Journal of Pharmaceutical and Scientific Innovation

www.jpsionline.com (**ISSN :2277 –4572**)

Research Article

MEN`S ACCEPTANCE AND ASSOCIATED FACTORS OF MODERN FAMILY PLANNING IN PASTORALIST COMMUNITIES OF DAGAHBUR DISTRICT, SOMALI REGION, EASTERN ETHIOPIA

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DOI: 10.7897/2277-4572.091162

Received on: 13/10/19 Revised on: 04/12/19 Accepted on: 22/12/19

ABSTRACT

To slow the current rapid population growth particularly in under developed countries, family planning programs have always been considered as the intervention of choice. Ethiopia, which is the second most populous country in sub-Saharan Africa next to Nigeria, experienced low family planning utilization (36%) of all methods. The main aim was to assess the level of men`s acceptance and associated factors of modern family planning of Dagahbur district, Somali Region; Eastern Ethiopia. Community-based cross-sectional quantitative study was conducted. A total of 686 study participants were recruited for the study. The investigator prepared, pre-tested and structured questionnaire was used to collect data. Odds ratio along with 95% Confidence interval in Multivariate Binary Logistic regression was used to assess the strength and significance of the association. A total of 686 men participated in the study. The proportion of male acceptance in modern family service was 22.3%. In the multivariate analysis, three variables were found to be significantly associated with the male acceptance in modern family planning service. These were marital status (AOR = 1.8, 95% CI (1.03, 3.15) family income (AOR = 1.93, 95% CI, (1.03, 3.63), and attitude about family planning (AOR = 3.19 95%, CI (1.89, 1.59), were significantly associated with the male acceptance of family planning service. The proportion of male acceptance in modern contraceptive was low. Polygamy in marital status, family income, attitude towards modern contraceptive, were the factors influencing acceptance on modern contraceptives.

Keywords: Family planning, Modern Family Planning Method; male acceptance, rural area

INTRODUCTION

Family planning refers to the use of various methods of fertility control that will help individual men and women or couples to have the number of children they want, when they want them to assure the wellbeing of the children and the parents. Contraceptive methods are classified as modern or traditional methods[1]. Modern methods include female sterilization, male sterilization, the intrauterine contraceptive device (IUD), implants, injectables, the pill, male condoms, female condoms, emergency contraception, standard day's method (SDM), and lactation amenorrhea method (LAM). Methods such as rhythm, withdrawal, and folk methods are grouped as traditional[2].

Population growth poses a great challenge for social, economic and cultural development of countries so for controlling the population growth rate family planning is important. Family planning methods requires the participation of both men and women. Men constitute half of the population in a society, and due to the traditional cultural structure of families in Ethiopia, they play a crucial role in decision making[3]. The requirements of men need to be identified to encourage them to become involved and support in the family planning[4].

Men's attitude towards family planning has a significant impact on how contraceptive methods are accepted. Men's approval of family planning encourages the usage rate of contraceptives by women; men's abstinence from such programs will result in increment in population growth. One problem in family planning programs is the low rate of male acceptance[5].

The correct understanding of limitations and requirements of using contraceptive methods by women is considered as men's participation.[6] Studies dealing with family planning tend to focus on women rather than men and the latter are often neglected as an important target for reproductive health programs. Few studies have addressed men's awareness, attitude and participation in family planning[5]. Family planning can prevent at least 25 % of all maternal death by allowing women to delay motherhood, prevent unintended pregnancies and unsafe abortions protect themselves from sexually transmitted diseases (STDs) including Human Immune Deficiency Syndrome (HIV/AIDS); and stop child bearing when they have reached their reproductive goals[5].

Worldwide around 225 million women who want to avoid pregnancy are not using safe and effective family planning methods, for reasons ranging from lack of access to information or services to lack of support from their partners or communities. Most of these women who are not using contraceptives live in 69 of the poorest countries on earth. If all women whom are using family planning were able to use contraceptive, 24 million Abortion of which 14 million are unsafe, 6 million miscarriages, 700,000 maternal deaths and 500,000 Infant deaths annually would be prevented[7-8]. Sub-Saharan Africa and Southern Asia accounted for 85% of the global burden of maternal deaths with sub-Saharan Africa alone accounting for 56%[9]. Like many other sub-Saharan countries, maternal mortality in Ethiopia is noticeably high and has stagnated at 414 per 100,0000 lives[10]. Even though Ethiopia is one of the highest maternal mortality ratio in the world, there is low utilization of family planning[11].

Despite the controlling of population, the rate of unplanned pregnancies and induced abortion are still high in Ethiopia, studies have shown that factors that most contribute to maternal death are pregnancy related especially unintended or mistimed pregnancies. EDHS 2000-2011 analysis done by UNFPA in 2012 revealed that Ethiopia was the most exposed to high-risk pregnancy (34.4%). The % of acceptance in men for family planning and fertility regulations have been ignored, understudied and underutilized but men's education and acceptance in family planning was the most common predictor of women's exposure to lower-risk pregnancy[12].

Despite efforts to implement family planning by the Ethiopian government and other stakeholders, the results obtained and the goal desired remain unachieved as evidenced by high population growth rate and persistent high total fertility rate of 4.6, very low contraceptive usage (36%) and high rates of unwanted pregnancy and its complications, So The primary aim of this study is to evaluate men`s acceptances and factors associated in modern family planning in Dagahbur district.

Objectives of the study

General Objective

To assess men`s acceptance and associated factors of modern family planning among pastoral community of Dagahbur district, Somali Region, Eastern Ethiopia from 26th February to June 2018 G.C.

Specific Objectives

To determine the status of men`s acceptance on modern family planning among married men in pastoral community of Dagahbur district, Somali Region; Eastern Ethiopia.

To identify factors associated with men`s acceptance on modern family planning among pastoral community of Dagahbur district, Somali Region; Eastern Ethiopia.

MATERIALS AND METHODS

Study Design

Community based cross-sectional Quantitative study was conducted among married men of the selected kebeles.

Source population

Married men with wife at age of fertility (15-49) living in Dagahbur district.

Study Population

All selected married men living in selected kebeles of Dagahbur district.

Study Unit

Married men living in the selected household of Dagahbur district was used to a study unit.

Inclusion and Exclusion Criteria

Inclusion criteria

Married men with reproductive age group [age between 15-49 years) wife; Husband lives with the wife in same place, couples should be in union for more than six months and permanent resident.

Sample Size Determination

The sample size was calculated based on the prevalence and associated factor. First the required sample size is calculated using single proportion formula by using EPI-INFO version 7 with the assumptions of: 95% CI (two-sided), 5% margin of error, prevalence of male acceptance level 11.5% in Jigjiga district kebeles based research conducted[13]

Where,

z = confidence interval (with 95% level of certainty)
D = margin of error (3%)
p = proportion (11.5%, p = 0.115)
Using the design effect of 1.5
Substituting in to the equation and taking indices that gives us the largest final sample size

$$n = \frac{(1.96)2*0.115(1-0.115)}{(0.03)^2} = 435.$$

Adding 5% non-response rate our total sample size was 457. Considering multi stage sampling that was employed during sample selection, a design effect of 1.5 was multiplied, which makes the final sample size 686.

Secondly, factors associated with men`s acceptance on modern family planning sample size was calculated using Open Epi Version 7 statistical software for two population proportions.

When reviewed many studies done in deferent part of the world and in Ethiopia most of them revealed that men`s education level, age and family size and urban residence are the most determinant factors for male acceptance in modern family planning.

Table 1: Second objective sample size calculation

Variables	Factors associated male acceptance on family planning		CI	Power	OR	Sample size	References
	No	Yes					
Age (20-30 years)	30.30%	69.70%	95%	80	4.1	92	13
Educational level (secondary school and above)	47.20%	52.80%	95%	80	2.0	304	14
Family size > 5	23.40%	76.60%	95%	80	5.4	78	15
Urban Residence	41.90%	58.10%	95%	80	8.1	62	16

After using the EPI-INFO version 7 to calculate the sample size using the above assumption with factors associated male acceptance in family planning service, education was taken as it gives the maximum sample size i.e. 304 (by one to one ratio).

Adding 5% non-response and multiplying 1.5 design effects the total sample size was 478 males.

By comparing the two sample sizes calculated using single proportion and double population formula, the larger sample size

which is 686 as the total sample for the study participants was taken.

Sampling Technique

Stratified sampling technique was used to select study participants. 8 Kebeles were selected from 19 Kebeles (10 urban and 9 rural kebeles) by simple random sampling (lottery method). A proportional allocation was employed to obtain sample size of each kebeles. First household was randomly selected and systematic sampling was applied to other households until all sample size is reached. The list of all households in the selected kebeles was obtained from the kebeles administration; also list of households with married men was listed. If more than one eligible man is present in a household during interview, one was selected randomly.

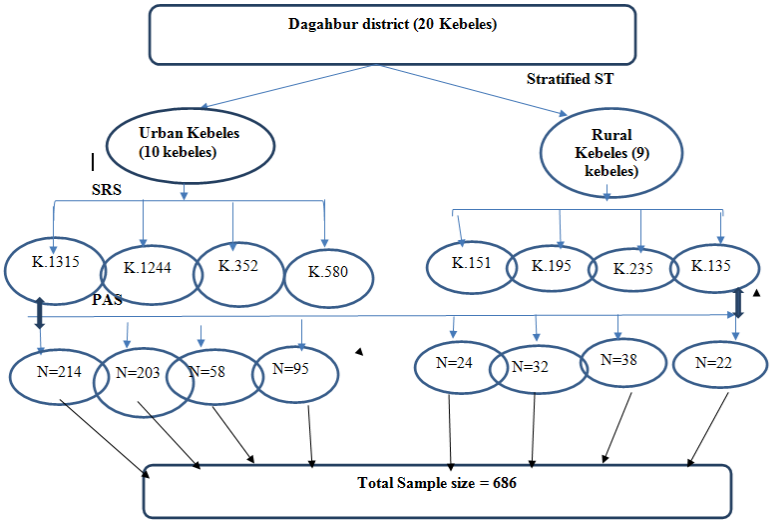

Figure 1: Schematic Presentation of sampling Procedure

Study Variable

Dependent variables

Male acceptance in family planning

Independent variables

Demographic factors like age, sex, marital status
Socio-economic Status like: income, Education, Occupation
Reproductive status like: number of live children.
Health Infrastructure like: availability of HF, FP commodities, HWs/HEWs
KAP: like beliefs, perceptions, attitude and practice

Data Collection Procedure

Data was collected using structured questionnaire through face to face interview. The Questionnaire were adopted in English and translated into Somali language. Six diploma nurses were used as data collectors and two BSc Nurses was hired as supervisors during the data collection.

Pre-test

Pre-test was conducted (5% of the sample size) before the actual data collection. Based on the pre-test result necessary modification was made on logical sequence, simplicity, and clarity of the questionnaires. In addition, any error was taken into account and ways of controlling them during data collection was mitigated.

Data Quality Control

Two days training was arranged prior for the data collectors and supervisors for ten days before data collection. After the pre-test, necessary corrections were made as per requirement to some of the questionnaires.

Field guide on how to conduct interview, was given to data collectors and supervisors. Each two collector were grouped together and one supervisor was assigned to every two group of them.

Moreover, during data collection supervisors was checked in the field on how the data collectors were doing their task. The principal investigator was also closely supervising the field activity on daily basis. At the end of each data collection day the principal investigator was also checking the completeness of the filled questionnaires and whether recorded information was accurate to ensure the quality of data collected. Besides this the principal investigator carefully entered and thoroughly cleaned the data before the commencement of the analysis.

Data Processing and Analysis

The data was entered into a computer by using EPI INFO version 7, and it was exported to SPSS version 20 for analysis. Description of means, proportions and rates of the given data for each variable was calculated. Bivariate analysis was done to see the association of each independent variable with the outcome variable and those predictor variables which have p-value of less than 0.20 was entered in to the multivariate logistic regression model to identify the effect of each explanatory variable on the outcome variables. A p-value less than 0.05 was considered as statistical significant variables and adjusted Odds ratio with 95% CI was calculated to see any association. Finally, the data was presented using table's figures and charts appropriately.

Ethical Consideration

Ethical clearance and permission were obtained from JiJiga University Research Ethical Committee and Official letter was taken from Dagahbur district administrative and their official permission was obtained. Then letters were prepared to the local authority of the selected kebeles. Voluntary written and signed informed consent was secured from each participant. Confidentiality was maintained at all levels of the study. Selection of participants was made on their own consent; and was told the voluntary nature of the study and that they can withdraw any time if they want. Couples who are not using the family planning but willing to use were advocated and directed to nearest health facility to use Family Planning.

RESULTS

Socio-Demographic Characteristics of the Respondents

A total of 686 married men were interviewed in this study making a response rate of 100%. Majority of the respondents were in the age group of 25-35 years (38.2%) making the mean age and standard deviation [SD] 39.1 (± 11.97) years. Most of them, 570 (83.1%) were residents of urban, while the rest were rural residents (Table 1).

Regarding to the respondents' educational status 254 (37.0 %) of study participants can`t read and write whereas 274 (39.9%) attained primary school while 111 (16.2%) of the respondents attended secondary and 47 (6.9%) attended higher education. In their ethnicity, 643 (93.7%) were Somali followed by non - Somali 43 (6.3%). Out of the total respondents, 659 (96.1%) were Muslim followers, followed by Orthodox Christianity followers of 20 (2.9%) and 7 (1%) protestant (Table 1).

Two hundred fifty-nine (37.8%) of the respondents were pastoralist while 148 (21.6%) were unemployed, 104 (15.2%) were government employee, 82 (12.0) were daily labourers, 79 (11.5) were merchants, and 14 (2.0%) were students. Of those 259 pastoralists, 165 (24.1) were nomadic while 94 (13.7) were agro-pastoralist. Over 584 (85.1%) of respondents were involved in monogamous marriage, but 102 (14.9%) reported being involved in polygamous marital union (Table 1).

Three hundred sixty-five (53.2%) of respondent`s household earned a monthly income of 3000 ETB or more, while 199 (29.0%) of them earned between 1500-3000 ETB and 122 (17.8) was less than 1500 ETB, with mean and SD, 3613.9 ± 2433 (Table 1).

Table 2: Socio -demographic Characteristics of the Study participants, Dagahbur Town/District, Somali region, Eastern Ethiopia 2018 (n = 686)

Characteristics	Frequency	Percentage (%)
Age of the of the respondent		
<25	62	9.0
25-35	262	38.2
35-40	121	17.6
>40	241	35.1
Residence		
Urban	570	83.1
Rural	116	16.9
Educational status		
Illiterate	254	37.0
Primary (1-8)	274	39.9
Secondary and above (9-12th)	111	16.2
Higher Education (College and University)	47	6.9
Ethnicity of the respondent		
Somali	643	93.7
Non-Somali	43	6.3
Religion		
Muslim	659	96.1
Orthodox	20	2.9
Protestant	7	1
Occupation of the husband		
Pastoralist	259	37.8
Unemployed	148	21.6
Employed	104	15.2
Student	14	2.0
Merchant	79	11.5
Daily worker	82	12.0
Marital status		
Monogamous marriage	584	85.1
Polygamous marriage	102	14.9
Household Monthly income		
<1500	122	17.8
1500-3000	199	29.0
>3000	365	53.2
Family size		
<=3	253	36.9
>4	36.9	63.1

Reproductive characteristics of respondents

Among the study population, 366 (53.4%) married at the age of 20-30 with the mean and SD 25.3 + 6.5. Of those the majority 372 (54.2%) got married within ten years, while the rest before ten years. The average number of total and currently alive children was 4 and 5 per man respectively, while the average desired number of children was 13.5 per man (Table 3). 322 (46.9%) of respondents had less than two children while 261 (38.0%) have more than five children that were alive. More than half (66.0%) of the study subjects wished to have further more children, from those, the majority 459 (60.0%) wished to have more than or equal to ten children, while 198 (28.9%) of the respondents wished to have more than five children (Table 3). Thirty-one-point eight percent preferred more of boys than girls while (20.8%) preferred girls and (27.8%) left the issue to God /Allah. Sixty four percent of the study participants had not discussed with their wives on the number of children that they want to have, while the rest discussed. Fifty-seven percent of the respondents preferred the next child in less than 2 years, while, 28.6%, and 5.7% of the respondents wished to have their next child between 2 and 3 years and after 3 years respectively.

Regarding to wife's desired no of children, nearly three quarter 273 (39.8%) of them don't know the number of children wanted by their partners, while 249 (36.3), and 140 (20.4%) need the same and less children than their partners respectively. Twenty-two-point nine percent of study participants said the decision is to be made by them self without their partner (either) to have more children or to stop, whereas, 34.5% left the issue to God /Allah (Table 3).

Table 3: Reproductive characteristics of the study subjects, Dagahbur Town/District, Somali Region, Eastern Ethiopia, June 2018

Characteristics	Frequency	Percentage (%)
Age at the first marriage: (n = 686)		
<20	193	28.1
20-30	366	53.4
>30	127	18.5
No of years living together. (n = 686)		
<10	372	54.2
10-20	197	28.7
>20	117	17.1
No of currently living children. (n = 686)		
≤2	322	46.9
3-4	103	15.0
≥5	261	38.0
Desired no of children (n = 686)		
≤5	35	5.1
5-10	198	28.9
≥10	459	
Preference for the next children = (n = 686)		
More of boys	218	31.8
More of girls	143	20.8
Both same	134	19.5
God knows	191	27.8
Discussion with wife on the No of children to have. (n = 686)		
Yes	243	35.4
No	443	64.6
Preferred time to wait before the birth of another child. = (n = 686)		
<_2	394	57.4
2-3	196	28.6
3-4	39	5.7
>4	57	8.3
Wives desired no of children. (n = 686)		
The same	249	36.3
Less children	140	20.4
More children	24	3.5
Don't know	273	39.8
Decision on when to have another child. (n = 686)		
My self	157	22.9
My wife	137	20.0
both of us	139	20.3
No decision	16	2.3
God knows	237	

Health service availability and accessibility of the study participants

Regarding health infrastructure 639 (93.1%) of them responded that they have health facility. Among them 287 (41.8%) reported that they can reach to the health facility in less than 30 minutes. Beside this, majority of them 235 (52.4%) reported that the service is available but majority of the participants 437 (68.4%) had not visited health facility to get the service while only 202 (31.6%) visited. Among those who visited the health facility were asked how were the service providers and more than half 118 (58.4%) mentioned that service care was good.

Table 4: Health service availability and accessibility of the study participants

Characteristics	Frequency	Percentage (%)
Availability of health facilities (n = 686)		
Yes	639	93.1
No	47	6.9
Distance of health facility (n = 639)		
<0.5 Hrs.	287	41.8
0.5-1 Hrs.	228	33.2
1 -2 Hrs.	98	14.3
>2	73	10.6
Availability FP service (n = 639)		
Yes	335	52.4
No	335	17.7
I don't know	191	29.9
Ever gone to health facility (n = 639)		
Yes	202	31.6
No	437	68.4
Ways of providing health service (n = 202)		
They give service well	118	58.4
They don't give service well	66	32.7
don't remember	8	4
I don't know	10	5
From whom do you prefer to get FP service delivery n = 202		
Male service provider	103	51
Female service provider	53	26
I have no sex preference	46	22.8

Knowledge of study participants on modern Contraceptive Methods

All study participants were asked whether they had ever heard about modern family planning or not. Most 492 (71.7%) of them reported that they have not heard about modern family planning, while only 194 (28.3%) of them had ever heard about it (Table 5).

The most commonly known modern family planning method reported by study participants was Injectables 48 (24.7%), followed by pills 44 (22.7%), male condom 42 (21.6%), natural methods 21 (10.8%), Norplant 14 (7.2%), and IUD 14 (7.2%). male sterilization 5 (2.6%) and Female Sterilization 2 (1%), where the least reported methods known Table 5).

Respondents were also asked the source where they can get modern family planning and 79 (40.7 %) of them reported about health centre, while 50 (28.8) and 42 (21.6%) mentioned hospital and health centres respectively, and the rest mentioned different areas (Table 5). They were also asked the advantage of modern family planning and 57 (29.3%), 48 (24.3%), and 53 (24.3%), 34(17.1%) of respondents said preventing of unwanted pregnancy, delays of mistimed pregnancy, spacing/limiting number of children to be born and prevention of STIs respectively. Among those who had ever heard about modern family planning, nearly three quarter 63 (32.4%) of them heard through Private Health Facilities, 59 (30%) from health institution, while others got information from other sources (Table 5).

Table 5: Knowledge of the study subjects on modern Family Planning, Dagahbur Town/District, Somali Region, Eastern Ethiopia; June 2018

Characteristics	Frequency	Percentage (%)
Ever heard about modern FP: (n = 686)		
Yes	194	28.3
No	492	71.7
The Awareness of the respondents on modern FP. (n = 194)		
Pills	44	22.7
IUCD	14	7.2
Injectable	48	24.7
Implant (Norplant)	14	7.2
Condom	42	21.6
Female sterilization	2	1
Male sterilization	5	2.6
Spermicidal (foaming tab. Jelly)	4	2.1
Natural method (periodic abstinence, withdrawal)	21	10.8
Where can you get modern family planning (n = 194)		
Hospital	50	28.8
Health centre	79	40.7
Health Post	42	21.6
FGAE clinic	10	5.2
Private clinic	9	4.6
Pharmacy /drug shop/Vender	2	1.0
Do not know	2	1.0
Purpose of the modern FP. (n = 194)		
Prevent unwanted pregnancy	57	29.3

For delay mistimed pregnancy	48	24.3
For spacing/limit No. of children	53	27.3
Prevention of STIs	34	17.1
Other	4	2.0
Awareness of the best ways to prevent unwanted or mistimed pregnancy. (n = 194)		
Modern family Planning	41	21.1
Natural FP	49	25.3
Do not know	104	53
Source of information for modern family planning. (n = 194)		
Government HF	59	30.0
Private HF	63	32.4
HEWs/HW	41	21.1
Family	21	10.8
Friends	6	3.0
Mass media	3	1.5
Community volunteers	1	0.5

Practice on modern Contraceptive Methods of the study participants

About 443 (64.5%) of the respondents reported that they have not discussed (communicated) about modern contraceptives with their wife, whereas 243 (35.4%) discussed. Of those who discussed, more than half 443 (64.6%) reported that their wives were unsupportive about modern contraceptives (Table 6).

Regarding the status about the contraceptive use, About 120 (17.5%) of study participants were current users, while 65 (9.5 %) of the respondents were ever-users, and the rest were non-users. Currently, the most commonly used methods by the respondent was condom by 67 (55.8%), while natural methods by 53 (44.2%) of the respondents, but there were no one who undertook male sterilization in the study area (Table 6).

Of those respondents, reported as current and ever users, the purpose of using was reported to be 80 (66.7%) and (33.3%) for spacing and limiting of the child birth respectively. Among the ever-users the reason of why they stopped was asked and various reasons were given during the interview for not using and the most common reasons were religious prohibition, desire to have more children, culture unacceptability, fear of side effects, and partner's (wife) disapproval were the most important reason that accounts 13 (20%), 12 (18.5%), 9 (13.8%), and 7 (10.8%) respectively (Table 6). The study subjects were asked whether they intend to use any method of contraceptive to delay or avoid pregnancy in the future and 416 (60.6%) of them decided not to use any method in the future and the rest intended to use (Table 6).

Table 6: Characteristics of modern Contraceptive Practice of the study participant, Dagahbur Town/District, Somali Region, Eastern Ethiopia; June 2018

Characteristics	Frequency	Percentage (%)
Ever discuss about FP		
Yes	243	35.4
No	443	64.5
Attitude of men`s wife towards contraceptives		
Supportive	243	35.4
Not supportive	443	64.6
Status of FP use		
Current Users	120	17.5
Ever Users	65	9.5
Non-users	501	73.0
Purpose of using modern contraceptive method (n = 120)		
For spacing	80	66.7
For limiting	40	33.3
Current Method of Using (n = 120)		
Condom	67	55.8
Natural method	53	44.2
Reason why you stopped using (n = 65)		
Health facility far from us	5	7.7
Fear of side effect	9	13.8
Fear of infertility	8	12.3
Unacceptable in my culture	12	18.5
Preferred method is not available	4	6.2
Desire have more children	13	20
Partner disproval	7	10.8
Religious prohibition	2	3.1
Have you ever Intended to use any method to delay or avoid pregnancy n = 686		
Yes	226	33.4
No	416	60.6
Not decided	41	6

Attitudes of the respondents toward modern Contraceptive Methods

From study participants, more than half 458 (66.8%) of men disapproved the use of the modern contraceptive to their wives. Among those who disapproved the use of the modern contraceptives, 293 (64.2%) mentioned religious prohibition, whereas, 102 (22.3%), 63 (13.5%), reported desire to have for more child, and culture respectively as reasons not to support the use of contraceptives (Table 6).

More than half 467 (68.1%) of the study subjects disagreed that information about Family planning should be accessible to male partners. The respondents were also asked about who makes the decision regarding contraceptives with their spouses and about 394 (57.45%) mentioned that the decision made by the male partner (Table 6). About 383 (55.8 %) disagreed that modern contraceptives improved ones standard of living while 230 (33.5%) agreed and the rest were neutral. About nearly half 322 (46.9 %) of the respondents agreed that child spacing improves both health of children and mothers while the rest 272 (39.7%) and 92 (13.4%) disagreed and neutral respectively (Table 6).

The respondents were also asked about their agreement, whether contraceptive use could cause infertility. And about half 347 (50.6%) of the respondent were agreed, whereas 244 (35.6 %), 95 (13.8 %), were disagreed, and neutral respectively. Regarding the attitude towards that contraceptive practice can make the family happy, about nearly half of 340 (49.6 (34.4%) of the respondent were disagreed (Table 6).

Table 7: Attitude of the study subjects towards on modern FP, Dagahbur own/District, Somali Region, Eastern Ethiopia, June 2018

Characteristics	Frequency	Percentage (%)
Do approve or disprove FP Methods (n = 686)		
Yes	228	33.2
No	458	66.8
Reason why Disprove (n = 258)		
Religious prohibition	293	64.2
Culture don't allow	102	22.3
Desire to have more children	63	13.5
Do you think that Information about FP should be available for males (N = 686)		
Yes	219	31.8
No	467	68.1
decision making about the family planning n = 686		
My self	394	57.4
My wife	137	20
Both of us	139	20.3
I don't know	16	2.3
FP improve once standard of living n = 686		
Agree	230	33.5
Disagree	383	55.8
Neutral	73	10.6
Child spacing improves the health of children and mothers		
Agree	322	46.9
Disagree	272	39.7
Neutral	92	13.4
Contraceptive use may cause infertility n = 686		
Agree	244	35.6
Disagree	347	50.6
Neutral	95	13.8
A couple that practices will happy life FP n = 686		
Agree	235	34.3
Disagree	340	49.6
Neutral	111	16 .2

From total of 686 study participants 154 (22.6) were good knowledge about family planning based on knowledge standard questions while the left 532 (77.6) poor knowledge regarding family planning (Table 8).

From total of the study participant 425 (62.8%) have positive attitude while 261 (38.0%) had negative attitude based on the attitude standard questions (Table 8).

Regarding the practice, about 610 (88.9%) is not practicing while only 76 (11.1%) is practicing the modern contraceptives; based on the practice Standard questions (Table 8).

Table 8: Knowledge, attitude and practice scores

Variable	Frequency	Percent %
Knowledge score		
Good knowledge	154	22.6
Poor knowledge	532	77.6
Attitude score		
Positive attitude	261	38.0
Negative attitude	425	62.8
Practice score		
Practiced	76	11.1
Not Practiced	610	88.9

Prevalence of male acceptance towards modern contraceptives of the study participants, Dagahbur Town/District, Somali Region, Eastern Ethiopia, 2018

Regarding the response of the study participants, the prevalence of male acceptance in modern contraceptive service, showed that 153 (22.3%) whereas 533 (77.7%) had not accepted on modern contraceptive use.

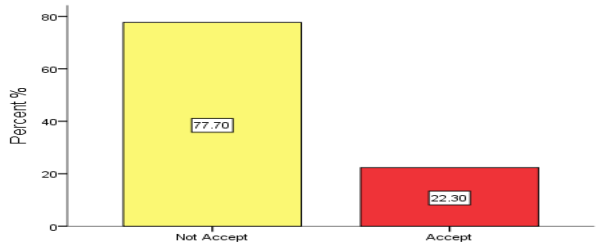

Figure 2: Prevalence of male acceptance in modern contraceptives of the study subjects in Dagahbur Town/District, Somali region Eastern Ethiopia, 2018 (n = 686)

Association between male acceptance and Related Factors

After completing data entry and cleaning, all important variables were checked using binary logistic regression. Almost all important independent variables have been selected and interred to bivariate analysis. Of these, 14 independent variables have shown significant association to the dependent variables with P-values less than 0.2 in which lastly were entered to multivariate logistic regression.

As it is indicated in the tables, age between 35-40 year, ethnicity, number of living children greeter then 5, being a merchant and daily labour, marital status of being polygamous, and family income greater than 3000 ETB were among the predictors associated socio-demographic factors with male acceptance in modern contraceptive service utilization in Bivariate analysis (Table 6).

Likewise, some of the reproductive variables such as desired number of children to have in the future, preference of male sex child in the next birth, discussion with wife on the number of children to have, and preferred time to wait before the birth of another child were also found to be predictors of male acceptance on modern contraceptive service acceptance. Apart from Availability of health facilities, and Distance to health facility good knowledge in modern contraceptive and positive attitude were also showed significant association with male acceptance in Bivariate analysis (Table 9).

Table 9: Associated factors with male acceptance in modern contraceptive Service Utilization at Bivariate Analysis in Dagahbur district Jarar Zone, Somali Region, East Ethiopia, June 2018

Variable	Male Acceptance of Modern FP service		Crude OR (95%)	P-value
	Yes	No		
Age category	(%)	(%)		
<25	10 (15.9)	53 (841)	0.67 (0. 32, 1.41)	0.28
25-34	57 (21.8)	204 (78.2)	0.99 (0.65, 1.51)	0.96
35-40	33 (27.3)	88 (72.2)	1.3 (0.80, 2.2)	**0.19**
>40	53 (22.0)	188 (78.0)	1	
Ethnicity				
Somali	147 (22.9)	496 (77.1)	1.83 (0.76, 4.41)	**0.18**
Non-Somali	6 (14.0)	37 (86.0)	1	
Number of living child				
≤2	74 (23.0)	248 (77.0)	1	
3-4	20 (19.4)	83 (80.6)	0.81 (0.47, 1.40)	
≥5	59 (22.6)	77.4	0.98 (0.66, 1.45)	**0.145**
Men`s occupation				
Pastoralist	44 (17.0)	215 (83.0)	1	
Unemployed	32 (21.6)	116 (78.4)	1.35 (0.81, 2.24)	0.25
Employed	16 (15.4)	88 (84.6)	0.89 (0.47, 1.65)	0.71
Student	2 (14.3)	12 (85.7)	0.81 (0.18-3.76)	0.79
Merchant	31 (39.2)	48 (60.8)	3.12 (1.81, 5.5)	**<0.0001**
Daily labour	283 (4.1)	54 (65.9)	2.53 (1.45, 4.43)	**0.001**
Married Status				
Mono gamy	124 (21.3)	457(78.7)	1.00	
Polygamy	29 (27.6)	76(72.4)	1.41 (0.88, 2.25) *	**0.16**
Monthly income				
<1500	18 (14.8)	104 (85.2)	1.00	
1500-3000	41 (20.6)	158 (79.4)	1.5 (0.81-2.75)	**0.19**
>3000	94 (25.8)	271 (74.7)	2 (1.15-3.48) *	**0.014**
Desired no of children				
≤5	4 (11.4)	31 (88.6)	0.42 (0.15, 1.22)	**0.112**

5-10	43 (21.7)	155 (78.3)	0.91 (0.61, 1.36)	0.638
≥10	106 (23.4)	34776.6)	1	
Preference for the next children				
More of boys	41 (19.2)	176 (80.8)	0.45 (0.29, 0.71) *	**0.001**
More of girls	16 (11.2)	127 (88.8)	0.24 (0.13, 0.44) *	**<0.0001**
Both same	2921.6	10578.4	2.52 (0.31, 0.87) *	**0.012**
God knows	66 (34.6)	125 (65.4)	1	
Discussion with wife on the No of children to have.				
Yes	37 (15.2)	206 (84.8)	1.98 (1.31, 2.98) *	**0.001**
No	116 (26.2)	327 (73.8)	1	
Preferred time to wait before the birth of another child				
<_2	94 (23.9)	300 (76/1)	0.58 (0.32, 1.05)	0.071
2-3	33 (16.8)	163 (83.2)	0.38 (0.19, 073) *	**0.004**
3-4	6 (15.4)	33 (85.3)	0.34 (1.21, 0.94) *	**0.037**
≥4	20 (35.0)	37 (65.0)	1	
Availability of health facilities				
Yes	146 (22.8)	493 (77.2)	1.69 (0.74 3.858)	**0.20**
No	7 (14.9)	40 (85.1)	1	
Distance to health facility in minute				
<0.5 Hrs.	59 (79.4)	228 (79.4)	1.09 (0.57,2.08)	0.79
0.5-1 Hrs.	67 (29.4)	161 (70.6)	1.75 (0.917,3.35) *	**0.090**
1 -2 Hrs.	13 (13.3)	85 (86.7)	0.65 (0.28,1.470)	0.297
>2	14 (19.2)	59 (80.8)	1	
Knowledge about FP				
Good knowledge	44 (28.6)	110 (71.4)	0.64 (0.43, 0.97) *	**0.035**
Poor knowledge	109 (20.5)	423 (79.5)	1	
Attitude towards FP				
Positive attitude	26 (10.0)	235 (90.0)	3.85 (2.44, 6.07) *	**<0.0001**
Negative attitude	12729.9	298 (70.1)	1	

Determinants of male acceptance in modern contraceptive Service

To determine factors associated with male acceptance on modern contraceptive, variables were screened using bi- variable logistic regression with the (p_ value ≤ 0.2) as a cut of point. In this regard 14 variables were found to be significant.

After considering predictor variables at bi- variable logistic regression in to multivariable logistic regression analysis, family income (AOR = 1.93, 95% CI (1.03, 3.63)), polygamy in marital status (AOR = 1.8, 95% (1.03, 3.15) and attitude about family planning (AOR = 3.19, 95% CI, (1.89, 1.59) were found to be significantly associated with male acceptance on modern contraceptive service.

Considering the marital status those who were engaged polygamous marriage were 1.8 times (AOR = 1.8, 95% CI, (1.03, 3.15). more likely to accept modern contraceptive service compared to their counterparts.

Concerning monthly income, those households with a monthly income of greater than 3000 birr (AOR = 1.93, 95% CI (1.03, 3.63). were 1.9 times more likely to accept modern contraceptives to those whose incomes less 1500 (AOR = 1.93, 95% CI, (1.03, 3.63).

Positive attitude has also been identified as an important predictor of male acceptance of modern contraceptives service, where males whose positive attitude were 3.19 times (AOR = 3.19, 95% CI (1.89, 1.59). more likely to accept family planning service as compared to those of negative attitude (Table 10).

Table 10: Predictors of male acceptance in modern contraceptives at Multi variate Analysis among males in Dagahbur district Jarar zone, Somali Region, East Ethiopia and June 2018

Variable	Male Acceptance of Modern FP service		Crude OR (95%)	Adjusted OR (95%)
	Yes	No		
Age category	No (%)	No (%)		
<25	10 (15.9)	53 (841)	0.67 (0. 32, 1.41)	0.48 (0.19,1.18)
25-34	57 (21.8)	204 (78.2)	0.99 (0.65, 1.51)	0.76 (0.44, 1.32)
35-40	33 (27.3)	88 (72.2)	1.3 (0.80, 2.2)	1.11 (0.63, 1.97)
>40	53 (22.0)	188 (78.0)	1	
Ethnicity				
Somali	147 (22.9)	496 (77.1)	1.83 (0.76, 4.41)	0.79 (0.27,2.27)
Non-Somali	6 (14.0)	37 (86.0)	1	1
Men`s occupation				
Pastoralist	44 (17.0)	215 (83.0)	1	1
Unemployed	32 (21.6)	116 (78.4)	1.35 (0.81, 2.24)	1.05 (0.59, 1.85)
Employed	16 (15.4)	88 (84.6)	0.89 (0.47, 1.65)	0.84 (0.4, 1.73)
Student	2 (14.3)	12 (85.7)	0.81 (0.18-3.76)	0.77 (0.15, 3.97)
Merchant	31 (39.2)	48 (60.8)	3.12 (1.81, 5.5)	1.81 (0.94, 3.49)
Daily labour	283 (4.1)	54 (65.9)	2.53 (1.45, 4.43)	1.48 (0.76, 2.86)
Married Status				
Mono gamy	124 (21.3)	457 (78.7)	1.00	1.00
Polygamy	29 (27.6)	76 (72.4)	1.41 (0.88, 2.25)	**1.8 (1.03, 3.15) ****
Monthly income				
<1500	18 (14.8)	104 (85.2)	1.00	1

1500-3000	41 (20.6)	158 (79.4)	1.5 (0.81-2.75)	1.35 (0.71, 2.60)
>3000	94 (25.8)	271 (74.7)	2 (1.15-3.48)	**1.93 (1.03, 3.63) ****
Number of living child				
≤2	74 (23.0)	248 (77.0)	1	1
3-4	20 (19.4)	83 (80.6)	0.81 (0.47, 1.40)	0.7 (0.38, 1.31)
≥5	59 (22.6)	77.4)	0.98 (0.66, 1.45)	0.64 (0.38, 1.10)
Desired no of children				
≤5	4 (11.4)	31 (88.6)	0.42 (0.15, 1.22)	0.75 (0.23, 2.42)
5-10	43 (21.7)	155 (78.3)	0.91 (0.61, 1.36)	1.05 (0.66, 1.66)
≥10	106 (23.4)	34776.6)	1	**1**
Preference for the next children				
More of boys	41 (19.2)	176 (80.8)	0.45 (0.29, 0.71)	0.65 (0.39, 1.07)
More of girls	16 (11.2)	127 (88.8)	0.24 (0.13, 0.44)	0.42 (0.21, 1.1)
Both same	2921.6)	10578.4)	2.52 (0.31, 0.87)	0.79 (0.45, 1.39)
God knows	66 (34.6)	125 (65.4)	1	1
Discussion with wife on the No of children to have.				
Yes	37 (15.2)	206 (84.8)	1.98 (1.31, 2.98)	098 (0.59,1.59)
No	116 (26.2)	327 (73.8)	1	1
Preferred time to wait before the birth of another child				
<_2	94 (23.9)	300 (76/1)	0.58 (0.32, 1.05)	0.83 (0.41, 1.68)
2-3	33 (16.8)	163 (83.2)	0.38 (0.19, 073)	0.56 (0.26, 1.22)
3-4	6 (15.4)	33 (85.3)	0.34 (1.21, 0.94)	0.61 (0.18, 2.00)
≥4	20 (35.0)	37 (65.0)	1	1
Availability of health facilities				
Yes	146 (22.8)	493 (77.2)	1.69 (0.74 3.858)	0.61 (0.25,1.47)
No	7 (14.9)	40 (85.1)	1	
Distance to health facility in minute				
<0.5 Hrs.	59 (79.4)	228 (79.4)	1.09 (0.57,2.08)	0.78 (0.38, 1.59)
0.5-1 Hrs.	67 (29.4)	161 (70.6)	1.75 (0.917,3.35)	1.15 (0.56, 2.37)
1 -2 Hrs.	13 (13.3)	85 (86.7)	0.65 (0.28,1.470)	0.65 (0.27, 1.55)
>2	14 (19.2)	59 (80.8)	1	1
Knowledge about FP				
Good knowledge	44(28.6)	110(71.4)	0.64 (0.43, 0.97)	1.07 (0.66,1.74)
Poor knowledge	109 (20.5)	423(79.5)	1	
Attitude towards FP				
Positive attitude	26 (10.0)	235 (90.0)	3.85 (2.44, 6.07)	**3.19 (1.89,1.59) ***
Negative attitude	127(29.9)	298(70.1)	1	

DISCUSSION

Community based cross-sectional study with the objective of the assessment of prevalence of male acceptance and associated factors of modern family planning has been conducted in Dagahbur district of Jarar zone, Somali regional state, Eastern Ethiopia. This study discovered that the proportion of male acceptance in family planning service was 22.3%. This result is almost consistent with a study conducted in Wolaita Sodo in Southern Nations, Nationalities and Peoples (SNNP) region of Ethiopia 25.3%[17], but to some extent lower than the study conducted in Tigray region of Ethiopia which showed 30%[18].

This difference might be due to the fact of difference in study setting; especially this was conducted in pastoral rural areas of Dagahbur woreda in Somali region, whereas the other study was conducted in urban agrarian region of Tigray. In contrary, study done in Debremarkos district, Northwest Ethiopia suggested proportion of male acceptance was 8.4 %[19] Egypt, 7.4%, whereas study conducted in urban area of Cameroon revealed 60.4% respectively[20]. The possible reason could be time difference, geographical, socio economic and cultural variations.

Regarding associated factors of men acceptance, polygamy is one of the factors positively associated with men's acceptance in modern contraceptive use, this means those men who are engaged with more than one wife were almost 2 times more likely to accept modern family planning than those with one wife. This is consistent with study conducted in sub-Saharan Africa, which found that polygamy has positive association with contractive use[21]. This might be due to fact that men with more than one wife have more concern on socio- economic related issues. Family incomes was a significant variable in which men with 3000 birr and above, were almost 2 times more likely to accept family planning as compared to those with income less than 3000 ETB. This study agrees with the study conducted in Eastern Ethiopia which found that family income has direct influence on men's acceptance in modern family planning [22] but differs from the result of the studies conducted in Edaga-Hamuse Town, Tigray, North Ethiopia, 33.5%[23], South Eastern Zone of Tigray, Ethiopia[24], The possible explanations could be due to geographical difference of the society, socio-economic status of the community, methodological differences.

Attitude was also another significant factor associated with men's acceptance in modern family planning service. This study showed that positive attitude has direct influence on men's acceptance in modern family planning service, in which men with positive attitude were 3 times more likely to accept family planning as compared to those men with negative attitude. This is in line with other study conducted in Debremarkos town, Northwest Ethiopia, which in contrary revealed that negative attitude towards family planning might affect the use of family planning, characterized by reduced contraceptive attention[19]. The possible explanation could be an information gap in family planning towards the

importance of family planning in men's acceptance, especially health education in family planning among the men.

CONCLUSION

The proportion of male acceptance in modern contraceptive services was found to be low in Dagahbur district of Jarar zone when compared to the target of male acceptance at both national as well as regional level. Polygamous marital status, higher income and positive modern contraceptive were found to be significantly associated with male acceptance in modern contraceptive service.

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How to cite this article:

Abdi Farah Sirad *et al.* Men`S acceptance and associated factors of Modern family planning in Pastoralist Communities of Dagahbur District, Somali region, Eastern Ethiopia. J Pharm Sci Innov. 2020;9(1):10-21.
http://dx.doi.org/10.7897/2277-4572.091162

Source of support: Nil, Conflict of interest: None Declared