

Available online at http://www.journalcra.com

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

International Journal of Current Research Vol. 12, Issue, 03, pp. 10696-10703, March, 2020

DOI: https://doi.org/10.24941/ijcr.38209.03.2020

RESEARCH ARTICLE

THE EFFECTS OF WOMEN'S EMPOWERMENT AND GENDER RELATED VARIABLES ON MODERN CONTRACEPTIVE USE AMONG MARRIED WOMEN IN DIRE DAWA ADMINISTRATIVE, ETHIOPIA IN 2018

*Asamenew Endaweke Wale, Bedasa Tessema Hatehu, Asrat Demeke. Wendimu, and Dejen Agegnehu. Fente

Department of Statistics, College of Natural and Computational Sciences, Dire Dawa University, P.O. Box 1362, Dire Dawa, Ethiopia

ARTICLE INFO

ABSTRACT

Article History: Received 04th December, 2019 Received in revised form 20th January, 2020 Accepted 18th February, 2020 Published online 30th March, 2020

Key Words: Empowerment, Factor Analysis, Logistic Analysis, Dire Dawa, Ethiopia. Background: Women's empowerment is a process by which those who have been denied the ability to make a strategic life choices acquire such ability. Women's empowerment increase with education and economic status and thereby influences fertility and also associated with contraceptive use. The main objective of this study was to investigate the determinants of family planning services focusing on women's empowerment and gender related factors among married women or living with a partner in Dire Dawa Administration, Eastern Ethiopia. Methods: A community based cross-sectional community study design using cluster random sampling technique was employed. Data collection was done using self-administered questionnaire among 1,190 married women and data was fed and analyzed into SPSS 20. Descriptive analysis, factor analysis and binary logistic regression analysis were applied. Results: The finding revealed that 410 (345%) of married women were use contraceptive methods. The finding indicates that the older the women the less contraceptive user (OR=0.958) and Muslim married women were less contraceptive user (OR=0.482) whereas women were more contraceptive user when they made a decision on the use of contraceptive methods by themselves only. Wo men's empowerment and many of the socio-economic and gender-related control measures were significantly associated with use of contraceptives. Dimensions of women's empowerment representing women attitudes towards refusing sex, women's reading media exposure and ownership of assets had a positive association with contraceptive use. Conclusions: The Ethiopian government has so far improved access to modern contraceptives, but utilization is still lagging, mainly due to lack of women empowerment, due to religious influence and limited contraceptive knowledge. Therefore, the government and concerned bodies should work to increase empowerments of women's and usage of contraceptive method.

Copyright © 2020, Asamenew Endaweke Wale et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Asamenew Endaweke Wale, Bedasa Tessema Hatehu, Asuat Demeke. Wendimu, and Dejen Agegnehu. Fente. 2020. "The Effects of Women's Empowerment and Gender Related Variables on Modern Contraceptive Use among Married Women in Dire Dawa Administrative, Ethiopia in 2018", International Journal of Current Research, 12, (03), 10696-10703.

INTRODUCTION

Women's empowerment is defined by Kabeer as, "A process by which those who have been denied the ability to make a strategic life choices acquire such ability" (Kabeer, Naila, 1999). At the government level, this includes the extension of all fundamental social, economic and political rights to women. On the individual level, this includes processes by which women gain inner power to express and defend their rights and gain greater self-esteem and control over their own lives and personal and social relationships. Male participation and acceptance of changed roles are essential for women's empowerment.

*Corresponding author: Asam enew Endaweke Wale,

Department of Statistics, College of Natural and Computational Sciences, Dire Dawa University, P.O. Box 1362, Dire Dawa, Ethiopia. According to the results of the 2015 Revision of World Population Prospects, total fertility is now 2.5 children per woman globally. A frica remains the region with the highest fertility at 4.7 children per woman. Europe has the lowest fertility of 1.6 children per woman. Both Asia and Latin America and the Caribbean have total fertility of 2.2 children per woman, closely followed by Oceania with 2.4 children per woman. Middle and Western Africa stand out as having particularly high fertility of over five children per woman. Eastern Asia, Eastern Europe and Southern Europe have very low fertility at less than 1.6 children per woman (World Bank. 2015). Currently, family planning service is offered as free of charge in both governmental and NGO health facilities in Ethiopia, including hospitals, clinics, health centers and health stations. However, according to the result of Ethiopian Demographic and Health Survey which is conducted in 2011, Ethiopia is among countries with low contraceptive prevalence

rate 29%, 20% and 57% among married women, all women age 15-49 and sexually active unmarried women, respectively, at national level (Central Statistical Agency, 2011). In addition, according to EDHS result the prevalence rate of use of any contraceptive method varies notably by region, ranging from 63 percent in Addis Ababa to 4 percent in the Somali region, and 34% in the Dire Dawa. Researchers are consistent with the view that if a woman can plan her family, with respect to her decision on the timing, spacing and number of children she bears without discrimination, her family would be more financially established and her children are educated and healthy. Moreover, she would be in good physical shape, productive and actively involved in the societal development (Duflo, 2012). Effective and efficient use of contraceptives is central to achieving these go als. Promoting equitable access to the full range of modern contraceptive methods is essential for the women's health and their development (Duflo, 2012; Gharaibeh, 2011). One of the major challenges to the use of modern contraceptive in most sub-Saharan African countries is the lack of women empowerment (Bogalech, 2007). In Ethiopia, women's participation in their own matters and women's benefit from social, economic and political spheres is low. Traditional, social and economic values constrain the rights of women and their opportunities to direct their own lives or participate in and contribute to community and national development (United Nations Millennium Declaration, 2000).

Although, Ethiopian laws give equal property rights to women, in fact tradition and women's low social and economic status limits their ownership of assets and decision making in different areas which affects their empowerment within household and communality (Shaw, 2006; Ogato, 2013). Ethiopian women are economically, socially, culturally and politically disadvantaged in the enjoyment of equal rights, in accessing opportunities, decision-making process, and basic resource/service. Although a number of policy emerging that support and encourage women's participation in development, women's access to and control of productive resource, information, training and education, empowerment and decision making is limited (Ethiopian Statistical Agency, 2003; Field, 2005). Although much of the literature examined sociodemographic, socio-economic and related factors that affect reproductive health outcomes related to contraceptive use in different areas, there is limited research exploring the effect of women's empowerment which is multidimensional on the use of contraceptive methods in our country, especially in this specific study area. Therefore, the aim of this study was to investigating the determinants of family planning services focusing on women's empowerment and gender related factors among married women or living with a partner in Dire Dawa Administration, Eastern Ethiopia.

MATERIALS AND METHODS

Study Area: The study was conducted in Dire Dawa administrative.

Study Design: A community based cross-sectional survey was carried out to investigate the effect of empowerment and other gender related variables on contraceptive use in which the study population consisted of all married women living in Dire Dawa Administrative at that time.

Data Sources and Study Population: In conducting this study we used primary sources of dat a which was conducted through data collection method. Thus, the source population were all married wom en or who were living with a partner lived in the study area for at least six months earlier to data collection. The study unit embraced all married women that are admitted to the study districts in the study areas at the time of d ata collection. The data for this study were collected using structured questionnaire by administering face to face interviewing of married women.

Sampling procedure and sample size determination: In this study stratification method was applied, urban as stratum one and rural as stratum two. It was not feasible or practical to draw a simple r andom sample or a systematic sample from the whole source population. This is because a sampling frame is unavailable. Even if a proper sampling frame did exist, most of the sample would live in different communities far away from each other, and the time and expense involved in contacting them would be prohibitive. The sample size can be calculated using a single population proportion formula and allocated for rural and urban strata through probability proportional to size sampling technique.

$$n = \frac{\left(Z_{\frac{\alpha}{2}}\right)^2 PQ}{d^2} * deff, i = 1, 2$$

We require results with a $\pm .04$ margin of error at a 95% confidence level. Thus, considering P = 0.34 (the prevalence of contraception for dire dawa (Central Statistical Agency, 2011) and *def f* = 2 the sample size for this study becomes

$$n = \frac{(1.96)^2 * 0.34 * 0.66}{(0.04)^2} * 2 = 1,082$$

It is common practice in surveys to increase the sample size by an amount equal to the anticipated non-response rate. In the calculation exercise below, we allow the anticipated non response rate to be 10 percent (Ethiopian Statistical Agency, 2003). Then 10% of the given sample size was 108 and the total sample size included in the study was 108+1, 082 = 1,190. Therefore, the rural stratum has 298 (25%) of the sample size whereas the urban has the remaining 892 (75%) of the given sample size.

Data Collection Methods and Instrument: The data for this study were collected using structured questionnaire by administering face to face interviewing of married women. The pretest fieldwork was conducted over five days in the selected kebeles of the study area in both urban and rural kebelesc overing 5% (60) of the sample size. During the collection when there is no-one at home when the interviewer arrived, he/she come back two times again rather than go to the house next door.

Variable of the Study: The dependent variable was contraceptive use which was classified into two categories: nonuse (coded as 0) and use (ever used and currently use coded as 1) indicating respondents' use of any method (modern or traditional) of contraception at the time of the study.

$Y = \begin{cases} 1, \text{ use of contraceptive} \\ 0, \text{non use of contraceptive} \end{cases}$

Independent variables included a number of empowerment and gender-related variables. Women's empowerment was measured by women's participation in economic decision making, household decision-making, and by two indices representing gender-role attitudes: attitudes toward wife beating and attitudes toward refusing sex with one's husband.

Methods for Data Analysis: We were conducting the analyses in three steps. In the first phase, respondents' characteristics were described and the distribution of the dependent and independent variables were explored. Second, a factor analysis was employed to uncover the underlying structure of the observable data from the survey responses. Since there is no prior theory on the structure of these responses, we assumed that any individual indicator may be associated with any factor. Therefore, the correlation coefficients between the factor and original variable (factor loadings) are used to understand the structure of latent factors in the model. Third, binary logistic regression analysis was used to examine the determinants of contraceptive use among married women, focusing on the impacts of women's empowerment. Thus, factor analysis offers not only the possibility of gaining a clear view of the data, but also the possibility of using the output in subsequent analyses (Field, 2005).

Binary Logistics Regression Analysis: Logistic regression is a popular modeling approach when the dependent variable is dichotomous, ordinal or multinomial. Thus logistic regression is used in a wide range of applications leading to binary dependent data analysis (Agresti, 2002). The odds ratio is the ratio of the odds of an event occurring in one group to the odds of occurring in another group. In binary logistic regression, odds ratio is the exponential of the estimated coefficient $\hat{\beta}$, $exp(\hat{\beta})$. For continuous covariate, $exp(\hat{\beta})$ is the predicted change in odds of contraceptive use for a unit increase in explanatory variables. For categorical independent variable, $exp(\hat{\beta})$ is the predicted change in odds of contraceptive use for a use to the reference category.

RESULTS AND DISCUSSION

Descriptive Statistics: The result from the following table shows that from the total of 1, 190 currently married women only 410 (34.5%) were use contraceptive methods while the remaining 780 (65.5%) of married women were not use contraceptive methods. The 2011 ECSA report shows that the prevalence of contraceptive user was 34 % in Dire Dawa which is similar result in our findings.

Therefore, even if there is an improvement on access and service of health facilities, there is a problem on improvement of contraceptive usage in Dire Dawa Administrative. This might be the problem of women empowerment on choice and decision of using contraceptive methods. The results from the following table 2, Decision on contraceptive use, number of child preference, decision on the use of Money, decision on health care, decision on purchasing, decision on visiting families and owners of assets like land and house were significantly associated with the use of modern contraceptive methods (P-Values < 0.001).

Table 1. Summery of married women's current contraceptive use

Contrace ptive use	Frequency	Percent	Valid Percent
No	410	34.5	34.5
Yes	780	65.5	65.5
Total	1190	100.0	100.0

Descriptive statistics for women empowerment indicators on current contraceptive use: From the following table 3, 65.2% of the married women who uses current contraceptive method reported that they visit their family and relatives by women alone or join, indicating a higher level of empowerment, while 73.1% of women who uses are not empowered. From the following table 4, 72.3% of the married women reported that none of the reasons (If she goes out without telling him, If she neglects the children, If she argues with him, If she refuses to have sex with him and If she burns the food) are justified for a husband beating his wife, indicating a higher level of empowerment in wife beating, while 27.7% of married women reported that some reasons were justified for a husband beating his wife, indicating a lower level of empowerment. From the following table 5, 63.4% of the married wom en indicated that all of the reasons (If she knows her husband has a sexually transmitted disease, If she knows her husband has sex with other women, If she has recently given birth and If she is tired or not in the mood) are justified for refusing to have sex with her husband, indicating a higher level of empowerment in refusal of sex in some circumstances, while 36.6% married women indicated that some reasons are not justified to refuse to have sex with her husband, indicating a lower level of empowerment.

Result of Factor Analysis and Principal Components

Preliminary Analysis: The determinant of the correlation matrix was 0.002 which is greater than the necessary value of 0.00001.(12) Therefore, multicollinearity is not a problem for these data. To sum up, all 20 questions in our component correlate fairly well and none of the correlation coefficients are particularly large; therefore, there is no need to consider eliminating any questions at this stage.

Factor Rotation: The following table 6 indicates the results of factor rotation of 20 Items. In varimax rotation factor solution for the original 20 items, 61.577% of the total variance was explained by the first six factors with eigenvalues greater than 1. The variables/components that load highly on factor one seems to all relate to refusing sexual intercourse. Therefore we label these factor Attitudes towards refusing sex. The variables/components that load highly on factor two seems to all relate to wife beating.

Therefore we label this factor Attitudes towards wife beating. The variables that load highly on factor three all seem to relate to reading about family planning from different media; therefore, we might label this factor reading media exposure. The variables/components that load highly on factor four all seem to relate to different aspects decision; therefore, we might label this factor social and economic decision in household. The variables/components that load highly on factor five both seems to relate to ownership of assets; therefore, we label this factor own ership of fassets. Finally variables that load highly on factor six both seems to relate to hearing about family planning in different media; therefore, we might label this factor as hearing media exposure.

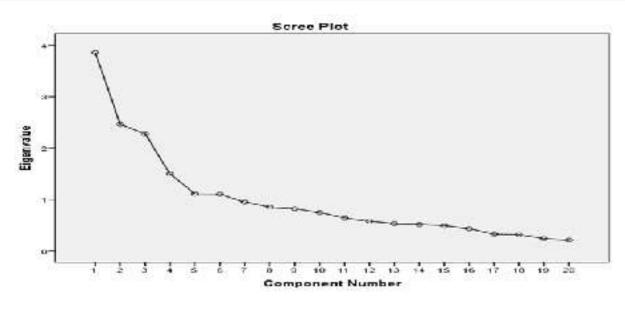


Figure 5.1. Scree Plot

Table 2. Descriptive Statistics Related to Women Empowerment Indicator	Table 2.	. Descriptive	Statistics	Related to	Women Em	powerment Indicators
--	----------	---------------	-------------------	------------	----------	----------------------

Variables	Current usage of Contraceptive Method						
	No	Yes	Yes				
	Frequency (%)	Frequency (%)	Chi-square (DF)	Sig.			
Decision on contrac eption							
Mainly Respondent	62 (52.5%)	56 (47.5%)					
Mainly Husband/Partner	20 (37.0%)	34 (63.0%)					
Joint Decision	122 (15.2%)	680 (84.8%)	503.671 (3)	< 0.001*			
Other	206 (95.4%)	10 (4.6%)					
Husband/partner Preference		. ,					
Same Number	100 (18.8%)	432 (81.2%)					
More Children	200 (52.9%)	178 (47.1%)	117.937 (3)	< 0.001*			
Fewer Children	18 (42.9%)	24 (57.1%)					
Do Not know	92 (38.7%)	146 (61.3%)					
Decision on Fam ily planning							
Mainly Respondent	105 (62.1%)	64 (37.9%)					
Mainly Husband/Partner	12 (48.0%)	13 (52.0%)					
Joint Decision	250 (26.3%)	701 (73.7%)	162.826 (3)	< 0.001*			
Other	43 (95.6%)	2 (4.4%)	102.020 (3)	\$ 0.001			
Decision on Money	15 (55.670)	2 (⁰ , ד. ד)					
Mainly Respondent	153 (59.3%)	105 (40.7%)					
Mainly Husband/Partner	16 (34.8%)	30 (65.2%)					
Joint Decision	241 (27.3%)	643 (72.7%)	91.837 (3)	< 0.001*			
Other	0(0.0%)	2 (100.0%)	91.037 (3)	< 0.001			
Decisions on Health Care	0 (0.078)	2 (100.070)					
Mainly Respondent	230 (51.0%)	221 (49.0%)					
Mainly Husband/Partner	39 (11.3%)	307 (88.7%)	132.351 (2)	< 0.001*			
Joint Decision	· · · · ·		152.551 (2)	< 0.001			
Decisions on Purchases	141 (35.9%)	252 (64.1%)					
	221 (40.0%)	220 (51 00/)					
Mainly Respondent	221 (49.0%)	230 (51.0%)					
Mainly Husband/Partner	12 (8.7%)	126 (91.3%)	09.240 (2)	< 0.001*			
Joint Decision	173 (29.0%)	424 (71.0%)	98.349 (3)	< 0.001*			
Other	4 (100.0%)	0(0.0%)					
Decisions on family visits	01 (50 201)	00 (40 70)					
Mainly Respondent	81 (50.3%)	80 (49.7%)					
Mainly Husband/Partner	13 (26.0%)	37 (74.0%)	21,020 (2)	. 0. 001*			
Joint Decision	315 (32.2%)	662 (67.8%)	21.839 (3)	< 0.001*			
Other	1 (50.0%)	1 (50.0%)					
Own land Alone only	9 (50.0%)	9 (50.0%)					
Jointly only	276 (67.0%)	136 (33.0%)					
Both alone and Jointly	15 (30.6%)	34 (69.4%)	308.827 (3)	< 0.001*			
Does not own	110 (15.5%)	601 (84.5%)					
Own House							
Alone only	9 (47.4%)	10 (52.6%)					
Jointly only	307 (50.8%)	297 (49.2%)	162.634 (3)	< 0.001*			
Both alone and Jointly	16 (38.1%)	26 (61.9%)					
Does not own	78 (14.9%)	447 (85.1%)					

*significant at 0.05 level of significant

Table 3. Summary statistics of women's Socio-cultural empowerment

Decision on Socio-cultural activities	Contraceptive Use	Total		
	No	Yes		
Others 5	14 (26.9%)	38 (73.1%)	52 (100%)	
wom an alone or joint decision	396 (34.8%)	742 (65.2%)	1138 (100%)	

Table 4. Summary statistics of women's Attitudes toward wife beating

	Count	percent	Valid Percent
None of the reasons are justified	860	72.3	72.3
One or more reasons are justified	330	27.7	27.7

Table 5. Summery statistics of Women's Attitudes toward refusing sex

	Count	Percent	Valid Percent
All of the reasons are justified	754	63.4	63.4
One or more reasons are not justified	436	36.6	36.6

Table 6. Multiple Logistic Regression Analysis on the usage of contraceptive method

$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Variables	β	S.E.	Wald	df	Sig.	AOR	95% C.I.for	$Exp(\beta)$
$\begin{array}{c c c c c c c c c c c c c c c c c c c $								Lower	Upper
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Age of woman	043	.014	9.225	1	.002	.958	.932	.985
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Religion of the woman								
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Orthodox			10.969	3	.012			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Protestant	.163	.271	.363	1	.547	1.177	.692	2.003
$\begin{array}{c} \text{own sons or dunghters (Yes)} & 1.868 & 243 & 59.167 & 1 & 000 & 6.474 & 4.022 & 10.42 \\ \text{yes} & 10.404 & 1.571 & 7.99 & 1 & .000 & 11.656 & 7.042 & 19.25 \\ \text{Don't know} & 1.404 & 1.571 & 7.99 & 1 & .371 & 4.071 & .187 & 88.44 \\ \text{Inter-Spousal education Difference} & & & & & & & & & & & & & & & & & & &$	Muslim	729	.263	7.700	1	.006	.482	.288	.807
$\begin{array}{c} \text{own sons or daughters (Yes)} & 1.868 & 243 & 59.167 & 1 & 000 & 6.474 & 4.022 & 10.42 \\ \text{Outraceptive use in the future (No)} & 1.868 & 2.435 & 2.57 & 91.219 & 1 & 0.00 & 11.655 & 7.042 & 19.25 \\ \text{Don't know} & 1.404 & 1.571 & .799 & 1 & .371 & 4.071 & .187 & 88.44 \\ \text{Inter-Spousal education Difference} & & & & & & & & & & & & & & & & & & &$	Other	19.976	19091.29	.000	1	.999	4.exp8	.000	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	own sons or daughters (Yes)		.243		1	.000			10.420
Yes 2.456 257 91.219 1 .000 11.656 7.042 19.25 Don't know 1.404 1.571 .799 1 .371 4.071 1.187 88.48 Inter-Spousal education Difference 8.129 2 .017 .371 4.071 .187 88.48 Woman has more -1.077 .389 7.681 1 .006 .341 .159 .77 Husband 's/partnet's occupation .485 .253 3.683 1 .055 .615 .375 1.00 Husband's/partnet's occupation .485 .253 3.663 .003 .000 4.289 1.905 9.65 Order .624 .408 2.342 1 .126 1.867 .839 4.15 Private employed .624 .408 .2342 1 .100 .3123 .100 .944 Owner of a company .342 .122 .100 .312 .300 .944 Owner of a company .342 .122 .101 .131 .105 .130 .									
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		2.456	.257				11.656	7.042	19.295
	Don't know	1.404						.187	88.487
$\begin{array}{c c c c c c c c c c c c c c c c c c c $					-				
Woman has more -1.077 3.89 7.681 1 0.06 3.41 1.59 7.7 Husband'spartner's occuption - - 3.683 1 0.055 6.15 3.75 1.01 Farmer - 19.538 6 0.03 - - - - - - - - - - 0.03 - - - 0.03 - - - 0.03 - - 0.03 - - 0.01 0.128 6.08 2.90 - 1 .66 0.290 - 0.01 3.123 1.309 7.44 0.001 0.123 0.309 7.44 0.001 0.123 1.309 7.44 0.001 0.123 0.309 7.44 0.001 0.123 0.309 7.44 0.001 0.123 0.309 7.64 - 0.012 0.013 0.02 Farmer - 7.07 2.141 1.09 1 7.41 4.33				8 1 2 9	2	017			
Husband has more 485 .253 3.683 1 .055 .615 .375 1.01 Husband's/patter's occupation Farmer 19.538 6 .003 .003 Merchant .284 .398 .507 1 .476 1.328 .608 .290 Orist employed .624 .408 2.342 1 1.26 1.867 .839 .415 Owner of a company 342 1.271 .000 4.289 1.905 9.65 Other 1.466 .924 2.520 1 .112 4.333 .709 26.47 Woman's Occupation		-1.077	389				341	159	.730
Husband's/partner's occupationFarmer19.5386.003Merchant.284.398.5071.4761.328.608.290Gov'tem ployed.624.4082.3421.1261.867.839.415Private employed1.456.41412.3721.0004.2891.905.9.65Daily ordker1.139.4446.5911.010.123.1.309.7.44Owner of a company3421.271.0731.788.710.059.8.57Other1.466.9242.5201.112.4.333.70926.47Woman's OccupationHouse wifeGov'tem ployed<									1.010
Farmer19.5386.003Merchant.284.398.5071.4761.328.608.2.90Gov'tem ployed.624.4082.3421.1261.867.839.415Private employed1.456.41412.3721.0004.2891.905.9.65Daily worker1.139.4446.5911.0103.123.1309.7.44Owner of a company3421.271.0731.7.88.710.059.8.57Other1.466.9242.5201.112.4.333.709.26.47Woman's Occupation22.8907.002House wife22.8907.002Farmer7072.141.1091.741.493.007.32.78Merchant.826.3316.2251.0132.284.1194.4.36Gov'tem ployed529.3462.3371.126.589.299.116Drivate employed.632.342.3151.0651Owner of a company.130.511.0651Uby erker.286.613.2171.6411.330 <td< td=""><td></td><td>.105</td><td>.255</td><td>5.005</td><td>1</td><td>.055</td><td>.015</td><td>.575</td><td>1.010</td></td<>		.105	.255	5.005	1	.055	.015	.575	1.010
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1 1			19 538	6	003			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		284	208				1 2 2 8	608	2 000
$\begin{array}{c c c c c c c c c c c c c c c c c c c $									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									
$\begin{array}{c c c c c c c c c c c c c c c c c c c $									
$\begin{array}{c c c c c c c c c c c c c c c c c c c $									
Woman's Occupation House wife22.8907.002Farmer7072.141.1091.741.493.00732.78Merchant.826.3316.2251.0132.2841.1944.36Gov't em ployed529.3462.3371.126.589.2991.16Private em ployed.632.342.34151.0651.880.962.367Daily worker.286.613.2171.6411.330.4004.42Owner of a company.130.511.0651.7991.139.418.3.10Other3.4041.7503.7851.05230.081.975927.87dec ision on the use of family phnningWoman13.5923.004Woman514.608.7141.398.598.1821.97Joint747.3175.5421.019.474.254.88Other3294.98311.2301.001.037.005.225Woman income relative to husbandMoreLessDoesn't earn<									
House wife 22.890 7 $.002$ Farmer 707 2.141 $.109$ 1 $.741$ $.493$ $.007$ 32.78 Merchant $.826$ $.331$ 6.225 1 $.013$ 2.284 1.194 4.36 Gov'tem ployed 529 $.346$ 2.337 1 $.126$ $.589$ $.299$ 1.16 Private employed $.632$ $.342$ 3.415 1 $.065$ 1.880 $.962$ 3.67 Daily worker $.286$ $.613$ 2.17 1 $.641$ 1.330 $.400$ 4.42 Owner of a company $.130$ $.511$ $.065$ 1.799 1.139 $.418$ 3.10 Other 3.404 1.750 3.785 1 $.052$ 3.081 $.975$ 927.87 decision on the use of family phnning 514 $.608$ $.714$ 1 $.398$ $.598$ $.182$ 1.97 Joint 747 $.317$ 5.542 1 $.019$ $.474$ $.254$ $.88$ Other -3.294 $.983$ 11.230 1 $.001$ $.037$ $.005$ $.25$ Woman income relative to husband $.515$ $.575$ 1.324 1 $.159$ $.897$ 2.82 The same 310 $.370$ $.702$ 1 $.402$ $.734$ $.355$ 1.51 Does n' earn 2.429 $.881$ 7.592 1 $.006$ 11.344 2.016 63.83 Don't know $-$		1.466	.924	2.520	1	.112	4.333	.709	26.477
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				22 800	7	002			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		707	0.1.41				102	007	22 700
$\begin{array}{cccccccccccccccccccccccccccccccccccc$.,			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$									
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Gov't em ployed								1.161
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									3.674
Other 3.404 1.750 3.785 1 $.052$ 30.081 $.975$ 927.87 dec ision on the use of family planning 13.592 3 $.004$ 113.592 3 $.004$ Husband 514 $.608$ $.714$ 1 $.398$ $.598$ $.182$ 1.97 Joint 747 $.317$ 5.542 1 $.019$ $.474$ $.254$ $.88$ Other -3.294 $.983$ 11.230 1 $.001$ $.037$ $.005$ $.25$ Woman income relative to husband $.370$ $.702$ 1 $.402$ $.734$ $.355$ 1.51 Doesn't earn 2.429 $.881$ 7.592 1 $.006$ 11.344 2.016 63.83 Don't know 661 $.575$ 1.324 1 $.250$ $.516$ $.167$ 1.59 contraceptive makes a woman Infertile 497 $.247$ 4.046 $.004$ $.068$ $.375$ $.98$ (Disagree) $$									4.424
dec ision on the use of family planningWoman 13.592 3.004Husband 514 .608.7141.398.598.1821.97Joint 747 .3175.5421.019.474.254.88Other -3.294 .98311.2301.001.037.005.25Woman income relative to husband $More$ 18.185 4.001.001.037.005.25Woman income relative to husband 18.185 4.001.001.037.005.25Woman income relative to husband 18.185 4.001.001.037.005.25Woman income relative to husband 310 .370.7021.402.734.3551.51Doesn't earn 2.429 .8817.5921.00611.3442.01663.83Don't know 661 .5751.3241.250.516.1671.59contraceptive makes a woman Infertile 497 .2474.0461.044.608.375.98(Disagree) 497 .247.00712.7201.0001.4151.1691.71re ading media exposure.758.12834.9621.0002.1351.6602.74ownership of a sæts.365.1189.6011.0021.4411.1441.81									
Woman 13.592 3 $.004$ Husband 514 $.608$ $.714$ 1 $.398$ $.598$ $.182$ 1.97 Joint 747 $.317$ 5.542 1 $.019$ $.474$ $.254$ $.88$ Other -3.294 $.983$ 11.230 1 $.001$ $.037$ $.005$ $.25$ Woman income relative to husband $More$ 18.185 4 $.001$ $.001$ $.037$ $.005$ $.25$ Woman income relative to husband $More$ 18.185 4 $.001$ $.001$ $.037$ $.005$ $.25$ Woman income relative to husband $.466$ $.293$ 2.528 1 $.112$ 1.593 $.897$ 2.82 The same 310 $.370$ $.702$ 1 $.402$ $.734$ $.355$ 1.51 Doesn't earn 2.429 $.881$ 7.592 1 $.006$ 11.344 2.016 63.83 Don't know 661 $.575$ 1.324 1 $.250$ $.516$ $.167$ 1.55 (Disagree) $$		3.404	1.750	3.785	1	.052	30.081	.975	927.873
Husband 514 $.608$ $.714$ 1 $.398$ $.598$ $.182$ 1.97 Joint 747 $.317$ 5.542 1 $.019$ $.474$ $.254$ $.88$ Other -3.294 $.983$ 11.230 1 $.001$ $.037$ $.005$ $.25$ Woman income relative to husband $More$ 18.185 4 $.001$ $.037$ $.005$ $.25$ Woman income relative to husband 18.185 4 $.001$ $.037$ $.005$ $.25$ Woman income relative to husband 18.185 4 $.001$ $.037$ $.005$ $.25$ Woman income relative to husband $.466$ $.293$ 2.528 1 $.112$ 1.593 $.897$ 2.82 The same 310 $.370$ $.702$ 1 $.402$ $.734$ $.355$ 1.51 Doesn't earn 2.429 $.881$ 7.592 1 $.006$ 11.344 2.016 63.83 Don't know 661 $.575$ 1.324 1 $.250$ $.516$ $.167$ 1.59 contraceptive makes a woman Infertile 497 $.247$ 4.046 1 $.044$ $.608$ $.375$ $.98$ (Disagree) $.128$ 34.962 1 $.000$ 1.415 1.169 1.71 re ading media exposure $.758$ $.128$ 34.962 1 $.000$ 2.135 1.660 2.74 ownership of assets $.365$ $.118$ 9.601 1 $.002$									
Other -3.294 983 11.230 1 .001 .037 .005 .25 Woman income relative to husband 1 11.230 1 .001 .037 .005 .25 More 18.185 4 .001 .037 .005 .25 Less .466 .293 2.528 1 .112 1.593 .897 2.82 The same 310 .370 .702 1 .402 .734 .355 1.51 Doesn't earn 2.429 .881 7.592 1 .006 11.344 2.016 63.83 Don't know 661 .575 1.324 1 .250 .516 .167 1.59 contraceptive makes a woman Infertile 497 .247 4.046 1 .044 .608 .375 .98 (Disagree) 000 1.415 1.169 1.71 reading media exposure .758 .128 34.962 1 .000 2.135 1.660 2.74 o									1.970
Woman income relative to husband MoreMore 18.185 4.001Less.466.2932.5281.1121.593.8972.82The same310.370.7021.402.734.3551.51Doesn't earn2.429.8817.5921.00611.3442.01663.83Don't know661.5751.3241.250.516.1671.59contraceptive makes a woman Infertile497.2474.0461.044.608.375.98Attitudes toward refusing sex.347.09712.7201.0001.4151.1691.71re ading media exposure.758.12834.9621.0002.1351.6602.74ownership of a sets.365.1189.6011.0021.4411.1441.81				• • • • • =					.882
	Other	-3.294	.983	11.230	1	.001	.037	.005	.255
Less.466.293 2.528 1.112 1.593 .897 2.82 The same310.370.7021.402.734.3551.51Doesn't earn2.429.8817.5921.00611.3442.01663.83Don't know661.5751.3241.250.516.1671.59contraceptive makes a woman Infertile497.2474.0461.044.608.375.98(Disagree)Attitudes toward refusing sexreading media exposureownership of a sæts	Woman income relative to husband								
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	More			18.185	4	.001			
Doesn't earn 2.429 .881 7.592 1 .006 11.344 2.016 63.83 Don't know 661 .575 1.324 1 .250 .516 .167 1.59 contraceptive makes a woman Infertile 497 .247 4.046 1 .044 .608 .375 .98 (Disagree) 000 1.415 1.169 1.71 reading media exposure .758 .128 34.962 1 .000 2.135 1.660 2.74 ownership of assets .365 .118 9.601 1 .002 1.441 1.144 1.81	Less	.466	.293	2.528	1	.112	1.593	.897	2.829
Don't know 661 .575 1.324 1 .250 .516 .167 1.59 contraceptive makes a woman Infertile 497 .247 4.046 1 .044 .608 .375 .98 (Disagree) . <td>The same</td> <td>310</td> <td>.370</td> <td>.702</td> <td>1</td> <td>.402</td> <td>.734</td> <td>.355</td> <td>1.514</td>	The same	310	.370	.702	1	.402	.734	.355	1.514
contraceptive makes a woman Infertile 497 .247 4.046 1 .044 .608 .375 .98 (Disagree)	Doesn't earn	2.429	.881	7.592	1	.006	11.344	2.016	63.835
(Disagree) Attitudes toward refusing sex .347 .097 12.720 1 .000 1.415 1.169 1.71 re ading media exposure .758 .128 34.962 1 .000 2.135 1.660 2.74 ownership of a sets .365 .118 9.601 1 .002 1.441 1.144 1.81	Don't know	661	.575	1.324	1	.250	.516	.167	1.593
(Disagree) Attitudes toward refusing sex .347 .097 12.720 1 .000 1.415 1.169 1.71 reading media exposure .758 .128 34.962 1 .000 2.135 1.660 2.74 ownership of assets .365 .118 9.601 1 .002 1.441 1.144 1.81	contraceptive makes a woman Infertile	497	.247	4.046	1	.044	.608	.375	.987
Attitudes toward refusing sex.347.09712.7201.0001.4151.1691.71re ading media exposure.758.12834.9621.0002.1351.6602.74ownership of a sæts.365.1189.6011.0021.4411.1441.81									
reading media exposure.758.12834.9621.0002.1351.6602.74ownership of assets.365.1189.6011.0021.4411.1441.81		.347	.097	12.720	1	.000	1.415	1.169	1.713
ownership of a sets .365 .118 9.601 1 .002 1.441 1.144 1.81									2.745
1	• •								1.816
Constant247 .675 .134 1 .714 .781	1	247		.134	1		.781		1.510

We can also use the scree plot which is shown below with a thunderbolt indicating the point of inflexion on the point of curve. This curve begins to tail off after six factors which justify retaining six factors.

Binary logistic Regression analyses: The logistic model showed that the likelihood of using contraceptive method was significantly associated with current ages of married women.

The decrement to the log odds of contraceptive user for a one year increment of age of a woman is 0.043. The estimated odds ratio (OR = 0.958) shows that the older the women were less likely using contraceptive method.

RESULT AND DISCUSSION

This study was intended to study the effects of women's empowerment and gender related variables on modern contraceptive use among married women in Dire Dawa Administration. Accordingly, descriptive analysis, factor analysis and logistic regression analysis were used. The results which are obtained are discussed as follows. The descriptive analysis of the study revealed that 65.5 percent of the sample currently married women were using contraceptives while 34.5 percent were not using contraceptives. The study identified socio-demographic, socio-cultural, socio-economic and women's empowerment factors. The findings of this study revealed that current age of women was negatively associated with contraceptive use and showed that the older the women were less likely using contraceptive method but this was contrast with the previous study in USA in which the older the woman could make decisions on the use of family planning and in Ethiopia which was not associated with contraceptive use (Kishor, 2008; Mekonnen, 2013).

The findings of this study revealed that Muslim married women were 51.8% less likely to use contraceptive methods than orthodox Christian married women. This result indicated that orthodox Christian married women were more users of contraceptive methods in Dire Dawa administration. This finding is in line with studies conducted in Kenya and in Mozambique. However, the finding surprisingly revealed that there is no significant difference in the use of contraceptives among Orthodox and protestant Christian married women (Saira Abdulla, 2014; Agadjanian, 2011). In this study inter-spousal education difference were found to be significant predictors for status of women in using different contraceptive methods. The finding shows that married women who had more education level than her husband/partner were 65.9% less likely to use contraceptive methods and married women who had less education level than her husband/partner were 38.5% less likely to use contraceptive methods than married women who had the same levels of education with her husband/partner. This indicates that married women who had the same levels of education were the more users of contraceptive methods. This finding was in contrast with the study conducted in Ethiopia and in Nigeria which was the more educated wife than her husband were the more contraceptive user (Mekonnen, 2013; Adebowale, 2013). The study also revealed that husband's occupation had a positive significant association with contraceptive use.

The result found that women whose husband's are private employed and daily workers were at least three times more likely to use contraceptive than married women whose husband's are farmers. These results were consistent with the previous study conducted in India. Similarly the study found that merchant married women were more than two times more likely use contraceptive methods than house wife married women. These results were consistent with the previous study conducted in Bangladesh (Sanku, 2013; Mohammad, 2013). The study also revealed that joint decision and decision by others on the use of contraceptive method had a negative significant association with contraceptive use. The result found that married women whose joint approvals and whose decision on the use of contraceptive method was by others were more than 53% less likely to use contraceptives compared to women only decision on use of contraceptive (OR= 0.474, CI: 0.254-0.882 and OR=0.037, CI: 0.005-0.255). These results were in construct with a study conducted in Turkey (Andrzej Kulczycki, 2000). We found the dimensions of women's empowerment and many of the socio-economic and genderrelated control measures were significantly associated with use of contraceptives. Dimensions of women's empowerment representing women attitudes towards refusing sex, women's reading media exposure and ownership of assets had a positive association with contraceptive use. These findings were consistent with the previous studies in Ethiopia, Namibia, and Uganda (Mekonnen et al., 2013; Mai Do and Nami Kurimoto, 2012)

Conclusion

Out of the total 1190, about 34.5% were currently used contraceptive method and 65.5% were women who currently do not use contraceptive method. Out of the total users of women and 5.1 percent were IUD users. Most of the married women obtained the current contraceptive method from government health center (54.1%) followed by 31.7% from government hospital. Even if there is an improvement on access and service of health facilities, there is a problem on improvement of contraceptive usage in Dire Dawa Administrative. This study had also examined economic empowerment, socio-cultural empowerment, familial and interpersonal dimensions, attitudes about gender roles, attitudes toward wife beating, attitudes toward refusing sex and socio-demographic characteristics determinants of women empowerments in Dire Dawa Administrative City. Result shows women's empowerment is an important determinant of contraceptive use. Results based on Multiple Logistic Regression Analysis model revealed that economic empowerment, socio-cultural empowerment, familial and interpersonal dimensions, attitudes about gender roles, attitudes toward wife beating, attitudes toward refusing sex and socio-demographic factors had statistically significant effect on women empowerments. Specifically, the study demonstrated that current age of a woman, religion of a woman, have sons alone, thinking of women using contraceptive method in the di fference, future, inter-spous al education husb and's occupation, occupation of a woman, decision on the use of family planning, woman's income contribution relative to her husband, perception on contraceptive makes a problem, woman attitude towards refusing sex, a woman reading

different media about family planning and ownership of assets had statistically significant impacts on the women empowerments. Married women whose joint approval of using contraceptive was found as an important factor for usage of contraceptive method and attitudes toward refusing sex, reading media exposure as a source of knowledge and ownership of assets were positively associated with contraceptive use.

Based on the study of findings and keeping the limitations in mind, the study forwards the following recommendations.

- We recommend that women's empowerment be incorporated into family planning programming in Dire Dawa Administrative and in Ethiopia in general.
- Policy makers should consider the adoption of family planning services for couples who are living in rural areas of Dire Dawa Administration.
- Though the Ethiopian government has so far improved access to modern contraceptives, utilization is lagging, mainly due to lack of women empowerment, due to religious influence and limited contraceptive knowledge. So, Awareness has to be given for the society (women's') on usage of contraceptive method and their empowerments.
- This study has implications for government and concerned bodies that seek to increase empowerments of women's and usage of contraceptive method. It is crucial to continue improving educational status of women's and their husband, as this is an important avenue for rising the women's to use contraceptive method and for empowering women.
- We recommend further studies should be conducted in Ethiopia and identify other factors that are not identified in this study to gain further understanding on this subject. Based on that study government should take an action on women empowerments and usage of contraceptive method.

Acknowledge ment

First of all, we would like to thank Dire Dawa University Research and Technology Interchange directorate Affairs for funding this research work. We also need to express our appreciation to Dire Dawa University, College of Natural and Computation Sciences and Department of Statistics for allowing us to conduct this study. We are also very grateful for all people who were participated as respondents, as enumerators and as supervisor in data collection process.

Funding: No funding Available

Conflict of Interest: I declare that we have no conflicts of interest.

Key Points

- Though the Ethiopian government has so far improved access to modern contraceptives, utilization is lagging, mainly due to lack of women empowerment, due to religious influence and limited contraceptive knowledge. So, Awareness has to be given for the society (women's') on usage of contraceptive method and their empowerments.
- Policy makers should consider the adoption of family planning services for couples who are living in rural areas of Dir e Dawa Administration.

- This study has implications for government and Policy makers that seek to increase empowerments of women's and usage of contraceptive method. It is crucial to continue improving educational status of women's and their husband, as this is an important avenue for rising the women's to use contraceptive method and for empowering women.
- Findings from this study can be applied to achieve women's empowerment an improving in using modem contraceptive methods. Low empowerment level of a woman can lead Fears of domestic and intimate partner violence within abusive relationships and a barrier to contraceptive use. Once a woman is empowered, their household decision-making and communicating with husbands will be improved, improving the uses of modem family planning methods.

REFERENCES

- Adebowale, S.A., Adeoye, L.A., & Palamuleni, M.E. 2013. "Contraceptive Use among Nigerian Women with No Fertility Intention: Interaction Amid Potential Causative Factors". *African Population Studies* 27, No 2, http://aps.journals.ac.za 127
- Agadjanian, V. 2011. Religion and Contraception in Mozambique: A Multidimensional Analysis. *Center for Population Dynamics*. Arizona State University.
- Agresti, A. 2002. *Categorical Data Analysis*, (Second edition). New York: Wiley.
- Andrzej Kulczycki 2008. "Husband-Wife Agreement, Power Relations and Contraceptive Use in Turkey", *International perspectives on Sexual and Reproductive health*, Vol. 34, pp. 127-137, September, 2008.
- Bogalech A. and Mengistu A. 2007. "Women's Empowerment in Ethiopia, New Solutions to Ancient Problems" Pathfinder International/Ethiopia, Addis Ababa.
- Central Statistical Agency 2011. "Ethiopia Demographic and Health Survey 2011 Preliminary report"
- Duflo E. 2012. "Women empowerment and economic development". *J Econ Lit.*, 50(4): 1051–79
- Ethiopian Statistical Agency (ESA) (Ethiopia). 2003. Statistical Abstract of Ethiopia. Addis Ababa, Ethiopia: Central Statistical Agency.
- Field, A. 2005. *Discovering Statistics using SPSS for Windows*. London – Thousand Oaks – New Delhi: Sage publications.
- Gharaibeh MK., Oweis A., Shakhatreh FMN., Froelicher ES. 2011. "Factors associated with contraceptive use among Jordanian Muslim women: implications for health and social policy". *J Int Womens Stud.*, 12(3): 168-84
- Kabeer, Naila. 1999. "Resources, Agency, and Achievements: Reflections on the Measurement of Women's Empowerment." *Development and Change* 30:435-4641994
- Kishor, S., & Lekha, S. 2008. 'Understanding Women's Empowerment: A Comparative Analysis of Demographic and Health Surveys (DHS) Data DHS Comparative Reports" Calverton, Maryland, USA: Macro International Inc.
- Mai Do and Nami Kurimoto, 2012."Women's Empowerment and Choice of Contraceptive Methods in Selected African Countries". Department of Global Health Systems and Development, Tulane University School of Public Health and Tropical Medicine, New Orleans, Louisiana, USA.
- Mekonnen T. et al., 2013. Women's Empowerment as a Determinant of Contraceptive Use in Ethiopia Further

Analysis of the 2011 Ethiopia Demographic and Health Survey, ICF International Calverton, Maryland USA

- Mohammad M. et al. 2013. "Determinants of Male Involvement in Family Planning and Reproductive Health in Bangladesh", American Journal of Human Ecology, Vol. 2, No. 2, 2013, 83-93, DOI: 10.11634/216796221302332.
- Ogato. G.S. 2013. "The quest for gender equality and women's empowerment in least developed countries: policy and strategy implications for achieving millennium development goals in Ethiopia." *International journal of Sociology and Anthropology*, Vol. 5(9), pp. 358-372, December.
- Saira Abdulla 2014. Religious affiliation and contraceptive us e in Kenya.
- Sanku D. and Enayetur R. 2013. "Socio-Economic Determinants of Family Planning Acceptance among Slum Dwellers of Shillong City, Meghalaya—A Multivariate Analysis Using Logistic Regression Model", *Demography India, Vol. 42, No. 1&2 (2013)*, pp. 65-74
- Shaw D. 2006. "Women's right to health and the millennium development goals: promoting partnerships to improve access". *Int J Gynaecol Obstet*
- United Nations Millennium Declaration; 2000 Sep 6-8; New York. New York: 2000 (cited 2013 Aug 28). Available from: http://www.un.org/en/ga/search/view_doc_asp? symbol = A/RES/55/2
- World Bank. 2015. "World Fertility patterns". *Washing ton, DC*: World Bank.
