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Factors influencing increased usage of Depot Medroxyprogesterone Acetate (Depo-Provera) among women in reproductive age (WIRA) in Nkawie, Ghana

Abstract

The objective of the study was to determine the factors contributing to the increased usage of DMPA among women in reproductive age (WIRA) in Nkawie in the Atwima Nwabiagya District of Ashanti Region, Ghana. A cross sectional study using both quantitative and qualitative approaches were used to determine the factors that may be influencing the increased usage of Depo-Provera among WIRA at the government hospital of the town. About 312 women sampled (52%) were Depo users with 17% of the Depo users being new registrant. About 97% knew of at least one type of contraceptive method available in the country but 36% had not used any of them before. Generally, 71% of all respondents were married and 73% of current Depo users were also married. Forty six percent of respondents had information about Depo from a Health provider with 47% of Depo user's sampled stating 'convenience' as their reason for choosing Depo while 28% because of its effectiveness. In conclusion it may be said that, as far as the findings of this study is concerned, women of varied socio-demographic background use Depo-Provera in the Nkawie District. It was however recorded of a possible association between pill users' age, number of children and their possible likelihood of switching over from the pill to Depo.

Introduction

Family planning entails the ability of individuals and couples to anticipate their desired number of children, spacing and timing of the birth of their children. It is achieved through the use of contraceptive methods and treatment of involuntary fertility (WHO, 2003). Skewed contraceptive method mix is of consent to family planning providers. Skewed method mix implies having a single contraceptive method consisting 50% or more of contraceptive uptake in a country. The pattern and the attributable factors vary widely across the globe (Sullivan, 2006). It may be due to cultural preferences or social norms, restrictive population policies, lack of access to a broad range of methods, or provider bias (Sullivan, Bertrand, Shelton, 2006). A change in contraceptive method mix may imply changes in acceptability of contraceptive methods. Understanding the trend is very important to addressing the demand of clients (Seiber, Bertrand, Sullivan, 2007).

In Ghana modern family planning method mix include the pill, injectables, implants, intra-uterine devices (IUD), male and female sterilizations, fertility awareness methods, lactation Amenorrhea Method (LAM), barrier methods and spermicides. Depo medroxyprogesterone acetate (DMPA) popularly known as Depo-Provera is a progestin only injectable contraceptive that has been used worldwide for the last 30 to 35 years. If used properly it is one of the most effective methods of birth control (Glanz, 2002). Use of injectable contraceptives has risen dramatically. Worldwide, between 1995 and 2005, the number of married women using Injectable nearly tripled from about 12 million to over 32 million. By 2015 its use is projected to reach nearly 40 million.

Nationally (Ghana) the use of injectable contraceptives especially DMPA has increased from less than 1% in 1988 to more than 5% in 2003 among women and it is still increasing (GDHS, 2003). Figures from the Family planning unit of the hospital for the 2006 to 2008 showed that Depo-Provera users take up more than 50% of all contraceptives available for each of the three years such as the pill, male

and female condoms, the implants and the Norigynon injectable. Thus, more women chose Depo-Provera over the other contraceptives. For the hospital management it would be useful to know what factors influence women's choice of DMPA in the Nkawie Hospital'. Therefore the importance of this study to the Hospital, District Health Administration and to the Ministry of Health as a whole cannot be underestimated as it would be a reliable source of information regarding why more and more women are perceived to be choosing Depo-Provera over other contraceptives and to find out what factors inform women's choice of injectable contraceptives over the others and also to help in the formulation and implementation of policy regarding the cost and procurement of Depo-Provera to the hospital. This study sought to assess contraceptive choices and to determine factors associated with the choice of DMPA among family planning users in Nkawie District Hospital in Ghana.

Methodology

This was a cross-sectional survey among family planning clients in Nkawie District Hospital. The study took place between July and September, 2009 at the family planning unit of the Nkawie Government Hospital. The Nkawie District has a population of about 18000 with 64% being urban. It has one hospital, four (4) health centres, four (4) clinics, six (6) maternity homes and 40 trained traditional birth attendants. The Hospital is located at Nkawie-Toase, the home of this study. The District has a doctor/population ratio of 1:39,407 and a nurse/ population ratio of about 1:3329.

With a national contraceptive prevalence of 25% the estimated sample size for this descriptive study was 316. A convenience sampling method was adopted. As clients registered for their regular family services in the morning at the family planning unit, they were approached while awaiting their turn. The purpose of the study was explained and voluntary consent to participate in the study was sought from each client. They were briefed about the research and the possible benefits to the community and were given the free will to decide whether to be interviewed or not. Clients willing to participate were interviewed in privacy. Confidentiality of the information provided was assured. A structured questionnaire with closed and open ended items was used for data collection. Face-to-face interviews were conducted to administer the questionnaire. Respondents were allowed to express themselves as freely as possible. Variables gathered included demographic and reproductive profiles of respondents, sources of contraceptive information, current and past contraceptive use, method switch and reasons for choosing DMPA. Others were knowledge of contraceptive methods, and spousal awareness of contraceptive use. Ethical clearance was also obtained from the Committee on Human Research Publication and Ethics (CHRPE) of the Komfo Anokye Teaching Hospital (KATH).

The data gathered were entered into a database Microsoft Office Access programme. The data was coded, edited and cleaned. Analysis was done using Stata version 9. Descriptive summaries were made. For the purpose of inferential statistical analyses, the data was dichotomised into DMPA users and non-users since over 50% of all contraceptive users chose DMPA. Chi-square and multivariable logistic regression analyses were done at 95% confidence interval and 5% level of significance. Thus, $p \leq 0.05$ was considered significant.

Results

Table 1 presents the socio-demographic profile of the respondents. The mean age was 30.9 (SD: 7.7) years, the youngest was 17 years and the oldest 49 years. About 19% had no formal education, 18% completed only primary education while 19% completed tertiary level of education.

Table 1: socio-demographic profile of respondents

VARIABLES	FREQ. (n=312)	PERCENTAGE (%)
Age grouping		
- 15-19	13	4.17
- 20-24	61	19.55
- 25-29	87	27.88
- 30-34	51	16.35
- 35+	100	32.05
Highest level of education attained		
- None	59	18.9
- Primary	55	17.63
- JHS	87	27.88
- SS/O/A Level	53	16.99
- Tertiary	58	18.59
Occupation		
- Trading	93	29.81
- Farming	89	28.53
- Apprentice	35	11.22
- Students	25	8.01
- Public /civil service	49	15.71
- Self-employed	12	3.85
- Unemployed	9	2.88
Ethnic background		
- Ashanti	176	56.41
- Fante	50	16.03
- Ga	21	6.73
- Ewe	25	8.01
- Northern	40	12.82
Religion		
- Islam	36	11.54
- Christianity	218	69.87
- Traditional	18	5.77
- Others	40	12.82
Marital status		
- Single	64	20.51
- Married	226	72.43
- Divorced/widowed	22	7.05
No. of children		
- None	37	11.86
- 1	48	15.38
- 2	69	22.12
- 3	54	17.31
- ≥4	104	33.33
Age at first birth	n=277	
- 15-19	116	41.88
- 20-24	132	47.65
- 25-29	29	10.47

Table 2 deals with client's knowledge about the different contraceptives available in the hospital and the community. About 21% of the respondents knew of or have heard about one contraceptive, 30% knew two different contraceptive methods, 21% knowing or are aware of at least 3 different

contraceptives, 11% knowing 4 methods with 16% knowing or being aware of more than 4 different contraceptives.

Table 2: Knowledge about Contraceptive Methods

VARIABLE	FREQ. (n=312)	PERCENTAGE (%)
No. of methods known		
- 1	64	20.51
- 2	93	29.80
- 3	64	20.51
- 4	32	10.26
- >4	49	15.71
- Missing	10	3.21
Method used previously		
- Pill	82	26.28
- Norigynon	18	5.77
- Implant	16	5.13
- female condom	27	8.65
- DMPA	25	8.01
- None	112	35.90
- Missing	32	10.3
Reason for stopping previous method		
- Unavailability	20	6.41
- High cost	2	0.64
- Side effect	76	24.36
- Service factors	20	6.41
- Difficulty to remember	42	13.46
- Interrupting sex	10	3.21
- None	129	41.35
- Missing	13	4.17
Current method being used		
- Pill	54	17.31
- DMPA	163	52.24
- Implant	24	7.69
- Foaming tablet	2	0.64
- Female sterilisation	7	2.24
- Female condom	2	0.64
- Norigynon	60	19.23

More than one half (52%) of all the women interviewed confirmed Depo as the contraceptive method they are using currently, 19% currently on Norigynon (another injectable), 17% on the pill, 8% on implant, 2% using female sterilization and 0.6% each on foaming tablet and female condoms currently as shown in the table 3 below. Nineteen respondents chose Depo because they were dissatisfied with the previous methods. More than half (63%) were previous pill users, 11% each formerly used female condoms, implant and Norigynon, while 6% previously used foaming tablets.

Table 3: DMPA Usage

First source of information about DMPA	Frequency n=163	Percentage (%)
- Friends	35	21.47
- Relatives	22	13.49
- Health provider	77	47.23
- Spouse	12	7.36
- Media	17	10.42
Decision to DMPA		
- Provider's	2	1.22
- My decision	102	62.57
- Mine influenced by the provider	55	33.74
- Both partners	4	2.45
Type of DMPA user		
- Old	136	83.43
- New	27	16.56
Reason for choosing DMPA		
- Curiosity	6	3.68
- Simple and Convenient	78	47.85
- Effectiveness	47	28.83
- Dissatisfaction with other methods	19	11.66
- Privacy/ discrete	8	4.90
- Missing	5	3.06
Method before switch to DMPA (n=19)		
- Pill	12	63.15
- Female condom	2	10.52
- Implant	2	10.52
- Foaming tablet	1	5.26
- Norigynon	2	10.52
Method Switch		
- Yes	19	11.7
- No	144	88.3
Reason for method switch		
- Difficulty to remember at the right time	8	42.10
- Side effects of other methods	7	56.83
- Reduction in sexual drive	2	10.52
- Unavailability	2	10.52
Partner's awareness DMPA usage		
- Yes	145	88.95
- No	18	11.04

Nearly half (48%) of the women said they adopted DPMA (Depo) with 'convenience' as their reason of choice while 29% chose it for its 'effectiveness' and 12% chose it due to dissatisfaction with other methods. Other commonly reported reasons cited were; privacy (5%), curiosity (4%) while close to 3% did not answer as to why they choose Depo. Of the 163 respondents who were then using Depo as a contraceptive of choice, 83% were regular users while 17% were new users who had the contraceptive for about 3 months.

Relationship between Socio-demographic parameters and Contraceptive choices of Respondents

The inferential statistical analytic tools (chi-square and logistic regression) were employed to determine whether there was any possible association in relation to the various socio-demographic parameters considered in this study however remote, between users of the most 'popular' injectable

contraceptive (Depo) and that of a non injectable- the Pill (according to the preliminary results of this study). The results are as shown in the Tables 4 and 5

Table 4: Relationship between Socio-demographic parameters and Contraceptive choices of Respondents

	CURRENT METHOD USED			
VARIABLES	THE (%)	PILL N	DEPO N (%)	P- Value
Age group				
15-19	2 (3.57)		10 (4.48)	
20-24	12 (21.43)		47 (21.08)	
25-29	14 (25.00)		66 (29.60)	
30-34	9 (16.07)		35 (15.70)	
35+	19 (33.93)		65 (29.15)	
total	56 (100)		223 (100)	0.951
educational status				
none	9 (16.07)		45 (20.27)	
primary	11 (19.64)		35 (15.77)	
JHS	14 (25.00)		67 (30.18)	
SHS/O/A Level	8 (14.29)		39 (17.57)	
tertiary	14 (25.00)		36 (16.22)	
total	56 (100)		222 (100)	0.489
occupation				
trading	16 (28.57)		67 (30.04)	
farming	17 (30.36)		72 (32.29)	
apprenticeship	7 (12.50)		37 (16.59)	
student	3 (5.36)		20 (8.97)	
public/civil service	13 (23.21)		27 (12.11)	
total	56 (100)		223 (100)	0.327
marital status				
single	13 (23.21)		47 (21.27)	
married	36 (64.29)		162 (73.30)	
divorced	5 (8.93)		7 (3.17)	
widowed	2 (3.57)		5 (2.26)	
total	56 (100)		221 (100)	0.187
no. of children				
0	9 (16.07)		28 (12.56)	

1	8 (14.29)	37 (16.59)	
2	17 (30.36)	46 (20.63)	
3	3 (5.36)	44 (19.73)	
≥4	19 (33.93)	68 (30.49)	
total	56 (100)	223 (100)	0.088

Table 5: Relationship between pill users and the possibility of switching over to Depo Provera in relation to number of children

VARIABLE	ODDS RATIO	P-value	CI (95%)
Age	0.917	0.020	0.85-0.99
no. of children			
0	1.0		
1	1.7	0.328	0.60-5.10
2	1.3	0.596	0.50-3.60
3	10.6	0.003	2.19-51.80
≥4	4.9	0.045	1.04-22.68

Discussion

Demographic Characteristics of Respondent

The mean age of all respondents interviewed was 30.9 years (SD 7.74). Additionally, 71% of the women were married. This indicated that the women captured under this study were mostly beyond the Ghanaian Constitutionally approved marital age of 18 years.

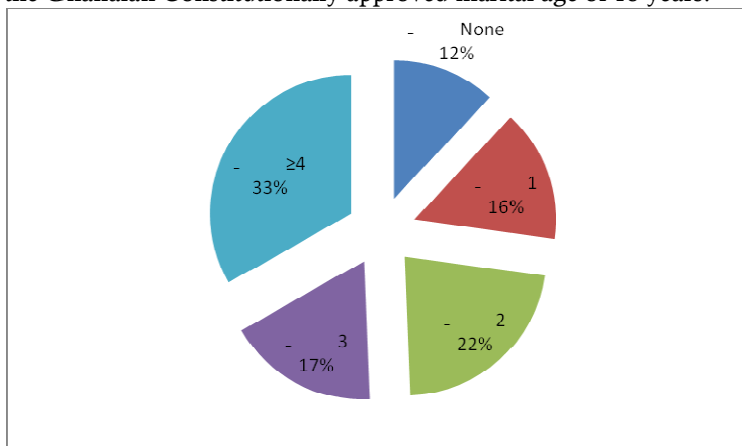


Fig 1: Percentage distribution by number of children per mother

This large number of respondents who are/were married certainly has implications on household size and the general socio-economic status of the family since about 55% of the respondent had between 1 to 3 children (Figure 1).

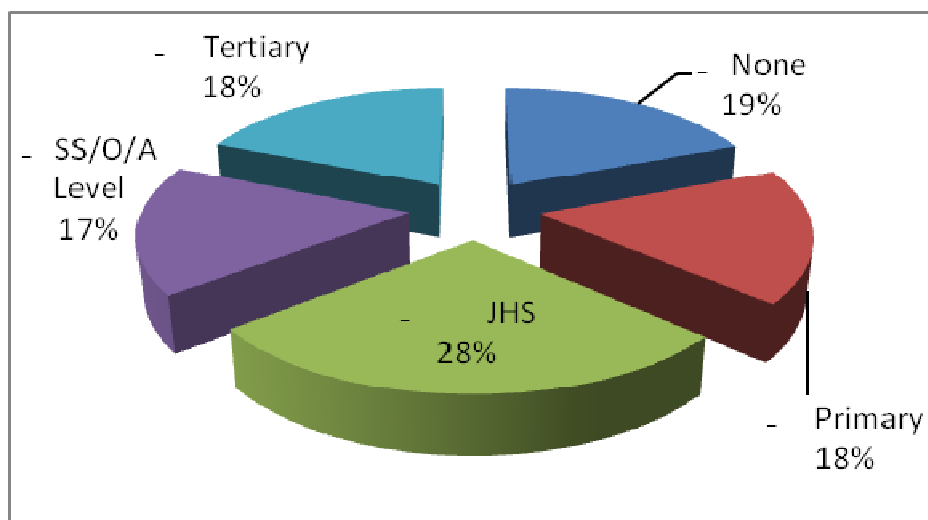


Fig 2: Percentage distribution of Educational Status

Only 58 (18%) of the respondents received education up to the tertiary level (Fig. 2). Also 58 respondents representing 19% had no education which indicates a somewhat semi-literate community.

The 'highest level of education attained' by these women could also be seen manifested in their occupational status with only 49 (16%) of them involved in formal (public or civil service) employment. (Fig. 3)

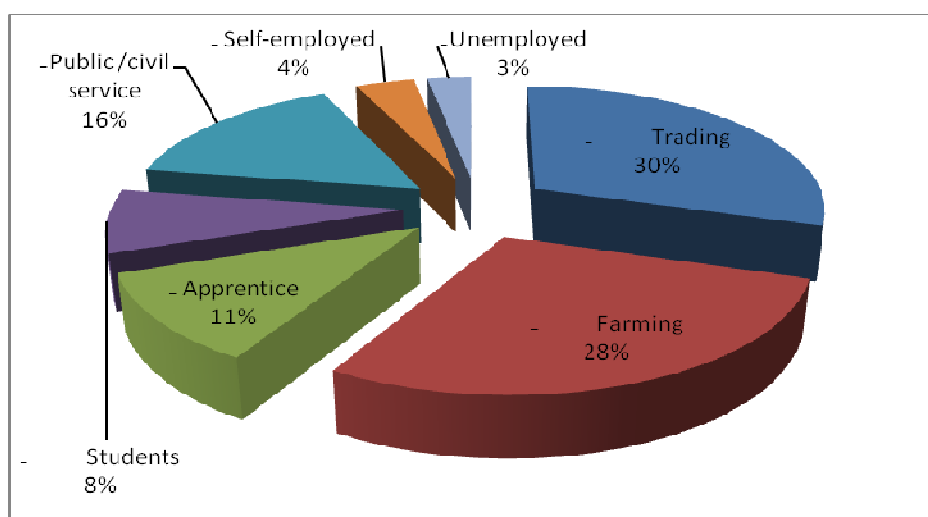


Fig 3: Percentage distribution of Occupation

However as indicated in table 4, the study did not record any significant association between current methods of contraceptive being used by the women and their demographic profile such as age grouping ($p \leq 0.951$), educational status ($p \leq 0.489$), occupation ($p \leq 0.327$), marital status ($p \leq 0.187$) and parity/number of children ($p \leq 0.088$). This suggests that for the women who took part in this study, socio-demographic profile may not necessary influence their choices of contraceptives. This may be attributed to fact that, most of the common contraceptives served under the Ghana health services are either heavily subsidized or absolutely free of charge especially in Government hospitals like the one in which this study was conducted. Thus since cost or affordability may not be the issue, married women were free to choose from a wide range of method regardless of their social and economic background.

Knowledge of Contraceptives Available

As far as knowledge of the contraceptives available in the hospital and the community was concerned, it could be inferred that, the respondents had a fairly good knowledge since about half (50.%) of all respondents knew between 1 and 2 different contraceptives that they may have seen, heard of, talked about with somebody or used before. Consistent with the Faryorsey, (1999) study about family planning among women, the pill was found to be the well known contraceptive method followed by the injectable. The pill may be this popular due to the fact that, it is one of the modern contraceptives that has been in use for a while coupled with the fact that it is easy to come across in nearly every Pharmacy or chemical seller's outlet in the community (WHO, 1999).

However in spite of the respondent's apparent fair knowledge of the different types of contraceptives available in both hospitals and the community in general (Fig.4) about contraceptives method previously used by respondent indicates that more than a third (36%) have never used any contraceptive before. These findings agree with those reported in Ghana (GDHS, 2003) and other countries (Faryorsey, 1999) about the apparent gap between knowledge of family planning and its practice.

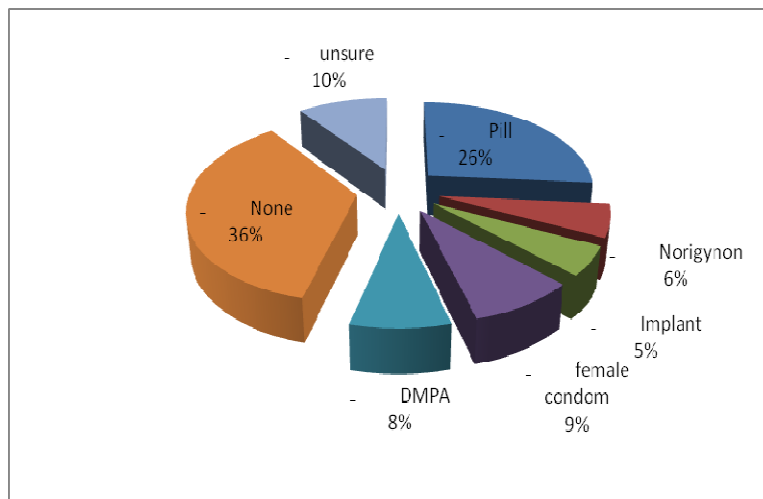


Fig 4: Percentage distribution of previous Contraceptive usage

The most frequently reported first source of information about DMPA (Fig. 5) was health providers (47%). These findings contradicts those of Forest (1994) study in a Texas Hospital (USA) as far as the first two most frequently reported first sources of information about Depo are concerned; as they found the most commonly reported first source to be friends followed by health providers. The difference in the findings of these two studies could be attributed to the fact that, while this study had a nearly uniform respondents by way of social status (being mainly farmers and traders, most with very little or no education), the Forest (1994) study dealt with women of varied socio-economic

statuses and also among varied race groups (White and Black) in Texas USA. The U.S.A. respondents may be discerning enough to have family planning information from various sources such as media (both electronic and print media) and also on the World Wide Web due to that country's social, economic and technological advancement.

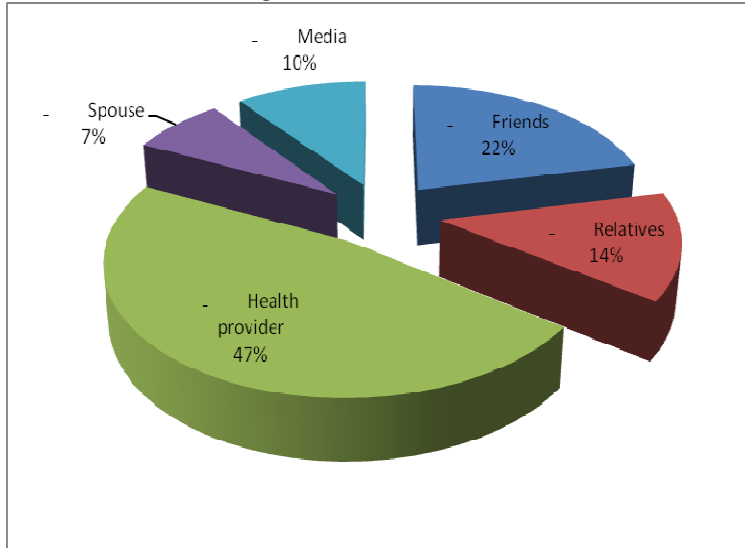


Fig 5: Percentage distribution of first knowledge about DPMA

Much as the findings (fig. 5) in this study regarding the first source of information on Depo mostly point to the health providers and hence must be given due credits as they could be considered as the 'soldiers' who are 'fighting' to make the family planning programme in Ghana a success, it also raises questions about 'provider influence', as to what extent a health providers' beliefs and personal values could influence their clients with regards to the choice of a particular contraceptive. This is very crucial, as a situational analysis conducted in Ghana between 1993 and 1995 found that, providers sometimes influenced and in some extreme cases restricted their client as to the choice of contraceptive they may settle on and these restrictions, according to that study, may be based on age, parity, marital status and spousal consent. Most providers appeared to have imposed these restrictions or influences with the best of intentions and are mostly convinced that by doing so they are protecting both the client and the society (GDHS 1998).

A little over a third (34%) of all Depo (fig. 6) users captured under this study disclosed that, their decision to eventually use Depo was somewhat influenced by the provider, although 63% of this group stated their decision was exclusively theirs.

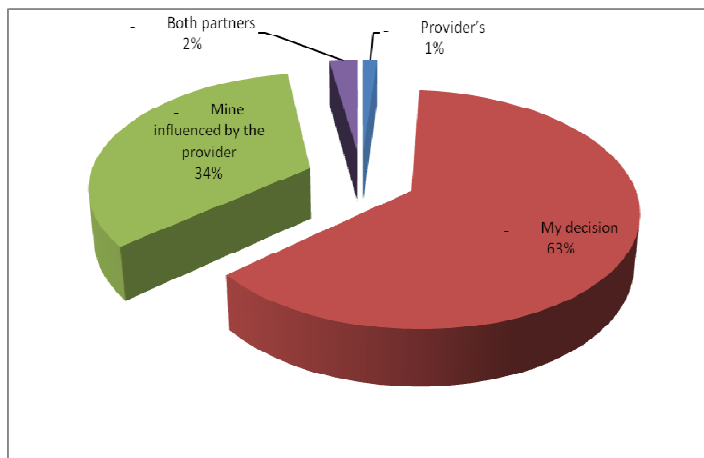


Fig 6: Percentage distribution of 'Decision to use Depo'
DMPA Usage

The findings that a little more than one-half (52%) of the women were currently using Depo Provera (fig. 7) is consistent with the trend for the last three years (2006-2008) in the study area, during which time Depo users represented 50% or more of all contraceptive users in each of the last 3 years as has been the recorded trend according to the District Health Directorate records .

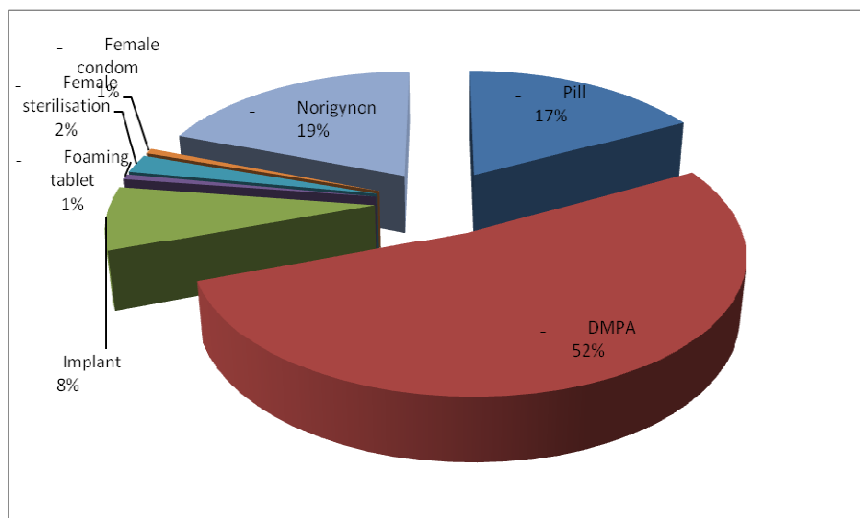


Fig 7: Percentage distribution of current contraceptive usage

Of the 163 respondents who were currently using Depo as a contraceptive of choice, 83% were old clients who had come for their regular 3-monthly injection while 17% were new users (within 3 months since starting to use Depo). To have the users of any contraceptive increase by 17%, whether they were users of other methods switching over to Depo or were new users of Depo was a huge increase for any contraceptive method within a space of three months. Nearly half (48%) of the women who were using Depo said they adopted it with 'convenience' as their reason.

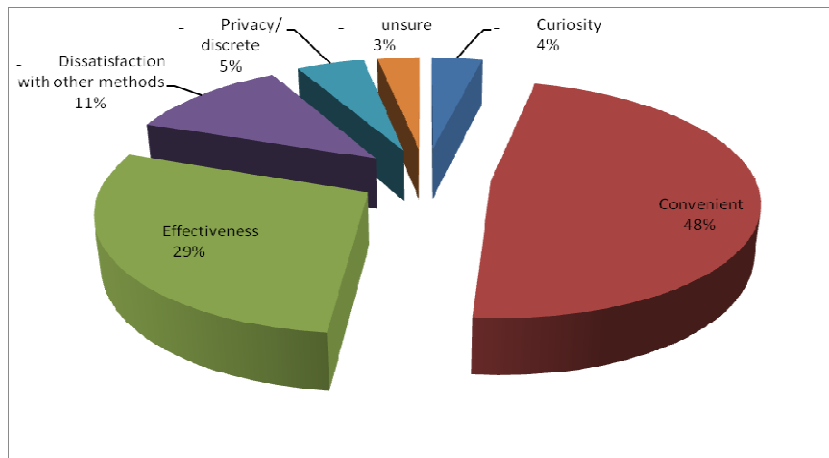


Fig 8: Percentage distribution for 'reasons on the usage of DPMA'

However, these findings (fig 8 above) are in sharp contrast with that of Frank (1992) which recorded 'curiosity' as the reason for which the largest group of their study respondents gave for choosing or using Depo. Again this could be attributed to the fact that, the two studies were undertaken in entirely different social settings. The women in Frank's (1992) study were of varied social status and from two different race and also in a country where contraceptives and sexual issues in general are openly discussed as part of normal day-to-day life issues.

Data from Table 5 indicate that, for every one year increase in age, pill users are 0.917 times more likely to switch over to using Depo as the contraceptive method of choice. This finding is also in line with that revealed by Frank's (1992) study which also recorded that pill users were significantly more likely than other women to switch to DMPA because they could not remember to take it at the right time. The reason for this trend may be due to the factors explained above such as one's general busy daily schedules and the fact that, the pill (if possible) is expected to be taken at the same time every day, irrespective of each day's work and activity schedules.

It was also observed from the same table that, while a mother with 1 child is nearly twice (1.72 times) more likely ($p \leq 0.328$) to switch from pill to using Depo, (using a woman with no children with 1.0 times likelihood to switch over to Depo as a reference), a mother with 3 children is ten times (10.64 times) ($p \leq 0.003$) more likely (very significant) to switch to Depo (CI 2.186-51.795), while a woman with 4 or more children was nearly five times (4.85 times) more likely ($p \leq 0.045$) to switch to Depo. Thus where as when considered separately (table 4) age and parity (number of children) as separate demographic characteristics may not necessarily influence a woman's choice of a particular contraceptive; however, as she begins to advance in age and have more or enough children (three or more) there is a strong likelihood that she may switch over from a daily pill intake to Depo as she may begin to look out for a relatively 'long term', but non-permanent form of contraception with effectiveness and convenience being key attributes.

Nine out of every 10 (89%) of the respondents using Depo answered yes to their partners being aware of their using Depo. These findings could be said to be consistent with the fact that, as much as 71% of all the respondents were married. As a result, one would expect that most of them were in responsible and 'matured' relationships (whether formal marriage or co-habitation) and that it was fairly normal for their partners to be aware of whether or not they were using contraceptives and exactly which method they are using.

Conclusion

Women of varied social and demographic background used Depo-Provera in the Nkawie District. Most Depo users were aware of other contraceptive methods but they chose DPMA for its contraceptive benefits. The social and demographic profiles of DMPA user and non-users were not significantly different.

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