FACTORS AFFECTING COMPLIANCE TO ORAL CONTRACEPTIVE PILL USE AMONG WOMEN OF CHILD BEARING AGE 15 - 49 YEARS, IN DAR ES SALAAM, 1993

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ABSTRACT

To identify factors influencing adherence to oral contraceptive regimens, a cross-sectional descriptive study was conducted in 15 health units offering family planning services in Dar es Salaam city. Between August and November 1993, 752 oral contraceptive users attending selected health units providing family planning services were randomly selected to participate in the study. Consenting women were interviewed by using structured questionnaire. Data analysis was done by using SPSS/PC^{+}. Frequency tables and cross-tabulation were initially done to explore primary association between variables. Stratified analyses was done to asses potential confounding. To adjust for multiple confounders, multivariate analyses was performed using multiple logistic regression. Model was fitted to identify determinants of non-compliance to oral contraceptive use. Statistical association were assessed by using the Chi-square test. Associations were considered significant if p-value was found to be less than 0.05. Five hundred eighty four (77.7%) respondents were compliant, while one hundred sixty eight (22.3%) were non-compliant. Compliance was associated with high level of proper knowledge on how to take the pills and correct knowledge on what to do when one pill is missed. Non-compliance was found to

be more common among women who were younger, uneducated, having more than three children, not preferring oral contraceptives, and those reporting to have experienced pill related side effects. Respondents were also found to have low knowledge of other methods of contraception besides condom, injectables and IUCD. Knowledge about side effects of pills and what to do when two or more pills are missed was generally lacking. Majority of respondents were using pills to space their next birth and only one third reported to have experienced pill related side effects. These findings indicated the need for continued information to clients on how to take pills and what to do when they miss one or more pills. More information about other family planning methods is required to increase their awareness in this population. The family planning unit within the Ministry of Health should be able to inco-orporate this information in their ongoing community based Information Education and Communication activities.

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ABBREVIATIONS

MOH	=	Ministry of Health
WHO	=	World Health Organisation
MCH	=	Maternal and Child Health
MCHA	=	Maternal and Child Health Aide
IUCD	=	Intrauterine contraceptive device
UMATI	=	Uzazi na Malezi Bora Tanzania
FP	=	Family Planning
OC	=	Oral contraceptive
CBD	=	Community Based Distribution
DSM	=	Dar es Salaam
TDHS	=	Tanzania Demographic and Health Survey
RMA	=	Rural Medical Aide
MUCHS	=	Muhimbili University College of Health Sciences
NFPP	=	National Family Planning Programme
FLE	=	Family Life Education
IEC	=	Information Education and Communication
DHS	=	Demographic and Health Survey
SD	=	Standard deviation
OR	=	Odds Ratio
C	=	Centigrade
MM	=	Millimeter
TPHA	=	Tanzania Public Health Association
CI	=	Confidence Interval
SDP	=	Service Delivery Point
HIV	=	Human Immunodeficiency Virus
AIDS	=	Acquired Immune Deficiency Syndrome
NGO	=	Non-Governmental Organization
UK	=	United Kingdom
WHA	=	World Health Assemby

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DECLARATION

I HEREBY DECLARE THAT THIS DISSERTATION IS MY OWN ORIGINAL WORK AND TO THE BEST OF MY KNOWLEDGE IT HAS NOT BEEN SUBMITTED FOR A SIMILAR DEGREE IN ANY OTHER UNIVERSITY.

CANDIDATE'S SIGNATURE .....Kibona.....

M.S. KIBONA, MD

DATE: .....1 September 1995.....

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for large families and low contraceptive use in Africa (Wulf, 1988). The other reasons for low contraceptive use is the weakness of the infrastructure to deliver quality services and lack of sound policies that support family planning services. As a result, the services provided are inaccessible to the potential users and may be unattractive to clients (Wulf, 1988).

Misconceptions about the health risks and side effects of contraceptive methods have been identified to contribute to low use of contraceptives in many parts of Africa and the rest of the developing world (Letternmaier et al, 1987).

1.2 Population growth and Fertility trend for Tanzania

Tanzania had 22,468,208 inhabitants in 1988. The population has increased by 88.7 percent from 1967 to 1988 indicating that it is almost doubling every 10 years. Table 1 shows this change from 1967 to 1988, together with the corresponding annual growth rates (Table 1).

Table 1: Population changes 1967 - 1988 in Tanzania.

Population (000)				Annual growth rate (%)		
YEAR	TOTAL	W	M	TOTAL	W	M
1967	11913	6109	5804	-	-	-
1978	17037	8686	8351	3.2	3.2	3.3
1988	22486	11580	10960	2.8	2.9	2.7

Source: Population census 1967, 1978 and 1988

The population has risen from 11.9 million in 1967 to 17.04 million in 1978. At an annual population growth rate of 3.2%, about 800,000 persons were added to the country every year. It is projected that the population will reach 36 million by the year 2000.

By 1988 it was also observed that the total fertility in Tanzania was 6.5 births per woman (1988 census). The census data shows that total fertility rate had remained consistently high between 1978 and 1988 (Table 2).

Table 2: Estimated Total fertility rate for Tanzania between 1978 and 1988

Country	Total fertility rate:	
	1978	1988
Tanzania Mainland	6.9	6.2
Tanzania	6.9	6.5

Source: 1988 Population Census, National Profile:

1.3 Family Planning Services in Tanzania

To reduce population growth and fertility, the government of Tanzania and some Non-governmental organizations (NGO's) have taken a number of actions. Family planning services were first introduced in Tanzania in 1959, when the Family Planning Association of Tanzania commonly known as UMATI (Uzazi na Malezi Bora Tanzania) started its activities in Dar es Salaam. Services were later extended to cover areas outside Dar es Salaam and branches were opened in Mwanza, Arusha, Moshi and Lindi towns (Omari, 1989; Gish, 1975). However, this expansion of services was not associated with significant increase of use of Family Planning methods. New efforts were initiated in 1971, when a maternal and child health committee was established in the Ministry of Health and Social

Welfare. One of the main aims of this committee was to ensure that mothers and children were adequately served. In line with the policy of the then ruling party, special emphasis was to be placed in setting services in the rural areas (Omari, 1989).

In 1974 the government of Tanzania integrated family planning activities into maternal and child health (MCH/FP) programme. At present almost twenty (20) years have passed, units offering family planning have been opened up to the level of some villages (MOH, 1992). By 1987, there were a total of 2601 MCH clinics, of these 80% were known to offer family planning services as part of MCH services. By that time, approximately 2472 Maternal and Child Aides (MCHAs) had been recruited and posted in different parts of the country. Also there were 65,889 clients who were registered into family planning services as new acceptors (Jesudas, 1987).

Although the number of MCH clinics providing Family Planning services and the amount of funds used increased, contraceptive use remained unacceptably low. The estimated prevalence of contraceptive use was about 7% in 1985 (Chiduo, 1987).

To strengthen the family planning services, Tanzania launched a National Family Planning Programme (NFPP) in 1989. This was done after the government realized that the existing family planning services lacked co-ordination and that supervision of the services was poor. The launching of this programme was thought necessary to improve family planning services provided by Family Planning Association of Tanzania (UMATI) and those provided as part of Maternal and Child Health (MCH) services.

The Tanzania demographic and health survey (DHS) conducted from October 1991 to March 1992 showed that the NFPP have had only limited impact. Contraceptive prevalence for the whole country was estimated to be ten percent (Ngallaba et al, 1993). The DHS also showed marked differences in Family Planning usage across regions. Kilimanjaro had the highest contraceptive prevalence of 25%, followed by Arusha (12.3%), Dar es Salaam (10.9%), Singida (10.7%) and Lindi (9.7%). Regions which showed the lowest contraceptive prevalence were Mtwara (1.5%) and Shinyanga (1.25%) (Ngallaba et al, 1993).

In depth situation analysis of the family planning services was done in 1987. The results of this analyses showed obvious weakness in the whole system.

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The main weakness identified was that the services were mostly clinic based so only those who could go to the clinic were served. As a result, single women and men are not adequately served because they are not regular attenders of these clinics. Other weaknesses includes lack of equipments and supplies needed to deliver quality services and limited choice of methods at the clinics. Most of clinics are dominated with contraceptive pills and that other methods are not regularly available (MOH, 1992).

The review above indicated the multitude of factors which influence use of contraceptives. These factors may account for the obvious gap between program inputs on one hand and utilization of services by potential clients. These factors have potential negative effects on program goal of reducing fertility as well as general improvement of health of mothers and children. Strategies aiming at reducing these barriers should have a major impact in increasing acceptability of family planning services.

2.0 REVIEW OF LITERATURE

Oral contraceptive is the most popular method of contraception in the world (Rinchart, et al, 1979). This is because of their effectiveness, the ease of administration and the adoption of policies by many countries that permit non Physicians to distribute Oral contraceptives. Because of these merits, many programme managers in different developing countries consider it as a method of choice for community based distribution programmes (Huber, et al, 1975).

In Bangladeshi, where community based distribution have been introduced, the initial acceptance was high, with rise from baseline of less than 10% to 35% (Bhatia, et al, 1980). This was followed by subsequent decline in fertility by twenty five percent (25%) one year after the initiation of the programme (Phillips, at al, 1982). Another study to evaluate performance of oral contraception also done in Bangladeshi, where performance of oral contraceptives was defined in terms of continuation rate for OCs use relative to other methods of contraception, discontinuation rate, and pregnancy rate; it was observed that, the performance of OCs in Bangladeshi was not satisfactory as the continuation rate at 12 months was 30% only; this was lowest among other methods except condoms. The rate of

discontinuation was also high and the reasons given for the high discontinuation were side effects (16.9%), pregnancy (17.1%), inconvenience (37.5%), objection of male partner (15.8%) and desire for more children (12.7%). Switching over to other methods from oral contraceptive use was also observed; among these, three quarters cited inconvenience of oral contraceptive as reason for method switching. The pregnancy rate among pill users was also high and comparable to those users of traditional methods, though using condom and vaginal foams, the pregnancy rate were much higher. However, pregnancy rate was low among Depo provera and IUCD users (Bhatia, et al, 1984).

In the United States, an estimated 3% of married and 6% of unmarried users became pregnant in their first year of the pill (Grady, et al, 1986). In United Kingdom (UK), family planning services are readily available to all women, regardless of the economic status. Oral contraception play an important role in this effort, yet poor compliance is much more prevalent than initially thought and factors identified to influence compliance in United Kingdom include; age, socio-economic group, education, side effects and health care delivery (Killick, 1992). In some developing countries the failure rate is as high as 20%. However, none of these studies attempted to identify factors associated

with high discontinuation and pregnancy rates. Can this low performance be a result of poor compliance? A study to assess non-compliance also done in Bangladeshi revealed that over consumption and under consumption of oral pills can occur. In this study of Bangladesh it was observed that women took as many as two to three pills, too many or too few in an average week. However, this study did not asses the unwanted consequencies of non-compliance. The overall average level of non-compliance for all clients was 8.7 pills per cycle meaning on average, the client overtake or undertake at least two to three OC pill each week. In the same study no statistically significant difference of compliance between people who had already accepted oral contraceptive use when the study started, those who accepted oral contraceptive use or those client who discontinued during the study. (Seaton, 1985).

Another study on pill compliance was done by Tsui of California Population Centre. She reported in a study done in Egypt between 1981 and 1982, that many women knew they were supposed to take pills every day but they did not know what to do if they forgot. This study found that 28% of Egyptian women surveyed did not know how frequent to take the pill (Tsui, 1988).

Another study conducted in Rural Columbia among new pill users at Magdalena city showed that 42% of the clients were taking pills correctly. This proportion included women who were taking the 21 day pill cycles as well as the 28 pill cycles. The remaining 58% had taken the pill incorrectly during the previous two weeks. The reasons given as to why women failed to take the pill appropriately were that; they ran out of supply (10%), took pill only when sexually active (5%), did not take when husband was away (8%), or they took every other day (11%). Others interrupted use either because of side effects(7%), forgot (6%) or did not give reasons (7%). In this study, knowledge of those who took the pills correctly, incorrectly and the providers were assessed especially as pill related knowledge, attitude and beliefs. Only 17% of the women understood that the pill works by preventing ovulation, 80% believed that the pills were effective if taken correctly. The proportion stating that the pill should be taken daily was higher among those who had taken oral contraceptives correctly (92%) than among those who had not (84%). On looking at cycle-to cycle errors, only 31% of respondents on 21 days pill cycle knew that seven days was the prescribed interval between packets, and just 35% of women on 28 days cycle knew to start the next packet the day after finishing the last one (Potter, et al, 1988).

A study done in Sri Lanka showed that symptoms arising from use of oral pills can lead into non-compliance and discontinuation. The symptoms stated were inter-menstrual bleeding (4%), nausea (30%), vomiting (15%) and headache (50%) (Basnayake, et al, 1984). The possibility that these symptoms may be aggrevated especially among users who are non-compliant must not be overlooked.

Interviews were conducted among 1,865 women who had accepted family planning at 45 Philippines clinics during 1970, one year after acceptance. It was observed that about 30% of acceptors had stopped practising contraception and 22% had become pregnant by the time of study. Contraceptive method first accepted had a strong effect on the likelihood of continuation or pregnancy because there was high pregnancy rate among those who were on spermicides, condoms and followed by those on pill. The pregnancy rate was low for those who were on IUCD and Depo provera (Laing, 1974).

Considering the research needs for developing world, it is evident that, there are no substitute for such research in the Developing world. The risk associated with use of oral contraceptives must be given proper perspective by weighing it against the specific risks associated with child bearing which for developing

world is by far greater than the risks of pill use (Huber et al, 1975). For family planning programmes, to succeed in developing countries, critical assessment of factors associated with non-compliance is urgently needed.

Moreover, it has been documented that most oral contraceptive failures are due to incorrect or inconsistent use, not a failure of the pill itself. It should be remembered that, to be effective, currently available low dose oral contraceptive pills require much higher compliance than older high-dose pills. Reduction of the failure rates from pill use by even one percent (1%), (e.g. by improving pill taking), at least 630,000 fewer women would have accidental pregnancies each year (Potter, et al, 1990).

A study done among 209 adolescents in the United States showed that the mean age of compliant client was higher than that of non-compliants (17.8 $\pm$ 1.9 Versus 17.1 $\pm$ 1.6 years) and the difference observed was significant. Also previous history of contraceptive use was associated with increased compliance. The adolescents in this study expressed concern about pill use, whereby 13% were worried about blood clots and 45% were worried about weight gain. However, the mean weight gain of compliant women was not significantly different from

that of non-compliants (3.3 ± 0.99 kg compared to 2.4 ± 0.46 kg). Two percent were worried about increased risk of cancer; 5% about high blood pressure, 4% about birth defects and 5% about lowering of fertility. On side effects experienced by oral contraceptive users, the same study observed that seventy-nine (38%) reported at least one of the following side effects: break through bleeding (25%); amenorrhorea (7%); nausea (6%); breast soreness (5%); and moon swings (8%).

Among these side effects only headache was significantly associated with non-compliance. None of the patients developed hypertension while using the pills. Compliance in this study was defined as returning for the scheduled visits and either having taken the pill as directed or having not taken the pill because the clients decided voluntarily to terminate their use (Emans, et al, 1987).

Another study was done to access oral contraceptive use continuation rates among adolescents. It was found that continued oral contraceptive use was associated with older age, white race, adolescents who had parents with high education, steady sexual partner and satisfaction with the chosen method(Furstenberg, et al, 1993).

The other thing to consider is the relation between type of pill and compliance. The fact that there are

more than two types of oral contraceptive pills provided to clients, makes the issue of compliance even more important. The older types of oral contraceptive pills contained 25 times more progestogen and three to four times as much oestrogen as of today's low-dose oral pills formulation. Although the old oral contraceptive pills were more likely to be associated notorius with side effects, they had the virtue that a woman could forget to take pills in one or two days and still not become pregnant. Most modern oral contraceptive pills contain less than 35 micrograms of oestrogen and less than one milligram of progestrogen. They are associated with less side effects (compared to the old type), but the changes in formulae demand rigid compliance by women using them, in particular, the progestogen-only, "mini pills". The deversity in types of pills and instructions on how to take them as given for each type of pills adds confusion to clients and may affect compliance (Potter, 1989).

Currently there are three types of oral contraceptive pills which can be taken by women practicing oral contraception. They include; the monophasic combined pills which contain both progesteron and oestrogen. With this type of pills, ovulation can occur even after missing one pill, particularly when the pill is missed at the beginning or end of the 21 days. The packets

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contain 21 pills; hence there is a 7 days rest period before a new packet is started.

The other type of pills is the Triphasic combined Pills. These oral contraceptives are packed to provide one week each of three different levels of oestrogen and progesteron, so as to simulate the natural hormonal fluctuations. They are good in reducing the impact in blood pressure, fatigue and other side effects than the monophasic pills. Each month's packet contains three colour of pills one for each hormonal combination. Similarly, a 28 day cycle contain a fourth colour for reminder/vitamin pills. When these pills are taken out of sequence there is an increased chance of pregnancy.

The third type of pills are called the Progestin - only "mini pill". These have been available since 1973 and are recommended for women who experience estrogen related side effects, such as headache, or hypertension and they are also recommended for breastfeeding women. In developing countries, a very small percentage of oral contraceptive users (1%) use the mini-pill (Finger, 1991).

A study on use and misuse of oral contraceptives by adolescents attending a free standing clinic was done among 216 adolescents. Factors associated with cycle to cycle transition were studied. It was reported that

oral contraceptive packs containing 28 tablets (including placebos) appeared to produce fewer cycle to cycle problems than the packs containing 21 active tablets (Goldstuck, et al, 1987).

Results from Demographic and health surveys conducted in Botswana, Egypt, Indonesia and Zimbabwe from 1987 to 1989 showed that many women were not taking oral contraceptives properly or adequately for full protection. The prevalence of incorrect use ranged from 5% to 89% in the four countries. However, the association between pill taking errors and socio-demographic variables differed across countries. Incorrect use was most common in Egypt and the errors concentrated among poorly educated and illiterate women while in Botswana, better educated and literate women were more likely to make errors in Pill taking, as were younger and lower parity women. In Zimbabwe and Indonesia, such errors were not concentrated in any particular socio-demographic groups (Hubacher, et al, 1993).

Another study done at Thailand in 1987, revealed that women with modest or no education were capable of using oral contraceptives correctly than educated urban women. According to this Survey conducted among 1,170 users, who were asked about pill use in the past month,

correct pill use was associated with old age, longer duration on method use and desire for no more children (Siriboon et al, 1990).

3.0 STATEMENT OF PROBLEM AND RATIONALE

3.1 Statement of the Problem

This study investigated compliance to Oral contraceptive (OC) regimes in Dar es Salaam and the factors associated with non-compliance. The findings from this study are expected to provide information which can be used to increase proper usage of oral contraceptives among family planning clients.

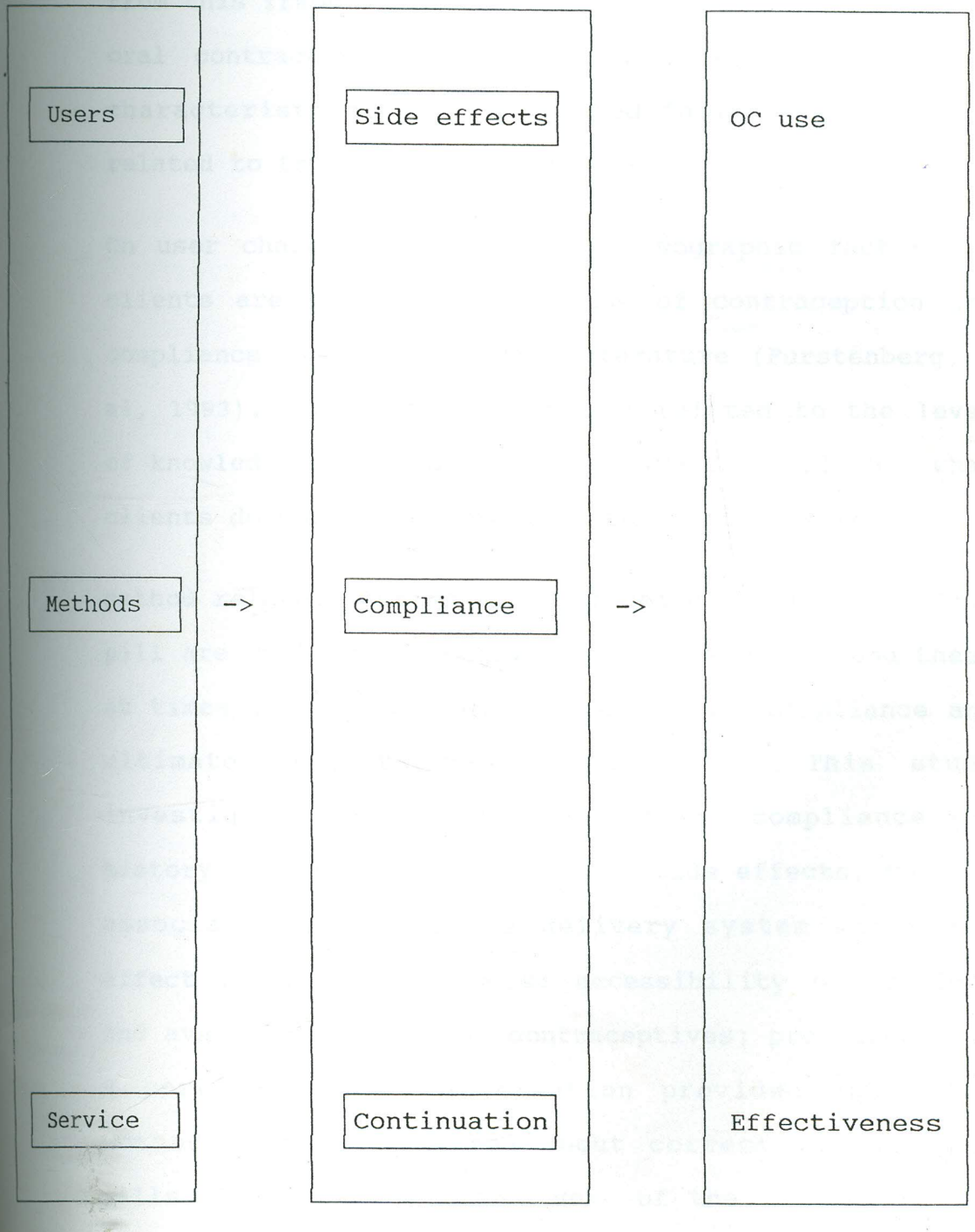
Any Family Planning Programme aims to improve health of mother and children by providing safe family planning methods which if used properly, can assist clients to plan their families. The main purpose of any family planning programme are two fold; to provide reversible methods for child spacing and more permanent methods for couples intending to stop child bearing. Oral contraceptives are a reversible method which have been proved to be very effective, relatively inexpensive to enable couples to plan their families. Their use is therefore regarded as an investment in human resources in programs designed to improve maternal and children health. This is because proper use of oral contraceptive pill enable couples decide for themselves when to have children and how many to have. Proper use of oral contraception allow women avoid negative consequences like unwanted pregnancies and illegal

abortion, side effects and child bearing under circumstances which threaten the health of mothers and children.

To achieve the above mentioned goals, oral contraceptive needs to be used properly. Women taking pills as instructed are said to be compliant to the regimens. There are several reasons which may affect compliance to the prescribed regimens. To study the compliance status among users attending service delivery units in Dar es Salaam, a conceptial frame work developed by Potter (1991) was adopted (see figure 1).

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Fig 1: CONCEPTUAL FRAME WORK ON ORAL CONTRACEPTIVE USE



Source: L. Potter (1991)

From this frame work, factors influencing compliance to oral contraceptives are broadly categorised as user characteristics, method related factors and factors related to the services given.

On user characteristics, socio-demographic factors of clients are known to affect use of contraception and compliance as cited in the literature (Furstenberg, et al, 1993). Other factors may be related to the level of knowledge of users on how to take the pill and what clients do when they forget to take one or more pills.

Method related factors also influence compliance. Oral pill are well known to give adverse reactions and these at times may be the sole reason for non-compliance and ultimate discontinuation from use. This study investigated the association between compliance and history of perceived pill related side effects. Factors associated with service delivery system which may affect compliance includes: accessibility of services and availability of oral contraceptives; preferrence of a certain method; information provided about the methods; and education about correct use of oral pills. This study assessed some of the factors in the service delivery system which might affect compliance to oral contraceptives.

2.2 Rationale

A Family Planning programme which is effective, must have substantial impact on maternal and child health, morbidity and mortality by the use of available contraceptives. Family Planning programs must support effective and efficient family planning services delivery, which is culturally and socially acceptable as well as sustainable. However, clients attitude and adherence to the prescribed regimes is critical to ensure that the program achieves its goals. Compliance is an act of following the prescribed regimen. For oral contraceptives, it means taking the oral pills daily and switching to another packet when the previous packet gets finished as instructed.

Since their introduction more than 30 years ago, oral contraceptives have become the most popular modern method of family planning in the world (Rinchart, et al, 1979). Extensive studies have been done and it has been documented beyond doubt that pills are 100% effective when used properly, but less effective if there is poor user compliance. In view of the importance of client compliance, this study was initiated to determine the magnitude of this critical problem which have far reaching implications.

There is paucity of information about client compliance to oral contraceptives in Dar es Salaam. Similarly, no studies of compliance to oral contraceptive have been reported in other parts of Tanzania. The findings of this study have allowed to identify factors which affects compliance to oral contraceptive pills among family planning clients in Dar es Salaam. By knowing these factors appropriate strategies can now be recommended and therefore undertaken to improve compliance. It has been observed that, although other factors could influence compliance in other parts of the world they may not be important in others; depending on the socio-demographic, culture and the service system operating. It is on this basis that this study of compliance to oral contraceptives and associated factors was thought important.

Oral contraceptive pill's compliance have been considered because 80% of modern contraceptive users in Tanzania are using oral pills (Ngallaba, et al, 1993). A substantial amount of funds therefore is used in provision of oral contraception, hence it was justifiable, to study the compliance status and factors which influence use of oral pills (compliance), so that the expected contribution of oral pills in reducing fertility and family size could be realized as planned.

Currently there are strategies aiming at increasing accessibility of family planning services worldwide: these strategies emphasizes use of alternatives strategies like community based distribution and integrated programme approaches. The findings of this study could contribute in informing planners of these strategies some of the factors which they need to consider to improve proper usage of contraceptives.

Compared to other methods of modern contraception, pill requires more self motivation and active participation of users, because pills are taken daily, while other methods such as Intrauterine contraceptive device (IUCD) or injectables require a less intensive schedule. For instance, those on injectables (Depo-provera) they receive an injection only once in three months, while those on Intrauterine contraceptive devices (IUCD); this is done once and the client only come occasionally for check ups. Likewise condoms and spermicides are applied only when one perform sexual intercourse.

With condom use, there is another motive for its use, that is, besides contraception, it prevents sexually transmitted diseases including AIDS/HIV. On other hand pills are associated with many unwanted effects like

nausea, headache, dizziness, breakthrough bleeding and cardiovascular manifestations. All these factors may affect clients ability to comply to the regimens.

The fact that there are several brands of oral pills each with its own instruction to users, further emphasized the need to study on oral contraceptive compliance, so that, appropriate recommendations could be given on how to use oral contraceptive pills to have best results. This information is crucial to policy makers and service providers involved in provision of family planning services.

4.0 HYPOTHESES FOR THE STUDY

1. Socio-demographic factors like age, education, etc. tend to influence compliance to oral contraceptive pill use among users attending family planning clinics in Dar es Salaam.

2. Better pill related knowledge among contraceptive pill users is associated with compliance while low pill related knowledge is associated with non compliance among users attending family planning clinics in Dar es Salaam

3. Experience of side effects is associated with Non compliance while non experience of side effects is associated with compliance to oral contraceptive use among users attending family planning clinics in Dar es Salaam.

5.0 OBJECTIVES

5.1 Broad Objectives

To determine compliance status and factors influencing compliance to oral contraceptive pill use among women of child bearing age (15 - 49 years), attending family planning service delivery points in Dar es Salaam.

5.2 Specific Objectives

1. To determine the level of compliance in taking oral contraceptive pills among women of child bearing age, (15 - 49 years) attending family planning service delivery points in Dar es Salaam.

2. To determine the level of knowledge on how to use oral contraceptive pills among women of child bearing age (15 - 49 years) attending family planning service delivery points in Dar es Salaam.

3. To determine the attitude of oral contraceptive users towards having more children and preference of other contraceptives at the family planning delivery points in Dar es Salaam.

4. To determine factors which influence Non-compliance to oral contraceptive pills among women of child bearing age (15 - 49 years) attending family planning service delivery points in Dar es Salaam.

6.0 METHODOLOGY

6.1 Study Area

This investigation was designed as a cross-sectional descriptive study and was conducted in Dar es Salaam. Dar es Salaam city is the largest commercial centre in Tanzania and covers about 11,200 square kilometers. Administratively the city of Dar es Salaam is divided into three districts of Kinondoni, Ilala and Temeke. The city has 1,566,370 inhabitants out of which 715,233 are residents of Kinondoni, 384,166 are of Ilala and 467,370 are of Temeke (Dar es Salaam City Council Annual Report, 1991). Majority of the Dar es Salaam residents (60%) are aged between 15 and 64 years (Dar es Salaam City Council Annual Report, 1991).

According to Tanzania Demographic and Health Survey conducted in 1991/92, about 10.9% of women of reproductive age were using modern contraceptives in Dar es Salaam (Ngallaba et al, 1993). Family planning services are provided as part of comprehensive maternal and child health services. By 1991, Dar es Salaam had 114 health units (12 hospitals, 4 health centres and 98 dispensaries) out of which 73 (64%) were providing family planning services (Dar es Salaam City Council Annual Report, 1991). The health units providing family planning services are located in all its three

districts; including; Kinondoni (28 units), Temeke (23 units) and Ilala (22 units). The family planning services offered in Dar es Salaam are estimated to cover 39% of the target population (Dar es Salaam City Council Annual Report 1991). By 1991, there were 234,955 women registered in various family planning clinics in the city. The main methods provided by most family planning clinics include pills, condoms, intrauterine contraceptive devices, injectables and to a lesser extent female sterilization, foams and jellies (Dar es Salaam City Council Annual Report, 1991).

6.2 Study Population

Women of child bearing age (15 - 49 years) in Dar es Salaam formed the target population for this study. The study population comprised of women of child bearing age using oral contraceptive pills at selected service delivery points during the study period. These women were recruited while attending for resupplies and/or consultations at the selected family planning clinics. Women who had used oral contraceptives for less than four months were excluded from the study because four months was regarded to be the minimum period for assessment of compliance of clients.

During the design phase, the minimum sample size required to detect prevalence of non-compliance of 42%

(As adopted from a study by Potter et al, 1988 at Magdalena, Columbia) with 95% precision was estimated to be 737.

Sample size calculation was done by using the formula

$$n = \frac{Z^2pq}{d^2}$$

(Developed by Vaughan et al 1989, later on modified by Lwanga et al 1991 and Henderson et al 1992)

Where n = sample size

p = The proportion of population of women who were not compliant to oral contraceptive use (taken to be 42% Potter, et al, 1991)

q = the proportion of population of women who were compliant to oral contraceptive use (58%, Potter, et al, 1988).

d = margin of error desired. Set at 0.05 (5%).

The sample was then multiplied by two (2) as the clinics were considered as clusters, (Bennet et al, 1991). A total of 752 oral pill users were recruited from the 15 selected family planning clinics.

6.3 <u>Sampling of the health units</u>

Fifteen service delivery points were selected from the three districts (five from each district). The selection was done after excluding 6 units from

Kinondoni, 9 from Ilala and 8 from Temeke. These service delivery points were excluded from the sampling frame because they were inaccessible by public transport or they were used in the pilot study before the main study. Two other service delivery points (Hindu Mandal and NDC) were excluded because they serve highly selected type of populations which may not be representative of the general population of Dar es Salaam. After these exclusions, 17 units remained in the sampling frame of each of the 3 districts. From each district, five service delivery points were randomly selected using random number tables. The selected units were Vingunguti, Ilala, Buguruni, UWT and Amtulbhai for Ilala district. Kilimahewa, Mtoni, Mbagala Round table, Temeke and Karosobo clinics were selected from Temeke district while Magomeni, Urafiki, Tandale, Mwananyamala and Kijitonyama selected from Kinondoni district.

6.4 Data collection procedure

Subjects were interviewed by using standardized questionnaires. Open-ended and close-ended questions were used to collect both qualitative and quantitative information. Ethical clearance to carry out the study was obtained from the College research and Publications committee of the Muhimbili University College of

Health Sciences, Dar es Salaam. Permission was also obtained from the City Council Medical Officer who in turn informed District Medical Officers and the MCH coordinators in the corresponding districts.

Before beginning data collection, a pilot study was conducted to test the research instruments and procedures. Thirty women using oral contraceptive pills from Oysterbay MCH clinic were randomly selected to participate in the pilot study. Most questions were found to be well understood by the respondents. Few questions were changed and appropriate corrections on the questionnaire were also made.

During the main survey, the investigator recruited every oral contraceptive user who made a visit to the service delivery posts for resupply and/or consultation and who had been on the method for at least four months. On average, about 10 oral contraceptive users were recruited every day. A total of 50 oral contraceptive users were recruited from each service delivery point.

All women recruited were interviewed in a separate room to obtain information about socio-demographic characteristics, attitude towards contraception, knowledge about oral contraceptives, and practice of family planning (Appendix 2).

6.5 Data processing and analysis

After data collection, all questionnaires were checked for completeness. The responses for all the questions were checked and any inconsistence noted and corrected. Responses for the open-ended questions were listed and main responses grouped into categories which were assigned codes. Those codes were later applied to all open-ended questions in the questionnaire. Data was then entered into the computer by using data entry programme of SPSS/PC+ (Norusis, 1986).

After data entry, frequencies of all variables were prepared and used to identify inconsistencies. After data verification and cleaning, the final data set was saved and used in the analysis.

Data analysis was done by using SPSS/PC+. Simple frequency tables and cross-tabulation were initially done to explore primary associations between variables. Stratified analyses was done to assess the effect of potential confounding variables. A statistical association involving categorical variables were assessed by using the chi-square test and P-values were obtained. When the P-value was found to be less than 0.05 the observed association was considered to be statistically significant. To adjust for multiple

potential confounders simultaneously, multivariate analyses was performed by using multiple logistic regression (Pagano, et al, 1993). A model was fitted to identify determinants of non-compliance to oral contraceptives use. Variables which were associated with the outcome variable in univariate analysis were included in the model. One variable at a time was added in the model and values of Beta-coefficient and Odds Ratio (OR) were examined each time a new variable is added into the model. Adjusted OR was then obtained from the model and 95% confidence intervals calculated by multiplying the OR with the exponent of Beta-Coefficient and its standard error (Pagano, et al, 1993)

6.6. DEFINITION OF TERMS USED

Family Planning

The World Health Organisation (WHO) defines Family Planning as a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decision by individuals and couples in order to promote the health and welfare of the family and this contribute effectively to the social development of a country (WHO, 1968).

Family Planning can also be defined as the application of measures intended to achieve optimal family size, either by birth control or by spacing births or both concurrently. This will favourably influence the health, development and well being of the family and has a stricking impact at mothers and children.

Fertility rates:

The number of live births in a unit period expressed as a proportion (usually per thousand) of fertile women in the population concerned.

Compliance:

Is an act of following a given set of instructions (prescription) aiming at achieving a certain goal or outcome. For the purpose of this study:

(a) A compliant client:

Will use oral contraceptives as instructed. That is one pill daily for 28 days for those on 28 day packet and switching to the next packet the following day and for those on 35 day packet, taking one pill continuously for 35 days, then starting the other packet the following day.

(b) If one misses 1-2 pills, but takes them, as instructed.

That is the client takes a pill right when she remembers to have missed and continues with the rest as usual, or for the one who has forgotten two pills , she takes a pill when she remembers and continues to take the pill for that day at the usual time. Takes another pill the following day and the pill for that day at usual time and continues with the rest as instructed, (one daily).

Compliance was defined as one oral contraceptive pill consumed for each day during the interval between observations of 2 weeks (Seaton, 1985).

(c) Non-compliant

i) Misses more than two pills in a cycle (packet)

ii) Does not switch properly from one packet to the next as instructed.

iii) Misses 1 - 2 pills but does not take the missed pills as described in (a) and (b).

Contraceptive discontinuers:

Refer to women who stop using a contraceptive method after a period of three months. Hence a Family Planning drop out is any user who is more than three months overdue for her next appointment (Korten, et al., 1978).

Family Planning Services Delivery Units (FPSDU)

These are places officially recognized to offer family planning services. This may be at hospitals, clinics, dispensaries, health centres or any recognized institutions among the 73 listed health facilities offering family planning services in Dar es Salaam.

Clients

These are women of child bearing age who use contraceptive methods at service delivery units.

7.0 RESULTS

7.1 Characteristic of the study population

The age of the study population ranged between 16 and 48 years with a mean of 26.3 years (standard deviation, SD + 5.5 years) and the median of 25 years. Majority of the respondents (83.1%) were between 20 and 34 years. The Socio-demographic characteristics of the study population is shown in table 3.

Table 3: **Sociodemographic characteristics of the study population, Dar es Salaam, 1993.**

	Number	%
Age (years):		
15 - 19	42	(5.6)
20 - 24	283	(37.6)
25 - 29	119	(15.8)
30 - 34	231	(30.7)
35+	77	(10.2)
Education:		
None/adult education	93	(12.3)
Primary education	615	(81.8)
Post primary education	44	(5.9)
Religion:		
Protestant	103	(13.7)
Catholic	137	(18.2)
Moslems	512	(68.1)
Marital status:		
Married	575	(76.5)
Cohabiting	91	(12.1)
Separated/Single	86	(11.4)
Occupation:		
Housewife	601	(79.1)
Business	67	(8.9)
Employed	84	(12.0)
Number of living children:		
0	5	(0.7)
1 - 2	427	(56.8)
3 - 5	277	(36.8)
6+	43	(5.7)

About 88% of the study population had at least primary education and over two-thirds (68.1%) were moslems. Most women (76.5%) reported to be married and only 84 (12.0%) were employed.

7.2 Knowledge

Women were asked to report the source of information where they heard about family planning for the first time. Five hundred sixty one (74.6%) reported to have heard about family planning from hospital or other health facilities, while 70 (9.3%) cited male or female friends as their primary source of information. Other sources of information cited were radio (14.6%) and schools or newspapers (7.5%).

Awareness of other methods of contraception was elicited by asking respondents to mention other methods which they knew could be used to prevent pregnancy. Majority of respondents mentioned IUCD, injectables and condom (table 4). Other methods were mentioned by less than a third of respondents.

Table 4: Awareness of other family planning methods among women using oral contraceptive in Dar es Salaam, 1993.

Method	Number	% *
Intrauterine contraceptive Device (IUCD)	698	(92.8)
Injectables	692	(92.0)
Condom	555	(73.8)
Foam/Jelly)	339	(45.1)
Tubal-ligation	99	(13.2)
Traditional methods	33	(4.4)
Diaphragm	24	(3.2)
Male Sterilization	23	(3.1)

* The percentages does not add up to 100 because respondentes gave more than one response.

Respondents were further asked to indicate whether their spouse or male partner knew that they were using family planning methods. Six hundred and seventy eight (90.2%) reported that their spouse/male partner were aware that they were using family planning methods. The distribution of women reporting that their spouse/male partner knew that they were using contraceptives by background characteristics is shown in table 5.

Table 5: Characteristics of women reporting that their male partner were aware that they are using oral contraceptive in Dar es Salaam, 1993.

Factor	Number	%
Age (years):		
15 - 19	39/ 42	(92.9)
20 - 24	258/283	(91.2)
25 - 29	108/119	(87.9)
30 - 34	203/231	(46.8)
35+	70/ 77	(90.9)
Education:		
None/adult education	85/ 93	(91.4)
Primary education	552/615	(89.8)
Post primary education	41/ 44	(93.2)
Occupation:		
Housewife	550/601	(91.5)
Business	59/ 67	(88.1)
Employed	69/ 84	(82.1)
Marital status:		
Single/Separated	60/ 86	(69.8)
Married/Cohabiting	618/666	(92.9)
Number of living children:		
0 - 2	386/432	(89.4)
3 - 5	251/277	(90.6)
6+	41/ 43	(95.3)

Compared to married/cohabiting women, male partners of single/separated women were less likely to know that their wives were using family planning methods.(X^2 = 45.45; P = 0.0000). Except for occupation, awareness did not vary by age, education, and number of living children.

Only forty five women (6%) correctly stated that oral contraceptive pills prevent pregnancy by preventing ovulation. Respondents were asked further to explain how contraceptive pills should be taken. Seven hundred and twenty six (96.5%) women had correct knowledge that they were supposed to take one pill every day. Only 26 (3.5%) said oral contraceptive pill should be taken on the day they had sexual intercourse.

To get more information about their knowledge, respondents were asked to explain what they will do when they miss to take one pill. Five hundred and fifty four (73.7%) said the missed pill should be taken on the following day or on the same day immediately after discovering that they had missed a pill, while 198 (26.3%) women did not know what to do in such situation.

Women who did not know what to do when they miss a pill were more likely to be aged less than 30 years, uneducated, married or cohabiting and housewife with less than three living children (Table 6). However, none of these variables were significant.

Table 6: **Socio-demographic characteristics of oral contraceptive users who did not know what to do when they miss one pill, Dar es Salaam 1993.**

Factor	Number	%	Crude OR	(95% CI)
Age (years):				
15 - 19	13/ 42	(31.0)	1.00	
20 - 24	77/283	(27.2)	0.83	(0.39, 1.79)
25 - 29	63/119	(52.9)	0.84	(0.22, 1.82)
30 - 34	23/231	(9.9)	0.53	(0.36, 1.28)
35+	22/ 77	(28.6)	0.89	(0.36, 2.20)
Education:				
None/adult	26/ 93	(28.0)	1.00	
Primary	161/615	(26.2)	0.91	(0.55, 1.53)
Post primary	11/ 44	(25.0)	0.86	(0.35, 2.09)
Marital status:				
Single/ Separated	19/ 86	(22.0)	1.00	
Cohabiting	26/ 91	(28.6)	1.41	(0.68, 2.95)
Married	153/575	(26.6)	1.28	(0.72, 2.28)
Occupation:				
Housewife	164/601	(27.3)	1.00	
Business	16/ 67	(23.9)	0.84	(0.44, 1.56)
Employed	18/ 84	(21.4)	0.73	(0.40, 1.30)
Number of living children				
0 - 2	117/432	(27.1)	1.00	
3 - 5	70/277	(25.3)	0.91	(0.64, 1.30)
6+	11/ 43	(25.6)	0.93	(0.43, 2.00)

Respondents were further asked to explain what they usually do when they miss two pills in two consecutive days. Only 29 (3.9%) women correctly said that they will take two pills in two consecutive days then continue with one pill daily. On missing more than two pills in successive days, only 7 (0.9%) clients reported correctly that they will use a barrier method like condom or spermicides during sexual intercourse until they got their next monthly period when they will start a new packet.

Table 7 shows the side effects mentioned by respondents to be associated with use of oral contraceptives. Abdominal pain was the most common side effect mentioned by respondents. Other side effects mentioned were vaginal discharge, high blood pressure, nausea, intermenstrual bleeding, headache, heavy vaginal bleeding, body weakness, malignancy of genital organs and weight gain.

Table 7: **Side-effects associated with use of oral contraceptive mentioned spontaneously by respondents, Dar es Salaam, 1993.**

Side effect	Number	% *
Abdominal pain	389	(51.7)
Vaginal discharge	256	(34.0)
High blood pressure	248	(33.0)
Nausea	230	(30.6)
Intermenstrual bleeding	192	(25.6)
Headache	151	(20.1)
Heavy vaginal bleeding	152	(20.2)
Body weakness	115	(15.3)
Malignancy of genital organs	53	(7.0)
Weight gain	47	(6.0)

* The percentages does not add up to 100 because respondents gave more than one response.

7.3 Attitude

Several questions were asked to measure attitude of respondents about various issues concerning contraception. One of these questions asked was for them to state whether they preferred using oral contraceptives. Six hundred and eleven (81.3%) respondents reported that they did.

The distribution of respondents who preferred to use oral contraceptive by socio-demographic variables is shown in table 8.

Table 8: **Socio-demographic characteristics of respondents who preferred to use oral contraceptives, Dar es Salaam, 1993.**

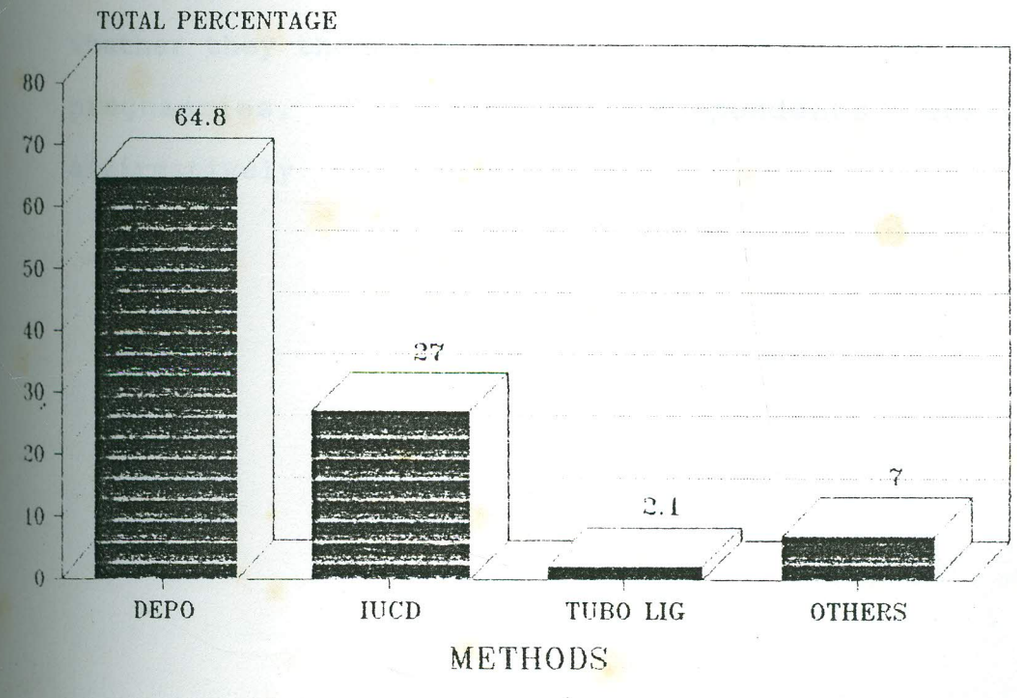
Socio-demographic Characteristics.	Number	%
Age (years):		
15 - 19	40/ 42	(95.2)
20 - 24	241/283	(85.2)
25 - 29	193/119	(86.5)
30 - 34	90/231	(39.1)
35+	47/ 77	(61.0)
Education:		
None/adult education	72/ 93	(77.4)
Primary education	498/615	(81.0)
Post primary education	41/ 44	(93.2)
Marital status:		
Single/Separated	71/ 86	(82.6)
Cohabiting	71/ 91	(78,0)
Married	460/575	(81.6)
Occupation:		
Housewife	486/601	(80.9)
Business/Employed	125/151	(82.8)
Number of living children:		
0 - 2	373/432	(86.3)
3 - 5	211/277	(76.2)
6+	27/ 43	(62.8)

Preference for oral contraceptive pill use was noted to decrease from 95.2% among women aged 15 - 19 years to 61% among women 35+ years. Compared to women with at least primary education, none educated women were less likely to prefer oral contraceptives. Similarly, women with 6+ children were less likely to prefer oral contraceptive than women with less than 3 children. Preference for oral contraceptive varied little by occupation and marital status.

Only 141 (18.7%) women did not prefer oral pills. Reasons given by those who did not prefer oral contraceptive were, "they experienced side effects" (42.2%); "the method was cumbersome" (35.5%); "tired of the method" (12.8%). Other reasons were given by 13 (9.2%) respondents.

Figure 2 shows other methods of family planning prefered by women who did not like to use oral contraceptives. Most of these women (64.5%) wanted to use injectables. Other methods mentioned were IUCD (26.9%), tubal ligation (2.1%), condoms and spermicides (7.0%).

Figure 2: METHODS PREFERRED BY WOMEN WHO DIDN'T LIKE TO USE OC IN DSM,1993(N=141)



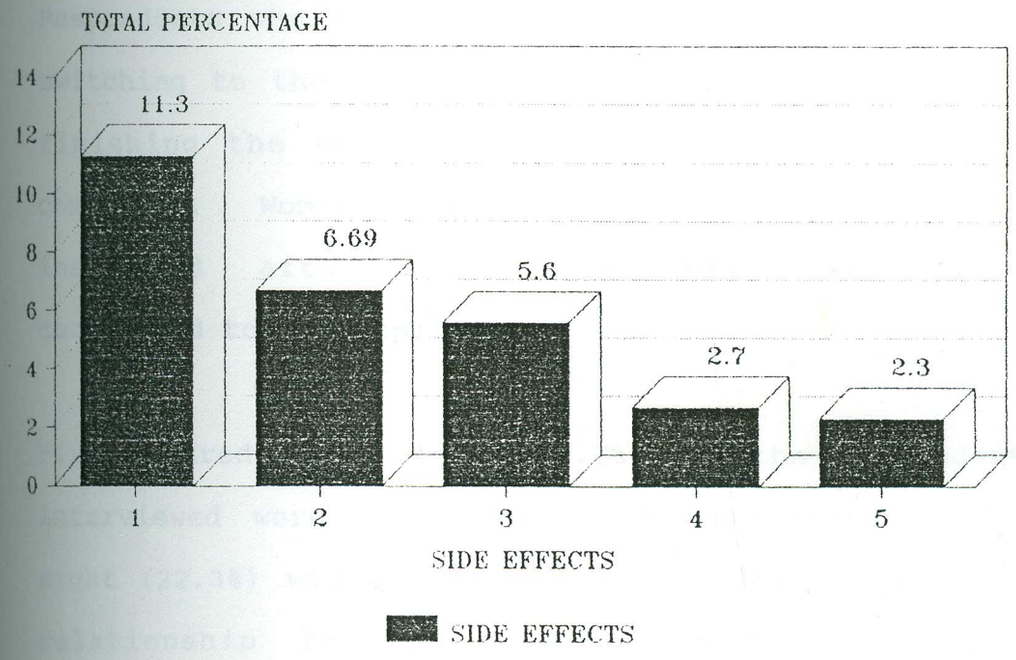
Respondents were also asked to indicate their preference for having more children. Six hundred and fifty six (87%) expressed their desire for more children. Respondents were further asked to indicate whether they thought pills were effective in preventing pregnancies, 741 (93.5%) respondents answered affirmatively.

7.4 Practice of contraception

The duration of use of oral contraceptives ranged from 4 to 156 months, the mean was 18.4 months (SD + 9.5 months and median was 11 months). Seven hundred and ten (94.4%) respondents were using 28 days pill packet ("Marvelon", "LO-femenol" and "Microgynon"), while 42 (5.6%) respondents were using the 35 days packets ("Microlut"). Two hundred seventy three (95.5%) respondents on 28 days packets had used pills for more than a year, while only 13 (4.5%) respondents on 35 days packets had used the pills for the same duration.

Two hundred fifty one (33.4%) respondents reported to that they had experienced what they thought were pill related side effects. The main perceived side effects were abdominal pain (11.3%), vaginal discharge (6.6%), intermenstrual bleeding (5.6%), high blood pressure (2.7%) and headache (2.3%) (figure 3).

Figure 3: SIDE EFFECTS PERCEIVED BY OC USERS IN DSM 1993.



KEY:

1. ABDOMINAL PAIN
2. VAGINAL DISCHARGE
3. INTERMENSTRUAL BLEEDING
4. BLOOD PRESSURE
5. HEADACHE

Compliance to oral contraceptive regimens was measured. Respondents who reported to take one pill daily and switching to the next packet the following day after finishing the previous packet were regarded to be compliant. Women who reported taking more pills as instructed after missing 1-2 pills were also considered to be compliant.

Five hundred eight four (77.7%) of the respondents interviewed were compliant, while one hundred sixty eight (22.3%) were non compliant. Table 9 shows the relationship between non-compliance and socio-demographic factors of the study population.

Table 9: **Socio-demographic characteristics of respondents who were non-compliant to oral contraceptives, Dar es Salaam, 1993.**

Factor	Number	%	Crude OR	95% CI
Age (Years):				
15 - 19	11/ 42	(26.2)	1.00	
20 - 24	63/283	(22.3)	0.81	(0.36, 1.82)
25 - 29	56/119	(24.2)	0.90	(0.40, 2.05)
30 - 34	24/231	(47.1)	0.71	(0.29, 1.75)
35+	14/ 77	(18.2)	0.63	(0.23, 1.69)
Education:				
None/Adult	23/ 93	(24.7)	1.00	
Primary	139/615	(22.6)	0.25	(0.14, 0.46)
Post-Primary	6/ 44	(13.6)	0.41	(0.16, 1.39)
Marital status:				
Married	128/575	(22.3)	1.00	
Cohabiting	18/ 91	(19.8)	0.86	(0.48, 1.56)
Single/ Separated	22/ 86	(25.6)	1.20	(0.69, 2.08)
Occupation:				
Housewife	131/601	(21.8)	1.00	
Business	21/ 67	(31.3)	1.64	(0.91, 2.93)
Employed	16/ 84	(19.0)	0.84	(0.45, 1.55)
Number of living children:				
0 - 2	88/432	(20.4)	1.00	
3 - 5	69/277	(24.9)	1.30	(0.89, 1.89)
6+	11/ 43	(25.6)	1.34	(0.61, 2.91)

Non-compliance was noted to decrease with age, with women 35+ years being 37% less likely to be non-compliant, when compared to those aged 15-19 years. Compared to uneducated women, respondents with post-primary education were 59% less likely to be non compliant. Non-compliance was noted to increase with number of children. Women with 6+ children were 34% more likely to be non-compliant than women with less than 3 children. All these associations were not statistically significant in the univariate analyses (table 9).

The distribution of non-compliance by other background variables is shown in table 10.

Table 10: **Background characteristcs of respondents who were Non-compliant to oral contraceptives, Dar es Salaam, 1993.**

Factor	Number	%	Crude OR	95% CI
Type of pill used:				
35 day pills	4/ 42	(9.5)	1.00	
28 day pills	164/710	(23.1)	2.85	(0.96, 9.56)*
Prefers to use oral contraceptive:				
Yes	125/601	(20.5)	1.00	
No	43/141	(30.5)	1.59	(0.38, 1.90)
Reported to have experienced side effects:				
No	95/251	(19.0)	1.00	
Yes	148/501	(29.1)	1.75	(1.21, 2.53)
Prefers to have more children:				
No	20/ 92	(21.3)	1.00	
Yes	148/660	(22.5)	1.07	(0.62, 1.88)
Husband aware that they are using pills:				
Yes	151/740	(20.4)	1.00	
No	3/ 12	(25.0)	1.16	(0.25, 4.73)*
Knowledge about what to do when they miss a pill:				
Correct	126/554	(22.7)	1.00	
Incorrect	42/198	(21.6)	0.94	(0.62, 1.42)
Ever used other family planning methods:				
No	146/666	(21.9)	1.00	
Yes	22/ 86	(25.9)	1.25	(0.72, 2.15)
Duration of use of oral contraceptives:				
> 12 months	61/291	(20.9)	1.00	
< 12 months	107/461	(23.7)	1.14	(0.79, 1.65)

* Exact confidence intervals obtained by using Fisher's exact test.

Compared with women on 35 days pills, respondents on 28 days pills were almost 3 times more likely to be non-compliant. Women who did not prefer to use oral contraceptive were 59% more likely to be non-compliant, than those who preferred pills. However, none of these associations were significant. Women reporting to have experienced side effects were 75% more likely to be non compliant than those who had not. The odds ratio was 1.75 and 95% CI = 1.21, 2.53. Non-compliance varied little by other background characteristics.

To asses joint effect of socio-demographic and background variables on compliance, multivariate analysis by using logistic regression model was applied and the results are shown in table 11.

Table 11: **Determinants of Non-compliance to oral contraceptive among respondents using contraceptive pills in Dar es Salaam, 1993**

Factors	* Multivariate OR (95% Confidence interval)		P-value
Number of living children:			
0 - 2	1.00		
3 - 5	1.67	(1.04, 2.66)	0.0320
6+	2.36	(0.89, 6.25)	0.0848
Prefers to use oral contraceptives:			
Yes	1.00		
No	1.66	(1.06, 2.59)	0.0264
Reported to have experienced side effects:			
No	1.00		
Yes	1.53	(1.06, 2.22)	0.0233

* The model included the following variables; age, education, marital status, occupation, number of living children, preferrence for OCs, history of experiencing side effects, type of pill used, husband awareness, duration of use and preferrence for more children.

Women who preferred to use other contraceptive methods and those who reported that they had experienced some side effects were more likely to be non-compliant than those who preferred oral contraceptives or those who had not experienced side effects. Non-compliance was also significantly more common among women with 3 or more children than those with less than 3 children. Other factors were not significantly associated with non-compliance.

8.0 DISCUSSION

Adherence to oral contraceptive regimens among family planning clients opting to use oral contraceptives is of central importance in assuring effectiveness. Several studies have shown that incorrect use is a major cause of contraceptive failures among oral contraceptive users (Hubacher et al, 1993; Potter et al, 1988; Trusell et al 1990; Siriboon et al, 1990; Emans et al, 1987; Seaton 1985).

This study considered the level of compliance to oral contraceptives among women of reproductive age in Dar es Salaam as well as factors which influence compliance. The findings of this study indicated that the level of knowledge on how to take the pills was exceptionally high. Even more important was the observation that most women interviewed knew what to do when they missed to take one pill. Many studies conducted in Tanzania (Ngallaba et al, 1993; Mmbuji 1991; Msami 1983; Kapiga et al, 1992) have focussed on eliciting general awareness of family planning methods. These studies have shown that the level of awareness of family planning methods is generally high in Tanzania.

However, many researchers and senior Family Planning services administrators have criticized these studies, mainly because they have asked questions which elicited general awareness and no attempt were made to explore more deeper knowledge which may assist to assess clients ability to use family planning methods correctly. The findings of this study confirm that the level of functional knowledge on how to use pills is quite high among women currently using oral contraceptive pills. This also suggests that the level of information provided to women using oral contraceptives in service delivery points (SDP) is quite comprehensive and that most clients had adequate knowledge about the correct way of taking pills.

The study also measured the level of awareness of other family planning methods. Overall, respondents had limited awareness of other family planning methods other than condoms and IUCD. These findings have critical implications on the quality of family planning services provided in the study area. Lack of awareness of other family planning methods may indicate limited exchange of information between the client and service providers. Limited awareness of other family planning methods may affect clients ability to choose a best method which suits her reproductive goals. Client-

provider information exchange and choice of contraceptive methods are the key components of the quality of care framework (Bruce 1990; Kumar et al, 1989).

Only a half of women interviewed were aware of at least one potential side effect of oral contraceptives. This suggests that there is limited information about side effects provided during counselling sessions. Knowledge on side effects of oral contraceptives is extremely important because pill related side effects may cause clients to discontinue pill use or switch to less effective methods (Stephen et al, 1988). In Egypt failure to take a pill within the previous month was strongly associated with experience of side effects (Trottier et al, 1994). Therefore communicating to women on side effects will make them aware and report earlier to health units in case they experience them and hence get appropriate advice.

Another aspect explored by this study was respondents future reproductive goals. Majority of women interviewed planned to have another child later on. This finding indicates that most women in the study area were using oral contraceptives to space their next birth rather than to limit family size. Interestingly, the desire for more children was common even among

women with more than three children. These findings may provide partial explanation to the relatively low usage of long term and permanent family planning methods in Tanzania. In the TDHS, of the 7% women using modern family planning methods, most of them were using pills (52%) while only 25% reported that they had been sterilized (Ngallaba et al, 1993). It is possible that many women don't use long term and permanent family planning methods because they don't want to limit family size.

In the recent national survey, desire for large families was observed to be common in Tanzania (Ngallaba et al, 1993). In this survey many women (36%) who were not intending to use family planning methods reported that they wanted more children. In general, the survey showed that more than a half of women interviewed wanted at least 5 children. More information on the disadvantages of large families need to be given during client counselling sessions.

This study had shown that the majority of women (78%) interviewed were taking oral contraceptive pills correctly, indicating that compliance on pill regimens was quite good. This suggests that most women using oral contraceptive in the study area took the pills correctly as instructed by service providers. Studies

done elsewhere found much lower proportions of women taking pills correctly. In Bangladesh, only 23% of women were reported to have good compliance (Seaton, 1985); compared to 42% (Potter et al, 1988). In Egypt, 63 percent of 1,258 current pill users reported an interruption in their pill use in the past month and of those women; only 40 percent took the correct action when they missed a pill. It is reported that the observed incorrect use was a result of confusing, uncorrect, or incomplete information provided to them at the clinics (Trottier et al, 1994).

The observed high compliance corresponds well with the high level of knowledge found in the study population. This suggests that knowledge had a direct relationship with correct use of contraceptives and supports the notion that raising general knowledge is a necessary step towards assuring high level of compliance. To sustain this level of compliance, steps need to be taken to maintain the high level of knowledge about pills.

Although compliance in taking oral contraceptives was high, one fifth of the study subjects were not taking their pills correctly indicating that non-compliance was still a problem in the service delivery points covered by this study. To increase contraceptive

effectiveness, it is important to identify non-compliant women and provide more counselling to assist them take pills correctly because non-compliance has been cited as a major cause of contraceptive failure (Trussel et al, 1990).

Similar findings have been reported in the Demographic and Health Survey in Botswana and Zimbabwe where 21% of users were found to be non-compliant. Non compliance was also identified to be a major problem in Egypt where 38% of oral contraceptive users were using oral contraceptive pills incorrectly (Hubacher et al, 1993).

The association between non-compliance and socio-demographic factors and other background characteristics was explored. Education appeared to be inversely associated with non-compliance although the ability of this study to assess the association between education and compliance was limited because only few respondents had post primary education.

Younger and single/separated women were more likely to be non-compliant than older, married women. These two variables were closely related since most younger women were also unmarried. It is possible that younger unmarried women had less defined reproductive goals making them less likely to comply with the pills regimens. However, neither of these factors were

significant in multivariate analyses indicating that they were not independent predictors of non-compliance. The number of living children was also found to be inversely associated with compliance. Women with more than two living children were more likely to be non-compliant than those with less than three children. This association was not materially altered in multivariate analyses suggesting that it was important predictor of non-compliance.

Reported duration of continued use of contraceptives was long, with mean duration of about eighteen months and median of eleven months. Since most women interviewed were using contraceptives in order to space their births, it seems over a half of the women wanted their next birth to happen about two years after their previous birth, (that is at least 11 months of contraceptive use and 9 months of pregnancy). This finding indicates that many women in the study area want to space their births for at least 2 years. This should be encouraged since babies born within 2 years of the previous birth are more likely to die than those spaced further apart. In the TDHS, it was found that infants born less than 2 years apart died in the first year of life at a rate twice that of those spaced further apart (Ngallaba et al, 1993).

Non-compliance was found to be more common among women who had used pills for up to 12 months than those who had used pills for longer duration. These results suggests that women on pills for shorter duration need more counselling and information about how to use pills than those who had been using them for longer durations. Satisfaction with the method of contraception has been documented to enhance contraception, (Furstenburg et al, 1993). Disatisfaction with the method of contraception has also been cited to be one of the reason for discontinuation from contraception, (Bhatia et al, 1984). It is reassuring to note that majority of women interviewed (81%) reported that they preferred oral contraceptives.

However, Non-compliance was common among women who responded that they did not prefer pills. This association remained significant after adjusting for other factors indicating that it was an independent predictor of compliance. Service providers need to identify these women during counselling and discuss other alternative methods which may suit their reproductive goals.

Substantial number of women reported to have experienced what they perceived to be side effects of

pills, although most of the side effects reported were non-specific and not necessarily due to the pills they were using. These results show that a large proportion of women experienced possible pill related side effects. Women who had experienced side effects were more likely to be non-compliant than those who did not. Other studies in Bangladesh have observed increased contraceptive use discontinuation among women reporting to have experienced side effects (Bhatia et al, 1984). A system need to be developed, hopefully within family planning service delivery points, to identify women experiencing possible pill related side effects. This information can be obtained routinely during counselling at each visit. Women experiencing side effects need reassurance and continued communication with service provider.

9.0 SUMMARY

The findings from this study showed that compliance to oral contraceptives among users attending service delivery points in Dar es Salaam was very high (77.7%). Similary, the level of knowledge on how to take pills and what to do when they miss one pill was generally high.

The study has indicated that there is limited knowledge on alternative methods a woman can use besides condom, IUCD and injectables. Also there is limited knowledge on side effects a woman can experience while on oral contraception, because only half of respondents could state at least one side effect from pill use they knew. This limited knowledge on alternatives a woman can use and side effects from pill affects the quality of services offered at these service delivery points.

Non-compliance to oral contraception is a problem because more than one fifth of the respondents were not taking oral pills correctly. Non-compliance was common among clients who were : young, non-educated, with more than three children; those who did not prefer oral contraceptives and those who perceived that they had experienced pill related side effects.

More than one third of respondents perceived to have experienced one or more side effects and this affected compliance. Abdominal pain, vaginal discharge and intermenstrual bleeding each was reported as pill related side effects experienced by at least 5% of respondents. High blood pressure and headache were reported by less than three percent each. However these reported side effects could be caused by other factors other than oral contraceptives.

Eighty seven percent of respondents intended to have children in the future, indicating that they were interested to space their children and not to limit their family sizes. Also the majority (81%) of oral contraceptive users interviewed preferred this method of contraception. Among those who were not in favour of this method they stated that the experience of side effects, long duration of OC pills use and the fact that they felt the method was demanding as it required one to take a pill daily were the main reasons for their non-preference of oral contraception.

10.0 CONCLUSION AND RECOMMENDATION

Compliance to oral contraception among clients attending family planning clinics in Dar es Salaam is encouragingly high and this is influenced by a multitude of factors; others having positive and other negative effects. This high compliance is associated with proper knowledge on how to use pills, what to do on missing one pill, being in favour of oral contraception, long duration of use of this method, not perceiving side effects from pills and older age of the clients.

There is obviously limited knowledge of other family planning methods, side effects from pills and what should be done when the client misses two or more pills. To improve compliance to oral contraception therefore, the following recommendations are given:

1. Appropriate counselling must be enforced among; non-compliant clients, those who perceive side effects from pills and those who do not favour this as a method, nevertheless appropriate actions should be taken.

2. Proper physical examination of clients must always be done to screen those at risk of pill related side effects for new clients and also to old clients during every visits.

3. Continuous information, education and communication must be done on alternative family planning methods and also pill related knowledge so that clients have more knowledge on them and wide range of choice according to their reproductive goals.

4. Studies must be encouraged to see compliance to other family planning methods and the associated factors so that the impinging factors are eliminated.

11.0 REFERENCES

1. Basnayake S, Higgins J, Rodgers S, Kelly SE: Early symptoms and discontinuation among users of oral contraceptive in Sri Lanka. Stud Fam Plann 1984; **15**(16): 285 - 290.

2. Bennet SW, Liyanaze W, Smith DA: Simplified general method for cluster sample surveys of Health in developing countries. World Health Stat Q 1991; **44**: 98 - 108.

3. Bhatia S, Mosley WH., Faraque ASG and Chakraborty J: The Matlab Family Planning Health Services Project. Stud Fam Plann 1980; **11**(6): 202 - 212.

4. Bhatia S, Kim Y: Oral contraception in Bangladesh. Stud Fam Plann 1984; **15**(5): 233 - 241.

5. Bruce Judith, Fundamental Elements of Quality of care: A simple Frame work: Stud Fam Plann 1990; **21**(2): 61 - 91

6. Bureau of Statistics. Population census 1967: Ministry of Planning and Economic Affairs, Dar es Salaam, Tanzania. 1973.

7. Bureau of Statistics. Population census 1978: Ministry of Planning and Economic Affairs, Dar es Salaam, Tanzania, 1981.

8. Bureau of Statistics. 1988 Population census: Preliminary report. Ministry of Finance, Economic Affairs and Planning, Dar es Salaam, Tanzania, 1991.

9. Chiduo A: Opening speech for Annual Scientific Conference of the TPHA held on 2nd - 4th November 1987 in Morogoro. Proceedings of the 6th Annual Scientific Conference of TPHA, November 2nd - 4th 1987, Morogoro, Tanzania :2.

10 Dar es Salaam City Council Annual Report for Department of Health, 1991.

11. Emans JS, Estherann A, Woods ER, Smith DE, Klein K, Merola J: Adolescents' compliance with the use of oral contraceptives. JAMA 1987; **257**: 3377 - 3381.

12. Finger WR: Using oral contraceptive correctly: Process on package instructions. Fam Health Int Net 1991; **12**(2): 14 - 27.

13. Furstenburg FFS, Allison P: Contraceptive continuation among adolescent attending family Planning clinics. Int Fam Plann Perspect 1993; **15(4)**: 211 - 217.

14. Gish O: Family Planning issues in Tanzania Planning the Health Sector 1975; 159 - 168.

15. Grady WR, Hayward MD, Yagi J: Contraceptive failures in the United States: Estimates from 1982 National Survey of Family Planning. Int Fam Plann Perspect 1986; **12**(5): 50 - 55.

16. Goldstuck ND, Hammar E, Butchart A: Use and misuse of oral contraceptive by adolescents attending a free standing clinic. Adv Contracept 1987; **3**(4): 335 - 339.

17. Henderson R, Sunderson T: Cluster sampling to asess immunization coverage. A review of experience with a simple sampling method. Bull World Health Organ 1992; **60**(2): 253 - 260.

18. Hubacher D and Potter L: Adherence to oral contraceptive regimens in four countries. Int Fam Plann Perspect: 1993; **19**(2): 49 - 53.

19. Huber SC, Piotrow PT, Potts M, Chris B, Isaac SL, Raven RT: Contraceptive distribution - taking supplies to the village and households. Pop Rep [J] July 1975; No. 5: 1 - 4

20. Jesudas JF: Maternal and child health. Family Planning - Monitoring and evaluation. Proceedings of the 6th Annual Scientific Conference of TPHA November 2nd - 4th 1987; Morogoro, Tanzania: 144 - 147.

21 Kapiga SH, Hunter DJ and Nachtigal G: Reproductive knowledge and contraceptive awareness and practice among secondary school pupils in Bagamoyo and Dar es Salaam, Tanzania. Cent Afr J Med 1992; **38**(9): 378 - 380.

22. Killick SR: Patients education and understanding: A critical review. Adv Contracept 1992, 8 Suppl 1: 55 - 65.

23. Korten FF and Korten DC: Background as Dr. Vivas Program. Casebook for Family Planning management. The pathfinder Fund, Printed in the United States of America by Total Graphics Inc. Sept. 1978: 137.

24 Kumar S, Jain A, Bruce J,; Assessing the quality of Family Planning services in Developing countires, Programme Division Working Papers No. 2, The population council, 1989.

25. Laing JE: Differentials in contraceptive use effectiveness in the Phillippines. Stud Fam Plann 1974; **5**(10): 302 - 313.

26. Lapham RL and Mauldin WP "Family Planning Program effort and Birth rate decline in Developing countries" Int Fam Plann Perspect, 1984; **10(3)**: 109 - 112.

27. Letternmaier RNC and Gallen ME: "Why counselling counts".Pop Rep [J] December 1987. No. 36: 1-14

28. Lwanga SK and Lemoshow S: Tables of the minimum sample size determination in health studies. A Practical Manual WHO Geneva, 1991; 25

29. Ministry of Health (MOH). The National Family Planning Programme, Plan of operation 1989-1992.

30. Ministry of Health Tanzania (MOH). Tanzania Family Planning situation Analysis study. 1992.

31. Ministry of Health (MOH). Family Planning Research agenda workshop 1992; Background document:7.

32. Mmbuji PKL: Contraceptive Prevalence rate and factors related to Contraceptive use among child bearing women in Mbeya Urban Tanzania. M. Med Community Health, dissertation, University of Dar es Salaam 1991.

33. Msami JPM: Contraceptive patterns and their relationship to fertility among women in Bagamoyo District and Dar es Salaam city, Tanzania. DPH Dissertation, University of Dar es Salaam 1983.

34 Ngallaba S, Kapiga SH, Ruyobya I, Boerma T: Tanzania Demographic and Health Survey 1991/92. Bureau of Statistics, Planning Commission, Dar es Salaam, Tanzania, 1993; 21 - 61.

35 Norusis MJ,SPSS/PC^{+} TM: SPSS for the IBM/PC/XT/AT Library of Congress catalogin-in-Publication Data; 1986 B 93-B 108.

36 Omari CK: Socio-cultural factors in modern Family Planning in Tanzania. The Edwin Mellen Press, United Kingdom, 1989: 43 - 165.

37 Pagano M and Gauvreau K. Principles of Biostatistics. Wadsworth Publishing company, Beltmont Calfonia, 1993: 432 - 434.

38. Phillips JF, Stinson WS, Bhatia S, Rahman M and Chakraborty J: The demographic impact of Family Planning Health Project in Matlab, Bangladeshi. Stud Fam Plann 1982; **13**(5): 131 - 140.

39. Potter L, Wright S, Berrio D, Suarez P, Pinedo R and Castaned Z: Oral Contraceptive compliance in rural Columbia. Knowledge of users and providers. Int Fam Plann Perspect 1988; **14**(1): 27 - 31.

40. Potter L: Pill complicance. The determinant of use effectiveness. Fam Health Int Net (FHIN) 1989; **11**(1): 6 - 7.

41. Potter L and Dean WM: Family Health International Research triangle. International Planned Parenthood Federation; Med Bull 1990; **24**(5): 2 - 3.

42. Potter L: Oral Contraceptive compliance and its role in the effectiveness of the method in patient compliance. In JA Cramer and B Spiker (editors) Medical Practice and Clinical Trials. Raven press Ltd. New York, 1991; 100 - 113.

43. Rinchart W and Piotrow PT: Oral contraceptive update on usage; safety and side effects: Pop Rep [A] January 1979; No. 5: 5 - 8.

44. Seaton B: Non compliance among oral contraceptive acceptors in Rural Bangladeshi. Stud Fam Plann 1985; **16**(1): 52 - 59.

45. Siriboon S, Saengtienchai C and Knodel J: Who forget to take the pill? The Thai Experience. Int Fam Plann Perspect 1990;**16**(1): 23 - 37.

46. Stephen EH and Chamratrithirong A: Contraceptive side effects among current users in Thailand. Int Fam Plann Perspect 1988; **14**(1): 9 - 14.

47. Trottier DA, Potler LS, Taylor BA, Glover LH: User characteristics and oral contraceptive compliance in Egypt. Stud Fam Plann 1994: **25**(5): 284-92.

48. Trusell J, Vaughan B, Menken J and Jones J: Contraceptive failures in United State, An update. Stud Fam Plann 1990; **21(1)**: 51 - 55.

49. Tsui C.: Pill Contraceptive: New users take pill incorectlly: Fam Health Inter Net (FHIN) 1988; **10**(1): 5.

50. Vaughan JP and Morrow RH: Estimating sample size for a Prevalence study. Manual of epidemiology for district health management, WHO, Geneva, 1989; 175 - 176.

51. Way AA, Cross AR, and Kumar S. Family Planning in Botswana, Kenya and Zimbabwe. Int Fam Plann Perspect, 1987; **13**(1):7 - 11.

52. Wharton C, Blackburn R, Rinechart-ward M. lower-dose pills. Pop Rep [J] November 1988; No. 7:1-7.

53 World Health Organisation (WHO) Technical Report Series 157; 1968, No 168, 21. (Resolution WHA 21 - 43): 5 - 6

54. Wulf D: The future of Family Planning in the Sub-Saharan Africa. Int Fam Plann Perspect 1988; **11**(1): 1 - 8.

12.1. APPENDIX 1 A: QUESTIONNAIRES

MUHIMBILI UNIVERSITY COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF DAR ES SALAAM

COMPLIANCE TO ORAL CONTRACEPTIVE PILL USE AMONG CLIENTS ATTENDING FAMILY PLANNING DELIVERY UNITS IN DAR ES SALAAM.

QUESTIONNAIRE TO ORAL CONTRACEPTIVE PILL USERS

ENGLISH VERSION

Serial Number .....

I. Identification:

1 Name of interviewer .....

2. Name of the family Planning service delivery point .....

3. Name of district .....

4. Name of the respondent.....

5. Date .....

II Socio-economic and demographic characteristics

1. Age (completed years).....

2. What is the level of education you attended?

01 Adult Education

02 Primary Education

03 Secondary Education ( )

04 Post-secondary Education

05. Others (eg Quran), Specify .....

06. None

3. Which religion do you belong to?

01. Christian (Protestant)

02 Christian (Catholic)

03 Moslem ( )

04 None

05. Others, Specify .....

4. What is your occupation.....

5. Marital Status

01 Single

02 Married

03 Living together with a man (cohabiting) ( )

04 Separated, divorced, widowed.

6. How many children have you? .....

III <u>Knowledge about contraception</u>

7. Where did you hear for the first time about family planning

01 At hospital/clinic/dispensary

02 From a female friend

03 From a male partner ( )

04 From radio

05 At school/college

06 From News paper

07 Others, specify .....

8. Please can you mention the contraceptive methods you know?

(Instruction: Tick the methods she mentions among the following)

01 Pills ( )
02 Condom ( )
03 IUCD ( )
04 Foams ( )
05 Jellies ( )
06 Implants ( )
07 Injection ( )
08 Female sterilization ( )
09 Male sterilization ( )
10 Traditional methods ( )
11 Natural methods (withdraw, abstainance, breastfeeding, Rythm) ( )

9. Do you know how Oral contraceptive pill works?

01. Yes
02. No. ( )

10. If yes in Question 9, How.....
.....

11. How often are the Oral contraceptive pills supposed to be swallowed?
.....
.....

12. Suppose you have forgotten to take one pill what will you do?

.....

.....

13. Suppose you have forgotten to take to (2) pills what will you do? .....

.....

.....

14. Suppose you have forgotten to take more than two pills what will you do? .....

.....

.....

IV Attitude on Contraception

15. How many more children do you intend to have?

01. 0 ( )

02. 1 - 2 ( )

03. 3 and above ( )

16 Is the current method of family planning (pills) the one you most prefer?

01. Yes

02. No ( )

17. If yes in question 16, Why?.....

.....

18. If No in question 16, why? .....
.....

19. If No in question 16, which method do you prefer?
.....

20. Why? .....
.....

21. Do you believe that Oral contraceptives are effective in pregnancy prevention?
01. Yes
02. No ( )

22. If Yes in question 21, Why? .....
.....

23. If No in question 21, Why?.....
.....

24. Does your male partner\husband know that you are using oral contraceptive pills?
01 Yes
02 No ( )
(If No in question 24 go to question 28)

25. If Yes does he approve?
01. Yes
02. No ( )
(If Yes go to question 27)

26 If he does not approve, why? .....
.....

27. If he approves, why?.....
.....
(From question 27 proceed to 29).

28. Why is he not informed about your use of oral contraceptive pills? .....
.....

29. Does your partner believe that oral contraceptives are effective in pregnancy prevention?
01. Yes
02. No ( )

30. If Yes, why? .....
.....

31. If No, why?.....
.....

V <u>Practice of Oral Contraception</u>:

32. For how long have you been using oral contraceptive pills?
..... years, equivalent to ..... months.

33. Please, can you mention some of the side effects you can get while using oral contraceptive pills? (Tick the side effects she mentioned among the following unprompted)

01. Headache ( )
02. Nausea ( )
03. High BP ( )
04. Abdominal pain ( )
05. Tiredness ( )
06. Vomiting ( )
07. Backache ( )
08. Intermestrual bleeding ( )
09 Heavy bleeding ( )
10 Weight gain ( )
11 Birth defect ( )
12 Reduced fertility ( )
13. Cancer ( )
14. Breast soreness ( )
15. Amenorrhoea ( )
16. Others, specify .....

34. Which side effects among those stated in question 33 have you experienced?

1. .....
2. .....
3. .....
4. .....
etc .....

35. How often do you take oral contraceptive pills

.....

.....

36. In the last 3 packets you used, which category of oral contraceptive pills have you been taking?

01 35 day pills

02. 28 day pills ( )

37. Can you demonstrate to me how you will start to take pills in this packet? (Note: give her the type of packet she is using as stated in question 36)

01. Able to show correctly

02 Unable to show correctly ( )

38 After taking the last pill in the just finished packet, can you explain to me exactly how you would start a new packet?

01. Explained in the right way for the type of pill she is using

02. Explained wrongly for the type of pill she is using ( )

39 What do you do when you miss a pill/pills?

.....

.....

40. What is/are the reason/s for you missing a pill/pills?

    01 Forgot ( )

    02 Husband away ( )

    03 Experience of side effects ( )

    04. Suffering from other diseases ( )

    05. Run out of supply ( )

    06. Others, specify .....

41. Have you ever used other methods of contraception beside the pills?

    01 Yes

    02 No ( )

    (If No proceed to question 44).

42. If Yes in question 41, which method/s

    01 .....

    02 .....

    03 .....

    04 .....

    05 .....

    etc.....

43. What were the reasons for you switching to oral contraceptives? .....

    .....

VI Health service related issues

44. Do you think you were given adequate and clear information on how to take the pill when you started contraception?

01 Yes

02 No

( )

45. If No in question 44, do you think you have adequate knowledge on how to use oral contraceptive pills now?

01. Yes

02. No

( )

46. If Yes in question 45, where did you get the adequate information on how to use oral contraceptive pills from

01 Husband/male partner

02 Female friend

03 Pharmacist

( )

04 Others, specify .....

.....

47. Do you think you are satisfied with work performance of family planning staff.

01. Yes

02 No

( )

48. Do you get adequate counselling whenever you have problems?

    01 Yes

    02 No ( )

49. If No in Question 48, what do you do?

    .....

    .....

50. Do you consider the time of interaction between you and the providers of family planning adequate?

    01 Yes

    02 No ( )

APPENDIX 2 B: QUESTIONNAIRE

MUHIMBILI UNIVERSITY COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF DAR ES SALAAM

COMPLIANCE TO ORAL CONTRACEPTIVE PILL USE AMONG CLIENTS ATTENDING FAMILY PLANNING DELIVERY UNITS IN DAR ES SALAAM.

QUESTIONNAIRE TO ORAL CONTRACEPTIVE PILL USERS

KISWAHILI VERSION

Nambari ya dodoso .....

I. UTAMBULISHO:

1 Jina la Mhoji.....

2. Jina la Kituo kinachotoa huduma ya Uzazi wa Mpango .....

3. Jina la Wilaya.....

4. Jina la Muhojiwa .....

5. Tarehe.....

II Vielelezo vya kiuchumi, kijamii na kitakwimu (Socio-economic and demographic characteristics

1. Umri (miaka kamili).....

2. Je umefika kiwango gani cha elimu?

01 Elimu ya watu wazima

02 Elimu ya msingi

03 Elimu ya Sekondari ( )

04 Elimu ya juu zaidi ya Sekondari

05. Nyinginezo (e.g. Quran), taja.....

06. Sijasoma (sijaenda shule)

3. Wewe ni muumini wa dini gani?

01. Mkristo (Protestant)

02 Mkristo (Katoliki)

03 Mwisilam ( )

04 (Sina dini) Mpagani

05. Nyingineyo. Itaje.....

4. Wewe unafanya kazi gani?.....

5. Wewe.....

01 Hujaolewa

02 Umeolewa ( )

03 Unajamiina (kuishi pamoja na mwanaume bila kufunga ndoa)

04 Umetengana/umeachika/umefiwa.

6. Je, una watoto wangapi? .....

III <u>Ufahamu kuhusu uzazi wa mpamgo</u>

7. Kwa mara ya kwanza, ulisikia wapi kuhusu uzazi wa wa mpango?

01 Hospitali/Kliniki/Zahanati

02 Rafiki wa kike

03 Rafiki wa kiume ( )

04 Redioni

05 Shule/Chuoni

06 Gazetini

07 Kwingineko, taja.....

8. Tafadhali, nitajie njia za uzazi wa mpango unazozifahamu (weka alama ya v kwenye njia atakazozitaja kati ya zifuatazo)

01 Vidonge ( )

02 Mpira wa kiume ( )

03 Kitanzi ( )

04 Povu ( )

05 Mafuta (Jellies) ( )

06 Implants ( )

07 Sindano ( )

08 Kufunga kizazi mke ( )

09 Kufunga kizazi mume ( )

10 Njia za asili ( )

11 (Kunida, kutokukutana kimwili, kunyonyesha) ( )

9. Je unafahamu vidonge vya uzazi wa mpango vinavyofanya kazi?

01. Ndiyo

02. Hapana ( )

10. Kama ndiyo, vinafanya kazi namna gani?.....

.....

11. Je mtu anapaswa amezeje vidonge vya uzazi wa mpango?

.....

.....

12. Kama umesahau kumeza kidonge kimoja utafanya nini?

.....

.....

13. Kama umesahau kumeza vidonge viwili (2) utafanya nini?.....

.....

.....

14. Kama umesahau kumeza vidonge zaidi ya viwili (2) utafanya nini?.....

.....

.....

IV <u>Mtazamo wa mteja kuhusu uzazi wa mpango.</u>

15. Je ni watoto wangapi zaidi ungependa kuwa nao?

01. 0 ( )

02. 1 - 2 ( )

03. 3 na kuendelea ( )

16 Je, njia ya mpango wa uzazi (vidonge) unavyotumia sasa ndiyo unayoipenda zaidi ya nyingine?

01. Ndiyo

02. Hapana ( )

17. Kama ndiyo, kwa nini? .....

.....

18. Kama hapana, kwa nini? .....

.....

19. Kama hapana swali la 16, njia ipi nyingine unaipenda zaidi? .....

.....

20. Kwa nini? .....

.....

21. Je, unaamini kwamba vidonge vya majira vina uwezo wa kuzuia mimba?

01. Ndiyo

02. Hapana ( )

22. Kama ndiyo, kwa nini? .....

.....

23. Kama hapana kwa nini? .....

.....

24. Je, mume wako (rafiki yako wa kiume) anajua kuwa wewe unatumia vidonge vya majira?

    01 Ndiyo

    02 Hapana ( )

    (Kama hapana swali la 24, nenda swali la 28)

25. Kama ndiyo anaafiki wewe kutumia njia hii?

    01. Ndiyo

    02. Hapana ( )

26 Kama hapana, kwa nini? .....

.....

27. Kama ndiyo kwa nini?.....

.....

28. Kwa nini mume wako (rafiki wa kiume) hafahamu kwamba wewe unatumia vidonge vya kuzuia mimba?

.....

.....

29. Je mume wako (rafiki wa kiume) anaamini kwamba vidonge hivi vina uwezo wa kuzuia mimba?

    01. Ndiyo

    02. Hapana ( )

30. Kama ndiyo, kwa nini?.....

.....

31. Kama hapana, kwa nini?.....

.....

V Utumiaji wa vidonge vya majira:

32. Je kwa muda gani umekuwa ukitumia vidonge vya majira? .....

33. Naomba unitajie madhara ambayo mtu anayetumia vidonge anaweza kuyapata (weka v katika madhara atakayotaja kati ya yaliyoorodheshwa hapa chini)

01.	Kuumwa kichwa	( )
02.	Kichefuchefu	( )
03.	BP kubwa	( )
04.	Kuumwa tumbo	( )
05.	Kujisikia kuchoka	( )
06.	Kutapika	( )
07.	Kuumwa na mgongo/kiuno	( )
08.	Kutokwa damu ya mwezi kabla ya mwezi (Intermestrual bleeding)	( )
09	Kutokwa damu nyingi ya mwezi	( )
10	Kuongezeka uzito	( )
11	Kuzaa mtoto mwenye kilema/kasoro	( )
12	Kupungua kwa uwezo wa kuzaa	( )
13.	Kansa	( )
14.	Kuvimba kwa matiti	( )
15.	Kutopata damu ya mwezi	( )
16.	Mengineyo, yataje	

34. Je ni madhara gani kati ya uliyoyataja (swali la 33) ambayo umewahi kuyapata?

1. .....

2. .....

3. .....

4. .....

Mengineyo .....

35. Nieleze utaratibu unaofuata katika kumeza vidonge vya majira.

.....

.....

36. Katika paketi tatu za mwisho za vidonge vya majira ni fungu gani kati ya haya mawili ulitumia?

01 Paketi ya vidonge 35

02. Paketi ya vidonge 28

37. Nionyeshe jinsi unavyoanza kumeza vidonge katika paketi hii (mpatie paketi ya vidonge anayotumia kama alivyoeleza katika swali la 36)

01. Ameonyesha sawasawa

02 Hakuonyesha sawasawa ( )

38 Baada ya kumeza kidonge cha mwisho katika paketi uliyomaliza hivi karibuni. Je unaweza kunieleza kwa ufasaha ulivyoanza kumeza vidonge katika paketi mpya?

01. Ameeleza sawasawa kufuatana na aina ya vidonge anavyomeza.

02. Hakueleza sawasawa kadri ya aina ya vidonge anavyovimeza. ( )

39 Je unafanya nini unapokosa kumeza kidonge/vidonge vya uzazi wa mpango.

.....

.....

40. Je ni sababu ipi/zipi zinazokufanya usimeze hivyo vidonge?

01 Nilisahau

02 Mume alikuwa hayupo

03 Nilipatwa na madhara kutokana na vidonge

04 Nilikuwa naumwa ugonjwa mwingine ( )

05 Niliishiwa vidonge

06 Mengine, yataje .....

41. Je umewahi kutumia njia nyingine ya/za uzazi wa mpango zaidi ya vidonge

    01 Ndiyo

    02 Hapana ( )

    (Kama hapana nenda swali 44).

42. Kama ndiyo swali la 41, ni njia ipi/zipi?

    01 .....

    02 .....

    03 .....

    04 .....

    05 .....

    Mengineyo .....

43. Ni sababu gani iliyokufanya uanze kutumia vidonge vya majira? .....

    .....

VI <u>Maswali yanayohusu huduma ya afya na mengineyo</u>

44. Je unafikiri ulipewa maelezo sahihi na ya kutosha ulipoanza kumeza vidonge?

    01 Ndiyo

    02 Hapana ( )

45. (Kama hapana swali 44), Je unafikiri unafahamu vya kutosha kuhusu jinsi unavyopaswa kumeza vidonge kwa sasa?

    01. Ndiyo

    02. Hapana ( )

46. (Kama ndiyo swali 45), umepata wapi maelezo yanayohusu umezaji wa vidonge vya majira?

01 Kutoka kwa mume/rafiki wa kiume

02 Rafiki wa kike ( )

03 Mfamasia

04 Kwingineko, taja.....

.....

47. Je unaridhika na kiwango cha utendaji kazi cha wahudumu wa uzazi wa mpango kituoni hapa?

01 Ndiyo ( )

02. Hapana ( )

48. Je unapata ushauri wa kutosha kila unapokuwa na matatizo?

01 Ndiyo

02 Hapana ( )

49. Kama hapana, unafanya nini unapohitaji ushauri huo?

.....

.....

50. Je unafikiri unapata muda wa kutosha kuweza kuongea na wahudumu wa uzazi wa mpango?

01 Ndiyo

02 Hapana ( )

HEALTH FACILITIES (MCH CLINICS AND FAMILY PLANNING CLINICS IN RESPECTIVE DISTRICTS) OF DAR ES SALAAM

ILALA	KINONDONI	TEMEKE
Ilala Hosp.	Oysterbay Disp	Temeke
Mnazi Mmoja	Mwananyamala	Mbagala Round Table
Buguruni Clinic	Tandale	Mtoni
Tabata	Mburahati	Kilimahewa
Vingunguti	Urafiki	Kasorobo
Kiwalani	Kimara	Keko
Kitunda	Mbezi	Buza Disp.
Kinyerezi	Kibamba	Yombo Vituka
Mwakanga	Kwembe	Chamazi
Pugu Kajiungeni	Kiluvya	Mbande
Buyuni	Muhimbili	Tuangoma
Chanika	Magomeni	Kibada
Mvuti	Goba	Chekeni/Mwasonga
Msongola	Mbweni	Kigamboni
Ukonga	Ununio	Mjimwema
Ukonga/Magereza	Boko	Nunge
Juwata	Bunju	Gezaulole
Airport H/Centre	Mabwe Pande	Mwongozo
Airport Disp.	Kijitonyama	Gomvu
Karakata	Kawe	Kimbiji

ILALA	KINONDONI	TEMEKE
Tanzania Medical Service	Oysterbay Hosp.	Buyuni
Medical Consult.	Chuo Kikuu	Tundwi Songani
NDC	Wazo Hill	Mgulani Police
Hindu Mandal		Mgulani JKT
TAPA		Vosa

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