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Awareness of planned family, modes of planning family and family planning practices by tribal women of a rural, remote hilly region, a community-based study

Background

Planned family (PF) is one of the fundamental pillars of safe reproductive health. PF refers to a couple's planning of timing of having a baby, the number of babies couple desires with spacing as per choice. In many parts of the world, a large gap persists between a woman's reproductive intentions and planning of family, decision making power and access to family planning(FP) modalities, including safe induced abortion and it's use.[1] Globally women with unmet need of FP constitute a significant proportion of women of reproductive age.[2] However there are many differences between developing and developed countries, which affect health of people, population growth, poverty reduction and human development in different ways. It is now well established that improving literacy and economic condition of individuals lowers birth rates. Low fertility in turn plays a positive role in economic growth too. All said FP practices boost is essential.

Keywords: low fertility, child birth, population growth, maternal deaths

Volume 11 Issue 4 - 2025

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Received: October 31, 2025 | **Published:** December 29, 2025

Objective

Community based study was conducted to know the awareness and practices of rural married women for having PF.

Material and methods

Study setting

Tribal communities of 140 villages near the village with health facility in a remote hilly region.

Study design- Cross sectional study

Study period– Two years

Sample size – Sample size was checked with calculations as suggested by Wanga & Lemeshow.[3] It was only 1540. However, a total of 4500 married women were interviewed for robust data. From each village, minimum 25 women were interviewed randomly as some villages were small, other little bigger.

Inclusion, exclusion criteria

Married women of 20 to 49 years, who were willing to provide desired information were included. Those who were not in a position to answer questions or not willing were excluded. But no one refused.

After taking approval of ethics committee of the institute, women were interviewed in their villages by research assistants at mutually convenient places. A predesigned tool was used.

Results

Of the total 4500 women interviewed, 26.68% women had their first child birth before the age of 20 years, a big number, then overall known (P value <0.01). More women of joint families (44.28%) than women of nuclear families (39.93%) had their first child birth within first year of married life, but difference was statistically insignificant. Table one depicts relationship with various variables (Table 1). Overall, only 38.68%women had some awareness of PF concept but only 8to 11% could talk about one or other mode of PF. Only 1746 (38.8%) women said they were aware that family needs to be planned. Table 2 depicts relationship with various variables. (Table 2) Only few women said they were aware that induced abortion was also a mode of PF, o to 26%with different variables however statistically significantly more women (P value <0.01) said breastfeeding was a method of prevention of pregnancy (25to80%). Table three depicts relationship with various variables with little difference between nuclear and joint families (Table 3). Awareness or no awareness over all 2998 women (66.62%) had used or were using some contraceptive. Table four depicts relationship with various variables (Table 4). Significantly less women (27%) (P value <0.01) had used any contraception before first child birth than use after births (50%). Table five depicts relationship of women using any contraception before first pregnancy in context of various variables (Table 5).

Table 1 Age at first birth, family type and marriage first birth interval

Variables		Age at first birth								First birth after marriage											
										Nuclear						Joint					
Education	Total	< 20	%	20 to 29	%	30 to 39	%	40 to 49	%	1 year	%	2 to 3 year	%	> 3 year	%	1 year	%	2 to 3 year	%	> 3 year	%
Illiterate	964	242	25	452	47	159	17	111	12	285	30	359	37	320	33	484	50	379	39	101	11
Primary	1340	458	34	542	40	248	19	92	6.9	598	45	548	41	194	15	598	45	598	45	144	11

Table 1 Continued...

Secondary/ higher secondary	2103	454	22	1358	65	214	10	77	3.7	879	42	859	41	365	17	879	42	989	47	235	11
Graduate	93	47	51	32	34	11	12	3	3.2	35	38	29	31	29	31	32	34	36	39	25	27
Total	4500	1201	27	2384	53	632	14	283	6.3	1797	40	1795	40	908	20	1993	44	2002	45	505	11
Profession																					
Home maker	502	152	30	314	63	10	2	26	5.2	263	52	189	38	50	10	298	59	158	32	46	9.2
Agriculture labourer	1443	458	32	555	39	263	18	167	12	548	38	589	41	306	21	688	48	502	35	253	18
Casual labourer	2498	561	23	1488	60	359	14	90	3.6	949	38	997	40	552	22	986	40	1306	52	206	8.2
Shop keeper	57	30	44	27	56	0	0	0	0	37	58	20	42	0	0	21	44	36	56	0	0
Total	4500	1201	27	2384	53	632	14	283	6.3	1797	40	1795	40	908	20	1993	44	2002	45	505	11
Economic status																					
Upper class	165	22	13	60	36	32	19	51	31	45	27	38	23	82	50	21	13	35	21	109	66
Middle upper class	510	79	16	266	52	77	15	88	17	251	49	211	41	48	9.4	158	31	265	52	87	17
Middle class	1060	454	43	459	43	121	11	26	2.5	425	40	511	48	124	12	542	51	453	43	65	6.1
Middle lower class	1355	325	24	854	63	142	11	34	2.5	307	23	637	47	411	30	674	50	504	37	177	13
Lower class	1410	321	23	745	53	260	18	84	6	769	55	398	28	243	17	598	42	745	53	67	4.8
Total	4500	1201	27	2384	53	632	14	283	6.3	1797	40	1795	40	908	20	1993	44	2002	45	505	11

*Small scale, (Food, Shoes making, Bamboo items) industries, Welding workshop, Brick furnace

Table 2 Awareness of planned family and modes of family planning

Variables				**Type of modes of contraceptives**									
AGE	**Total**	**YES**	**%**	**Stylization**	**%**	**Injectable contraceptives**	**%**	**Oral contraceptives**	**%**	**Condom**	**%**	**Others**	**%**
20 to 29	2230	846	37.9	183	8.2	201	9.0	263	11.8	182	8.2	17	0.8
30 to 39	1574	652	41.4	135	8.6	153	9.7	189	12.0	136	8.6	39	2.5
40 to 49	696	248	35.6	66	9.5	48	6.9	68	9.8	35	5.0	31	4.5
Total	4500	1746	38.8	384	8.5	402	8.9	520	11.6	353	7.8	87	1.9
Education													
Illiterate	964	456	47.3	103	10.7	135	14.0	158	16.4	35	3.6	25	2.6
Primary	1340	424	31.6	83	6.2	158	11.8	65	4.9	100	7.5	18	1.3
Secondary/ higher secondary	2103	829	39.4	184	8.7	98	4.7	285	13.6	218	10.4	44	2.1
Graduate/	93	37	39.8	14	15.1	11	11.8	12	12.9	0	0.0	0	0.0
Total	4500	1746	38.8	384	8.5	402	8.9	520	11.6	353	7.8	87	1.9
Profession													
Home maker	502	275	54.8	46	9.2	58	11.6	91	18.1	59	11.8	21	4.2
Agriculture labourer	1443	766	53.1	176	12.2	203	14.1	223	15.5	130	9.0	34	2.4
Casual labourer	2498	662	26.5	142	5.7	132	5.3	200	8.0	157	6.3	31	1.2
Shop keeper	57	43	75.4	20	35.1	9	15.8	6	10.5	7	12.3	0	0.0
Total	4500	1746	38.8	384	8.5	402	8.9	520	11.6	353	7.8	87	1.9
Economic status													
Upper class	165	75	45.5	18	10.9	24	14.5	18	10.9	15	9.1	0	0.0

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Table 2 Continued...

Upper middle class	510	217	42.5	69	13.5	49	9.6	61	12.0	38	7.5	0	0.0
Middle class	1060	485	45.8	68	6.4	45	4.2	138	13.0	223	21.0	11	1.0
Lower middle class	1355	423	31.2	100	7.4	132	9.7	130	9.6	32	2.4	29	2.1
Lower class	1410	546	38.7	129	9.1	152	10.8	173	12.3	45	3.2	47	3.3
Total	4500	1746	38.8	384	8.5	402	8.9	520	11.6	353	7.8	87	1.9
Parity													
P.1	1635	716	43.8	171	10.5	143	8.7	244	14.9	139	8.5	19	1.2
P.2	1530	600	39.2	155	10.1	157	10.3	151	9.9	108	7.1	29	1.9
P.3- P.5 Above	1335	430	32.2	58	4.3	102	7.6	125	9.4	106	7.9	39	2.9
Total	4500	1746	38.8	384	8.5	402	8.9	520	11.6	353	7.8	87	1.9

(Small scale (Food, Shoes making, Bamboo items) industries, Welding workshop, Brick furnace)

Table 3 Family type and awareness of breastfeeding, induced abortion as family planning methods

Variables		**Awareness of breastfeeding as contraceptive**				**Induced abortion for planned family**	
	Total	**Family Type**					
		Nuclear		**Joint**		**Yes**	**%**
Age		**Yes**	**%**	**Yes**	**%**	153	10.8
20 to 29	2230	1599	71.7	1214	54.4	80	7.1
30 to 39	1574	684	43.5	489	31.1	84	18.6
40 to 49	696	265	38.1	326	46.8	317	10.6
Total	4500	2548	56.6	2029	45.1	81	18
Education							
Illiterate	964	456	47.3	325	33.7	18	1.7
Primary	1340	1081	80.7	935	69.8	192	13.4
Secondary	2103	968	46	745	35.4	26	48.1
Higher secondary	93	43	46.2	24	25.8	317	10.6
Total	4500	2548	56.6	2029	45.1	77	23.7
Profession							
Home maker	502	329	65.5	235	46.8	82	6.7
Agriculture labourer	1443	620	43	353	24.5	158	11.4
Casual labourer	2498	1542	61.7	1412	56.5	0	0
Shop keeper	57	57	100	29	50.9	317	10.6
Total	4500	2548	56.6	2029	45.1	20	26.7
Economic status							
Upper class	165	99	60	74	44.8	80	24.6
Upper middle class	510	352	69	263	51.6	144	18
Middle class	1060	785	74.1	715	67.5	17	1.8
Lower middle class	1355	856	63.2	554	40.9	56	6.4
Lower class	1410	456	32.3	423	30	317	10.6
Total	4500	2548	56.6	2029	45.1	98	14.3
Parity							
P.0	1635	1128	69	985	60.2	43	4.4
P.1 P.2	1530	785	51.3	566	37	116	11.5
> P.3	1335	635	47.6	478	35.8	60	18.5
Total	4500	2548	56.6	2029	45.1	317	10.6

Small scale, (Food, Shoes making, Bamboo items) industries, Welding workshop, Brick furnace)

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Table 4 Contraceptives used by couples

Variables	Tota	YES	IfYes, Modes										
AGE			**Condom**	**%**	**IUCD**	**%**	**Injectable contraception**	**%**	**Oral contraception**	**%**	**Tubal Ligation**	**vasectomy**	**%**
20 to 29	2230	1421	156	11	148	10.4	409	28.8	452	31.8	199	57	18
30 to 39	1574	1125	269	23.9	242	21.5	328	29.2	189	16.8	60	37	8.6
40 to 49	696	452	166	36.7	88	19.5	56	12.4	37	8.2	98	7	23.2
Total	4500	2998	591	19.7	478	15.9	793	26.5	678	22.6	309	149	15.3
Education													
Illiterate	964	449	125	27.8	99	22	74	16.5	56	12.5	84	11	21.2
Primary	1340	1063	245	23	151	14.2	356	33.5	252	23.7	51	8	5.6
Secondary	2103	1432	212	14.8	218	15.2	352	24.6	358	25	261	31	20.4
Higher secondary	93	54	9	16.7	10	18.5	11	20.4	12	22.2	10	2	22.2
Total	4500	2998	591	19.7	478	15.9	793	26.5	678	22.6	1072	760	15.3
Profession													
Home maker	502	325	25	7.7	45	13.8	81	24.9	99	30.5	71	4	23.1
Agriculture labourer	1443	1227	247	20.1	178	14.5	379	30.9	301	24.5	103	19	9.9
Casual labourer	2498	1389	294	21.2	231	16.6	325	23.4	278	20	211	50	18.8
Shop keeper	57	57	25	43.9	24	42.1	8	14	0	0	0	0	0
Total	4500	2998	591	19.7	478	15.9	793	26.5	678	22.6	385	73	15.3
Economic status													
Upper class	165	75	5	6.7	9	12	12	16	24	32	19	6	33.3
Upper middle class	510	325	88	27.1	57	17.5	96	29.5	74	22.8	7	3	3.1
Middle class	1060	798	136	17	112	14	224	28.1	188	23.6	130	8	17.3
Lower middle class	1355	919	141	15.3	99	10.8	249	27.1	268	29.2	156	6	17.6
Lower class	1410	881	221	25.1	201	22.8	212	24.1	124	14.1	114	9	14
Total	4500	2998	591	19.7	478	15.9	793	26.5	678	22.6	426	32	15.3
Parity													
P.0	1412	684	234	34.2	85	12.4	189	27.6	152	22.2	21	3	3.5
P.1 P.2	1219	978	152	15.5	166	17	317	32.4	269	27.5	60	14	7.6
P.3 P.4	1321	1011	107	10.6	215	21.3	258	25.5	178	17.6	204	49	25
> P.5 Above	548	325	98	30.2	12	3.7	29	8.9	79	24.3	89	18	32.9

Table 5 Time of contraceptive used

Variables				Timing						If not use, reason					
Age	**Total**	**yes**	**%**	**Before first pregnancy**	**%**	**After first pregnancy**	**%**	**Using**	**%**	**husband said No**	**%**	**Mother/ Mother in law said No**	**%**	**Any other**	**%**
20 to 29	2230	1032	46.3	256	24.8	452	44	324	31.4	365	35.4	672	65.1	161	15.6
30 to 39	1574	989	62.8	245	24.8	548	55	196	19.8	299	30.2	219	22.1	67	6.8
40 to 49	696	359	51.6	152	42.3	177	49	30	8.4	156	43.5	99	27.6	82	22.8
Total	4500	2380	52.9	653	27.4	1177	50	550	23.1	820	34.5	990	41.6	310	13
Education															
Illiterate	964	328	34	88	26.8	74	23	166	50.6	210	64	265	80.8	161	49.1
Primary	1340	1062	79.3	214	20.2	686	65	162	15.3	88	8.3	152	14.3	38	3.6
Secondary	2103	897	42.7	315	35.1	389	43	193	21.5	522	58.2	573	63.9	111	12.4
Higher secondary	93	93	100	36	38.7	28	30	29	31.2	0	0	0	0	0	0
Total	4500	2380	52.9	653	27.4	1177	50	550	23.1	820	34.5	990	41.6	310	13

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Table 5 Continued...

Profession															
Home maker	502	324	64.5	152	46.9	101	31	71	21.9	56	17.3	87	26.9	35	10.8
Agriculture labourer	1443	984	68.2	232	23.6	398	40	354	36	205	20.8	165	16.8	89	9
Casual labourer	2498	1040	41.6	258	24.8	665	64	117	11.3	547	52.6	730	70.2	181	17.4
Shop keeper	57	33	57.9	11	33.3	13	39	11	33.3	12	36.4	8	24.2	4	12.1
Total	4500	2380	52.9	653	27.4	1177	50	550	23.1	820	34.5	990	41.6	310	13
Economic status															
Upper class	165	42	25.5	25	59.5	8	19	9	21.4	12	28.6	30	71.4	81	193
Upper middle class	510	342	67.1	128	37.4	121	35	93	27.2	87	25.4	54	15.8	27	7.9
Middle class	1060	745	70.3	255	34.2	352	47	138	18.5	88	11.8	169	22.7	58	7.8
Lower middle class	1355	598	44.1	146	24.4	297	50	155	25.9	312	52.2	368	61.5	77	12.9
Lower class	1410	653	46.3	99	15.2	399	61	155	23.7	321	49.2	369	56.5	67	10.3
Total	4500	2380	52.9	653	27.4	1177	50	550	23.1	820	34.5	990	41.6	310	13
Parity															
P.0	1412	683	48.4	242	35.4	209	31	232	34	205	30	406	59.4	118	17.3
P.1 P.2	1219	789	64.7	165	20.9	498	63	126	16	149	18.9	215	27.2	66	8.4
P.3 P.4	1321	657	49.7	125	19	432	66	100	15.2	345	52.5	296	45.1	23	3.5
> P.5 Above	548	251	45.8	121	48.2	38	15	92	36.7	121	48.2	73	29.1	103	41
TOTAL	4500	2380	52.9	653	27.4	1177	50	550	23.1	820	34.5	990	41.6	310	13

*Small scale, (Food, Shoes making, Bamboo items) Industry, Welding workshop, Brick furnace.

Discussion

In most parts of the world, for the rural communities, FP services have remained a neglected public health problem, so their awareness is affected. In addition, there are more issues amongst rural women because of their ignorance and perceptions, availability and also use of contraceptives, which lead to teen age births as was found in the present study, 26.68% women had their first child birth before the age of 20 years, lack of access to information and services, as well as fear of side effects, disapproval from family influence unmet need. In the present study it was revealed that in many cases who were not using any birth control measure, mostly it was husband or mother or mother-in-law who had asked women not to use any contraceptives. Akelo et al.,[4] from America also reported that a significant gap existed between FP intentions and FP practices. May et al.,[5] from Africa reported that FPP too often define reproductive choices on the basis of the availability and uptake of contraceptives, not necessarily indicative of choice, nor do they ensure that choice leads to actions to achieve one's own fertility goals. Bhan et al.,[6] suggested that a gendered perspective was needed in recognizing the value of a woman's choice of PF that persists and sustain population control approaches. Access is the major issue in rural health around the world. It is essential to explore awareness and practices of couples regarding FP and factors that influence the use of contraceptives. In the present study it was revealed that many rural women were not aware that Induced abortion was also a mode of planning family. Cleland et al.,[7] have reported that in the past 40 years, FPP have increased from 10% to 60% and this has played a major role in reducing fertility in developing countries from six to about three births per woman, however, in half of the low-income and lower-middle income countries contraceptive practices have remained low and fertility, population growth, and unmet need for FP remained high. Change in fertility rates across societies is a complex process that involves attitude towards PF and greater accessibility to contraception. Efforts need to be made to improve access and strengthen use of contraceptives. Ahmed et al.,[8] opined that contraceptive use averted around 44% of maternal deaths around the world, because of various reasons including reduced number of high-parity births. It becomes much more important in the regions like study area as maternal deaths numbers are high. Ouma et al.,[9] did a study in Northern Uganda and reported that in spite of the awareness, positive attitude, and free FP services, there were obstacles that hindered PF practices among rural women. In the present study it was revealed that women were ignorant of PF.As when interview continued it was revealed that they were using something without understanding planned family concepts. Sensoy et al.,[10] suggested that individuals learning modern FP methods and with positive attitude for modalities may increase the usage of contraceptive contributing to healthy communities. It is important to examine the attitude and determinants in order to spread the choice of effective methods. Otieno et al.,[11] from Africa reported that the improvement of service delivery in general, precisely taking on the availability and the uptake of quality birth control technologies were the most feasible means through which countries could fast track their fertility transitions. Female sterilization is often the first and the only FP method as was found in present study also. Prusty et al.,[12] from India have reported that knowledge and use of temporary contraceptive methods were considerably lower among tribal women compared to their non-tribal counterparts in the three states of India. There was low acceptance of FP modes due to phobia of adverse health consequences, accessibility and lack of sound knowledge of contraception. In most parts of the world, FP services for the rural communities have remained a neglected subject, more problems and shortcomings are encountered in the developing countries. Some of these problems may have simple remedies, others complex and need out of box solutions. With good overall FPP, changes at local and central level can be made to encourage birth spacing and birth limitations, and to make them more easily accessible to the great majority of the rural populations. In the countries where the majority of the population lives in rural areas, the

resources are concentrated in the cities, so focused attention for rural communities is essential. Martins et al.,[13] did a study in US to know differences in FP services in rural–urban geography and reported the proportion of clinics offering walk-in appointments was lower in rural (47%) than in the urban areas (67–73%). On site provision of most hormonal methods was most common in urban areas and least in rural but provision of nonhormonal methods was similar. Barriers that varied geographically were low intrauterine device (IUD) demand and lack of trained IUD providers. These barriers were most common in rural areas (42% and 70%, respectively). In the present study also, few women used IUD due to various reasons. Despite international funding and promotion of FP, it has somehow waned in the past decade. Awareness, availability and access are believed to be major issues for rural couples around the world, but there are things beyond these issues which need quality studies. Adekannbi et al.,[14] explored the literacy of women about PF in rural communities of Nigeria and reported that the majority had not opted FP modes and reasons for non-adoption included, husband's disapproval and unavailability of health facilities and fear of complications due to use of FP modes. This was revealed in the present study too. Duru et al.,[15] did a study in Nigeria and reported commonest reason for choosing any FP method in rural (52.3%) and urban, (49.5%) areas was convenience. Study found that, though the reported awareness and knowledge about PF in both localities were high, the overall use of FP modes was low. Antic et al.,[16] reported that the respondents in Serbia who used condoms, were often younger, better educated and had better financial status. There were differences in terms of FP between urban and rural area which could be explained by differences in age and education. Aznie et al.,[17] did a study about FPP in rural community to know various factors that encouraged the practice of PF for rural communities in Malaysia. Education, understanding husband, and type of work were the most significant factors influencing FPP. The study found that rural communities had begun to realize importance of PF but still were not able to receive various modern methods of FP. Barrow et al.,[18] did a study in Gambia and reported need of focus on FP services for women in rural areas, emphasizing the quality of services and gender equality. Study by Mustafa et al.,[19] from Pakistan revealed that the majority of women knew some modern contraceptive methods, but the overall use of any contraceptive method was particularly low. Reasons for not using FP and modern contraception included incomplete family size, negative perceptions, in-laws' disapproval, religious concerns, side-effects, and lack of access to quality services. Addressing issues around access, affordability, availability, and sociocultural barriers about modern contraception will help to meet the needs and ensure that the women and couples fulfill their childbearing and reproductive health goals.

Conclusion

Present community-based study in rural hilly forestry region revealed that 34% women had never used or were not using any contraceptive. There was lack of awareness about PF. There was ignorance in context of various modes of FP. Not only various demographic factors affected awareness and use of FP modes, it was family, husband mother, mother-in-law too.

Acknowledgements

None.

Conflict of interest

There is no Conflict of interest.

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