ .

The correlation between knowledge and attitude was computed using Pearson product-moment correlation coefficient (Table 3). It was found that there was a significant weak positive correlation between knowledge and attitude scores on the "Standard Days Method" of family planning among the women studying for a PG program ( $r = 0.292$ ,  $p < 0.001$ ).

Data in Table 4 show that there is a significant association between knowledge scores and income of the family ( $\chi^2 = 13.568$ ,  $p\text{-value} = 0.009$ ), whereas the data presented in Table 5 show that attitude score had a

**Table 3:** Relationship between knowledge and attitude regarding "Standard days Methods" (n = 540)

Variable	Minimum	Maximum	Mean $\pm$ SD	r	p-value
Knowledge	0	42	8.03 $\pm$ 3.76	0.292	<0.001
Attitude	0	96	49.16 $\pm$ 8.489		

**Table 4:** Association between level of knowledge scores and selected demographic variables (n = 540)

Variables	Poor knowledge	Average knowledge	$\chi^2$	df	p-value
<i>Age (in years)</i>					
21–23	484	30	1.607	1	0.387
23–25	26	0			
<i>Stream of PG course studying for</i>					
MA	175	9			
M.Com	213	12	0.607	2	0.742
MSW	122	9			
<i>Religion</i>					
Hindu	393	28			
Christian	89	0	6.356	3	0.094
Muslim	27	2			
Jain	1	0			
<i>Type of family</i>					
Joint family	258	16			
Nuclear family	231	14	1.289	2	0.525
Extended family	21	0			
<i>Marital status</i>					
Single	493	27	3.531	1	0.060
Married	17	3			
<i>Income in family per month (in rupees)</i>					
Between 7,000 and 17,000	404	20			
Between 17,001 and 27,000	89	5	13.568	4	0.009*
Above 27,000	17	5			
<i>Area of residence</i>					
Rural	453	26	0.132	1	0.717
Urban	57	4			
<i>Presence of a married sibling</i>					
Present	73	6	0.734	1	0.392
Absent	437	24			
<i>Sibling who is married</i>					
Brother	13	0			
Sister	51	6	4.086	3	0.252
Both	9	0			
<i>Awareness on family planning</i>					
Yes	160	11	0.367	1	0.545
No	350	19			
<i>Awareness on natural family planning</i>					
Yes	107	10	2.547	1	0.110
No	403	20			

\*Significance; df, Degree of freedom

significant association with the variables, stream of PG course studying ( $\chi^2 = 16.133$ , p-value = 0.001), type of family ( $\chi^2 = 11.820$ , p-value = 0.003), income in family per month ( $\chi^2 = 23.969$ , p-value = 0.001), presence of a married sibling ( $\chi^2 = 11.937$ , p-value = 0.001), sibling who is married ( $\chi^2 = 13.229$ , p-value = 0.004), awareness on family planning ( $\chi^2 = 23.700$ , p-value = 0.001), and awareness on the methods of natural family planning ( $\chi^2 = 11.993$ , p-value = 0.001).

## DISCUSSION

This study shows that most (78%) of the students were Hindus and almost 96.3% of the students were unmarried.

These sample characteristics were similar to a cross-sectional survey conducted in Maharashtra. The study was carried out among 1,996 students studying in 27 medical colleges in Maharashtra. The survey assessed the knowledge, attitude, and perception toward contraceptive use and counseling. In the survey, the majority (87.7%) of the students were Hindus and most (98.7%) of them were unmarried. But the sample characteristic of place of residence contradicts the findings of Hogmark et al, where they report that the majority (72.3%) of the students came from an urban setting. Whereas, in the present study, the majority (88.7%) of the students lived in a rural setting.<sup>9</sup>

The present study finding reveals that most of the students gained awareness on natural family planning

**Table 5:** Association between attitude and selected demographic variables (n = 540)

Variables	Favorable attitude	Unfavorable attitude	$\chi^2$	df	p-value
<i>Age (in years)</i>					
21–23	231	283	2.747	1	0.109
23–25	16	10			
<i>Stream of PG course studying for</i>					
MA	98	86			
M.Com	80	145	16.133	2	0.000*
MSW	69	62			
<i>Religion</i>					
Hindu	188	233			
Christian	46	43	2.320	3	0.509
Muslim	13	16			
Jain	0	1			
<i>Type of family</i>					
Joint family	139	135			
Nuclear family	94	151	11.820	2	0.003*
Extended family	14	7			
<i>Marital status</i>					
Single	239	281	0.276	1	0.599
Married	8	12			
<i>Income in family per month (in rupees)</i>					
Between 7,000 and 17,000	184	240	23.969	4	0.000*
Between 17,001 and 27,000	57	37			
Above 27,000	6	16			
<i>Area of residence</i>					
Rural	224	255	1.789	1	0.181
Urban	23	38			
<i>Presence of a married sibling</i>					
Present	22	57	11.937	1	0.001*
Absent	225	236			
<i>Sibling who is married</i>					
Brother	4	9			
Sister	14	43	13.229	3	0.004*
Both	4	5			
<i>Awareness on family planning</i>					
Yes	52	119	23.700	1	0.000*
No	195	174			
<i>Awareness on natural family planning</i>					
Yes	37	80	11.993	1	0.001*
No	210	212			

\*Significance; df: Degree of freedom

through educational books and teachers. This finding can be contradicted by the findings of a study carried out in Central Region of Ghana among 300 adolescents where it is reported that the study reports that the major source of information on contraceptives was TV/Radio (60%) followed by friends (30%).<sup>10</sup> A similar result can also be found in a study carried out to find the need of providing the accurate information on planned parenthood to young adults of age 18 to 22 years in university of Athens. The survey explains that the satisfactory sources of information to the young adults were their parents or friends. Very few people seek the assistance of health-care professions on matters of contraception reports.<sup>8</sup>

In the present study, the students who reported that they were aware of methods of family planning listed some of the methods, mainly, oral pills, condom, and tubectomy operation. This finding is corroborated with a study carried out in Sikkim among women of reproductive age group. The study reports that most of the students were aware of oral pills (37.9%), condom (31%), and tubectomy (27%).<sup>11</sup>

Majority of the students had below-average knowledge score on the "Standard Days Method" of family planning. These findings can be supported with the study carried out in New Delhi by Shahina et al. The study was conducted among 1,331 married women, out of which 29.3% said that they were aware of periodic abstinence

and a majority (84.9%) of them did not have a correct knowledge of the fertile period of the menstrual cycle.<sup>12</sup>

## CONCLUSION

It was observed that even though the majority women studying for a PG program in arts, commerce, and social work had poor knowledge on the "Standard Days Method" of family planning, they expressed a favorable attitude toward it. This might be because they understand the "Standard Days Method" under the context of family planning method. The "Standard Days Method" is an easy, safe, and effective method of family planning and most of the women were doubtful to interpret the standard days, providing the adequate information on the "Standard Days Method" will enhance the knowledge of the women, thus helping them to be independent to take decisions of planned parenthood.

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