

**DEMAND FOR FAMILY PLANNING
IN SOUTH SULAWESI, INDONESIA 2007**

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Requirements for the degree of
Master of Applied Population Studies**

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DECLARATION

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree in any university; and that to the best of my knowledge it does not contain any material, which is formerly published or written by any other persons except where due to reference is written in this thesis.

Asep Sulaimani

Adelaide, 10 July 2009

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ABSTRACT

Better understanding of the demand for family planning in South Sulawesi Province, Indonesia has obtained by analyzed the trends of demand for family planning and a number of selected demographic, socio-economic and family planning variables. The 2007 Indonesian Demographic and Health Survey data show that between 1991 and 2007 the demand for family planning and current use of contraception in South Sulawesi have increased. However, special attention needs to be paid to the trends of unmet need for family planning which has increased moderately and gradually between 1997 and 2007. Bivariate and Multivariate analysis have been carried out in this study. The demand for family planning was found to be directly associated with women's age, number of living children, desire for future children, women's education, distance to health facility, transportation to health facility and husband's approval of family planning. Certainly, Women's age, desire for future children and husband's approval were the variables which had the strongest relationship with demand for family planning. To summarize, South Sulawesi has a high level of unmet need for family planning and a relatively low level of met need which exposed that the total demand for family planning, consisting of unmet need and met need is relatively low. Therefore, in order to reduce the fertility of the province, the total demand for family planning and its fulfillments should be increased.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Over the past few decades there has been positive progress on the contraceptive use and the demand for family planning in Asia which also related with the declining on the number of unmet need. More than 100 million women in less developed countries or about 17 percent of all married women, would prefer to avoid a pregnancy but are not using any form of family planning (Ross and Winfrey, 2002).

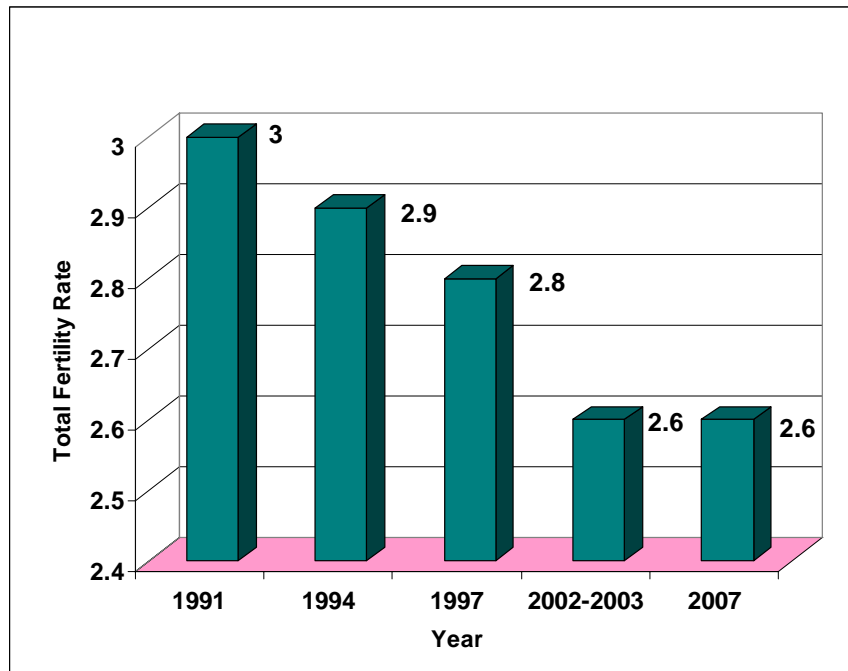
Table 1.1. Demand for Family planning and Its Component for Currently Married Women.

Country	Year of survey	Unmet need			Current use			Total demand ¹	Percentage of total demand satisfied	Unmet need modern methods	Using modern methods	Percentage of total demand satisfied by modern methods
		Total (1)	Spacing (2)	Limiting (3)	Total (4)	Spacing (5)	Limiting (6)					
ASIA												
Bangladesh	2004	11.3	5.1	6.3	58.1	16.2	41.8	71.4	84.1	22.1	47.3	66.3
Cambodia	2000	29.7	14.4	15.2	23.8	9.4	14.4	56.4	44.5	34.7	18.8	35.1
India	1998-99	15.8	8.3	7.5	48.2	3.5	44.7	64.0	75.3	21.2	42.8	66.9
Indonesia	2002-03	8.6	4.0	4.6	60.3	24.2	36.2	69.7	87.6	12.2	56.7	81.4
Kazakhstan	1999	8.7	3.6	5.1	66.1	23.0	43.0	75.2	88.5	22.1	52.7	70.7
Kyrgyz Republic	1997	11.6	4.5	7.2	59.5	26.3	33.3	71.2	83.6	22.3	48.9	68.7
Moldova	2005	6.7	2.5	4.2	67.8	19.3	48.5	75.2	91.1	30.6	43.8	58.2
Nepal	2001	27.8	11.4	16.4	39.3	3.8	35.5	67.1	58.6	31.7	35.4	52.7
Pakistan ²	2003	32.7	11.2	21.5	32.1	na	na	64.8	49.5	39.6	25.2	38.9
Philippines	2003	17.3	7.9	9.4	48.9	13.7	35.2	68.5	74.7	32.8	33.4	48.8
Turkmenistan	2000	10.1	5.2	4.9	61.8	22.0	39.8	72.2	86.0	18.9	53.1	73.6
Uzbekistan	1996	13.7	6.6	7.0	55.6	20.2	35.4	69.3	80.3	17.9	51.3	74.1
Vietnam	2002	4.8	2.0	2.8	78.5	13.9	64.6	84.3	94.3	26.7	56.7	67.3

Source: Westoff, CF 2006.

Demographers and health specialists refer to these women as having an “unmet need” for family planning, a concept that has influenced the development of family planning programs for more than 20 years. Based on table 1.1, the highest estimates of unmet need in Asia are for Pakistan (32.7 percent), Cambodia (29.7percent), and Nepal (28 percent), while the lowest values are for Vietnam (5 percent), Moldova (7percent) and followed by Indonesia (8.6 percent). The spacing and limiting components of unmet need are fairly evenly divided except in Pakistan where the emphasis is on limiting. In contrast, the actual use of contraception is concentrated among limiters in these Asian countries. The percentage of total demand satisfied is highest in Vietnam (94 per cent) and now averages around 85 percent in half of these countries

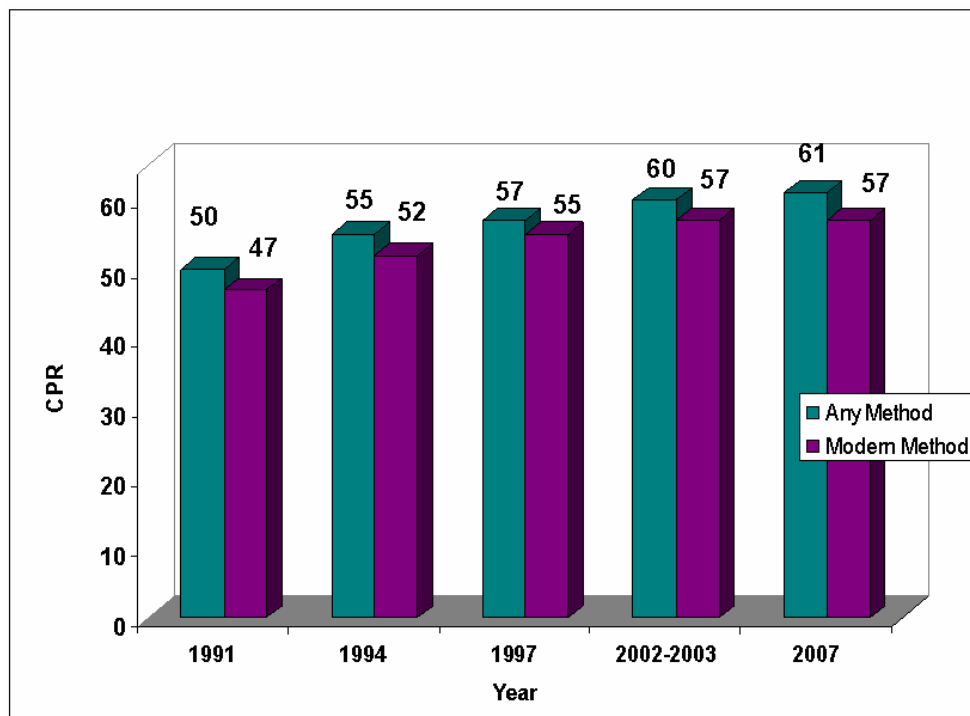
Figure 1.1. Trends in Total Fertility Rate in Indonesia



Source: Indonesia Demographic and Health Survey 1991, 1994, 1997, 2002 & 2007.

The low value of unmet need in Indonesia might come from implementation family planning which is coordinated by the National Family Planning Coordinating Board. Indonesia is a country with a total population of about 213.375.287 million in 2005, it make Indonesia is the fourth most populous country in the world after China, India and The US (SUPAS, 2005). The family planning program in Indonesia has been implemented since the early 1970s which have objective to increase the knowledge of, attitude towards and practice of contraception. As a result, Indonesia experienced decreasing number of unmet need for family planning from 10.6% in 1994 to 8.6% in 2002 and gain in increasing of contraceptive use and the significant decline of fertility rate on the national level (figure 1.1, figure 1.2 & figure 1.6).

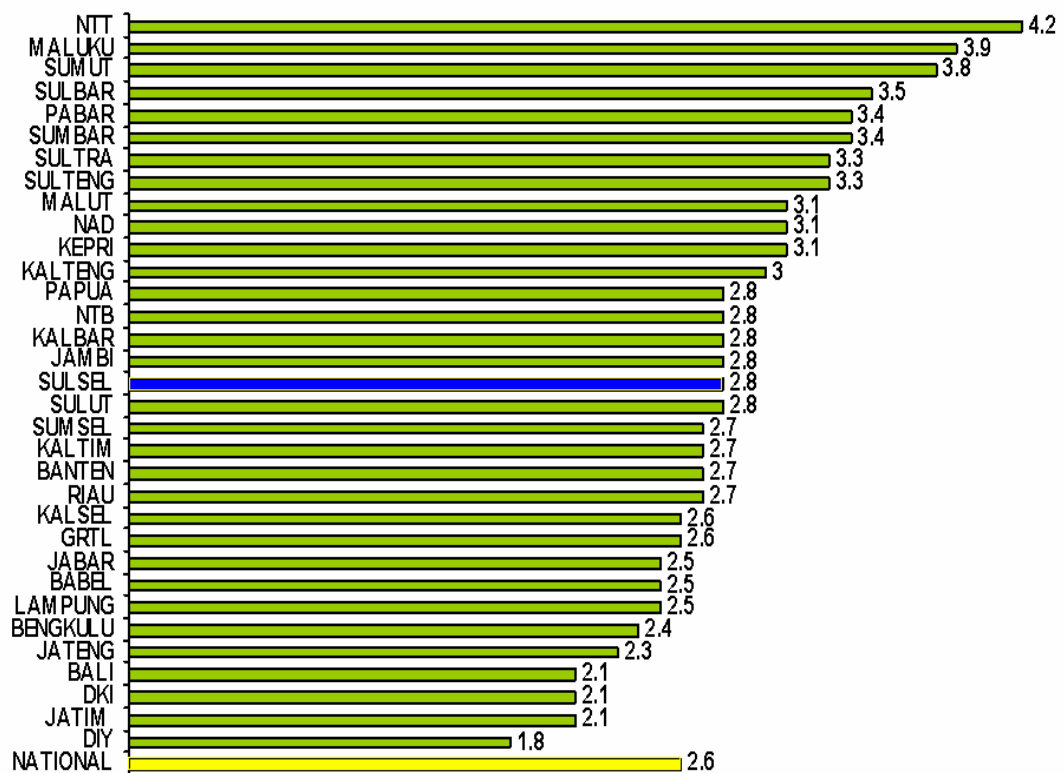
Figure 1.2. Trends in Contraceptive Use among Currently Married Women in Indonesia



Source: Indonesia Demographic and Health Survey 1991, 1994, 1997, 2002 & 2007.

Indonesia's population and family planning program is successful to decline total fertility rate (TFR) from 3 in 1991 to 2.6 births per woman by 2007 (see figure 1.1). As would be expected, the fertility decline reflects the upward trend in contraceptive use. The contraceptive users went up from 47% in 1991 to 57% in 2007 (see figure 1.2).

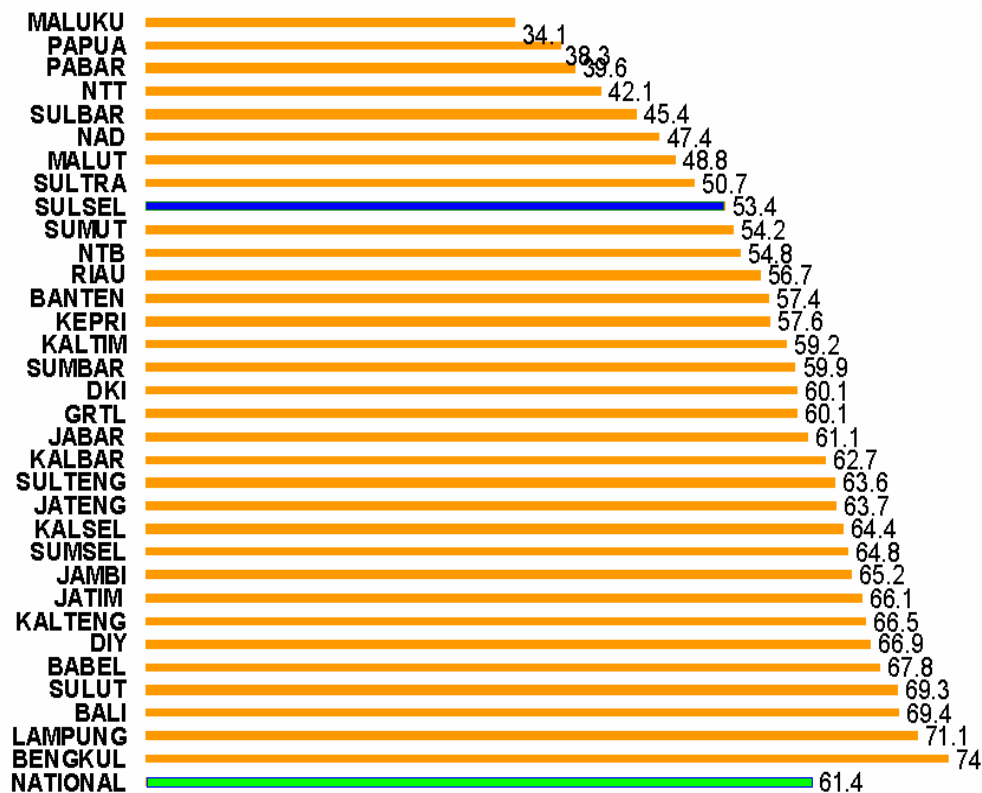
Figure 1.3. Total Fertility Rate by Province in Indonesia, 2007



Source: Indonesia Demographic and Health Survey, 2007

Though the national TFR is 2.6, there is a wide variation in fertility by province as shown on the 2007 Indonesia Demographic health Survey (see Figure 1.3). It ranged from about 1.8 per cent in DI Yogyakarta to 4.2 per cent in East Nusa Tenggara. Furthermore, the current contraceptive use and the unmet need for family planning among these provinces also have a big wide gap (see figure 1.4 and figure 1.5).

Figure 1.4. Current Use of Contraceptive by Province in Indonesia, 2007

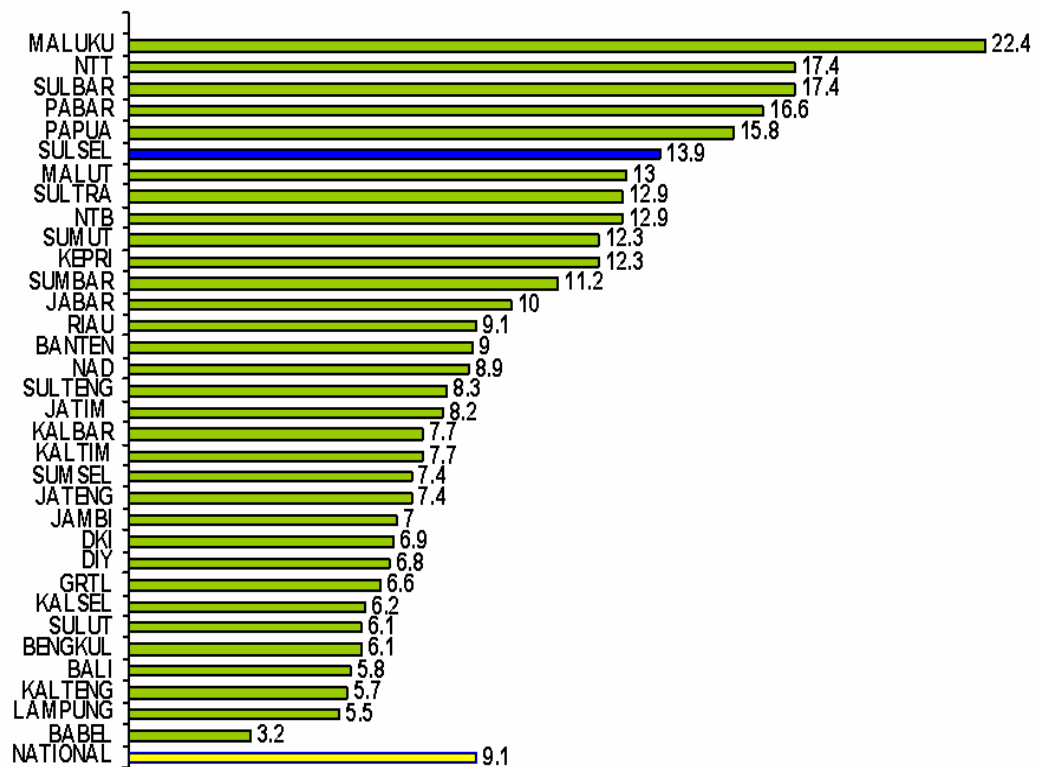


Source: Indonesia Demographic and Health Survey, 2007

The use of contraception ranged from about 71.1 per cent in Bengkulu to 34.1 per cent in Maluku (see figure 1.4). Currently married women who have unmet need for family planning ranged from about 3.2 per cent in Bangka Belitung to 22.4 per cent in Maluku (see figure 1.5).

One province, South Sulawesi, has been selected for this study. The following is the reasons of the choice of this province. Firstly, the Indonesia Demographic and Health Survey data reveal that South Sulawesi experienced the increasing trend of unmet need for family planning where its number gradually rose from about 11.70 per cent in 1997 to 13.9 per cent in 2007.

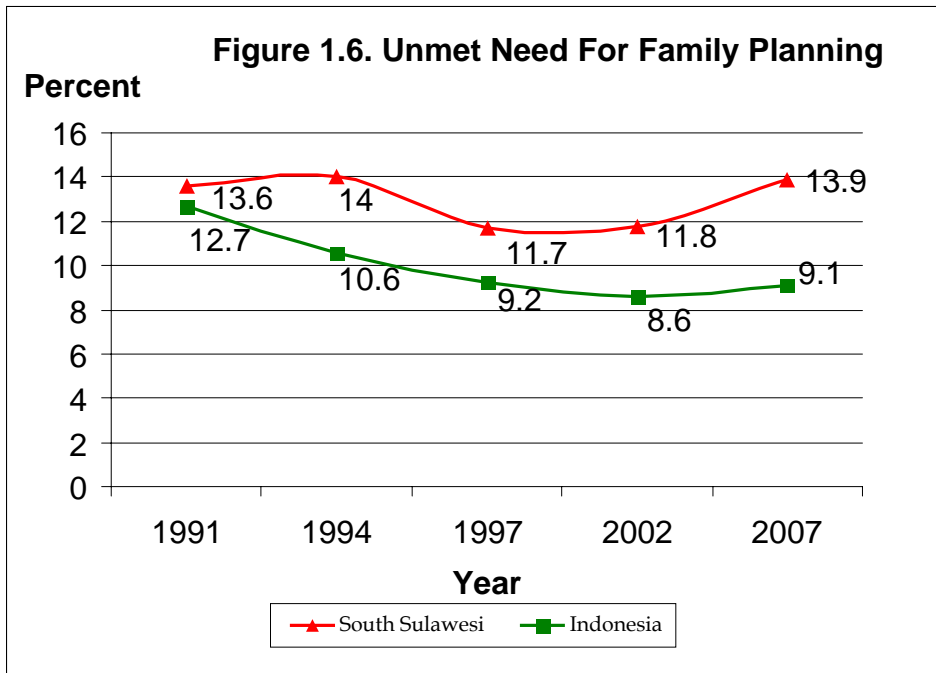
Figure 1.5. Unmet Need for Family Planning by Province in Indonesia, 2007



Source: Indonesia Demographic and Health Survey, 2007

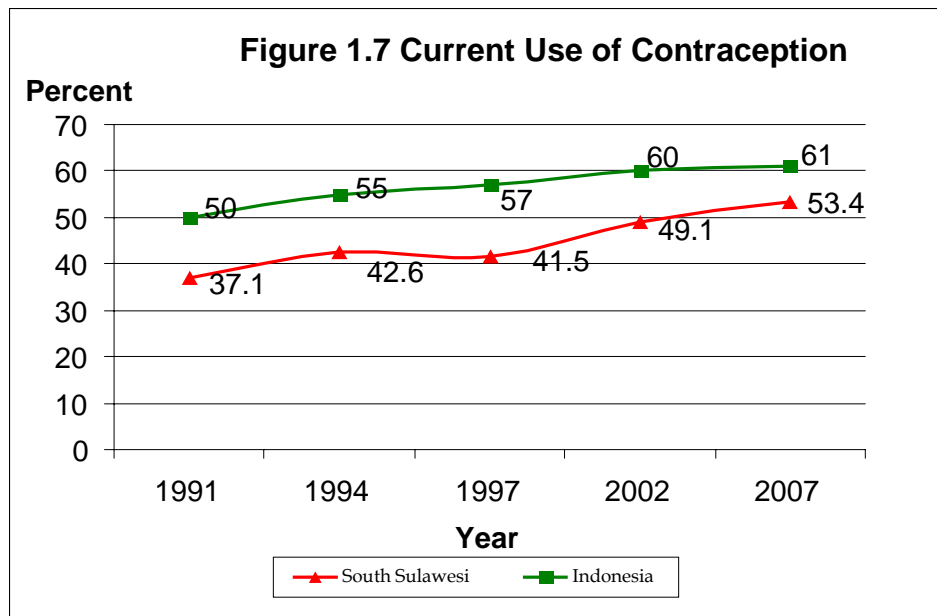
Based on the Indonesian Demographic Health survey data, South Sulawesi not only has a high number of unmet need for family planning compared to other provinces in Indonesia in 2007 (see figure 1.5), but also it was still remained the province with number of unmet need for family planning higher than national average number over period 1994 - 2007 (see figure 1.6).

Secondly, in South Sulawesi the number of contraceptive use has fluctuated from 1994 to 2007 which was also below the national level. It is increased from about 37.1 per cent in 1991 to 42.6 per cent but then it drop to 41.5 per cent in 1997. Afterwards, the number of current use of contraceptive went up again to 53.4 percent in 2007 (see figure 1.7). Despite its increased



Source: Indonesia Demographic and Health Survey, 1994, 1997, 2002, 2007

current use of contraception (figure 1.7), the IDHS 2007 had identified that recently this province has still shown an increase on the number of unmet need for family planning (figure 1.6).



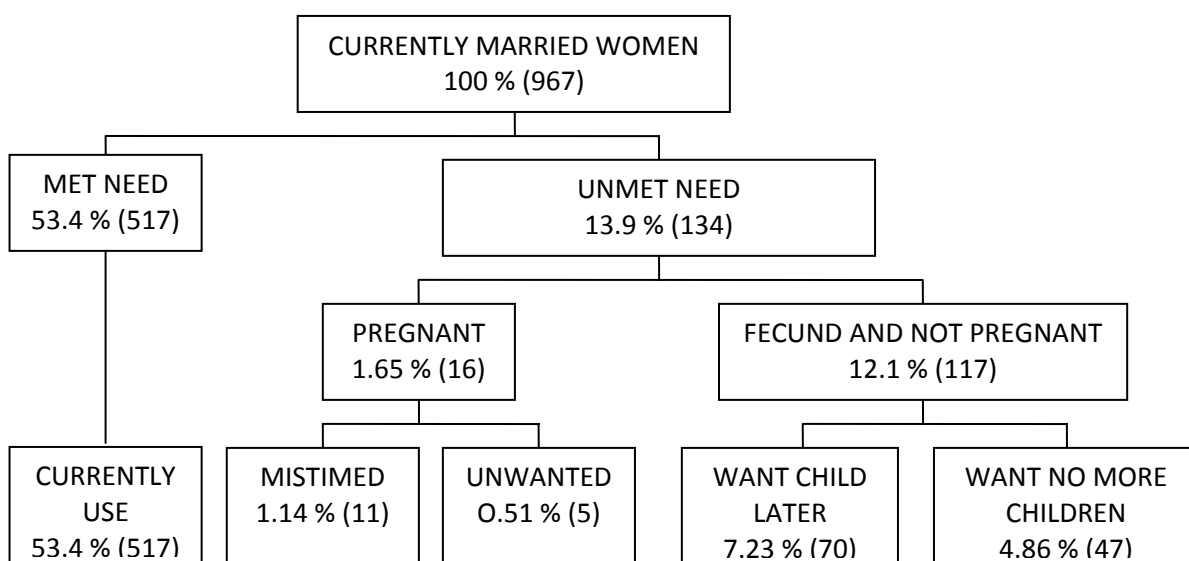
Source: Indonesia Demographic and Health Survey, 1994, 1997, 2002, 2007

Observing the relation between current contraceptive use and unmet need for family planning, Westoff and Ochoa (1991) defined the demand for family planning as the sum of current contraceptive users and currently married women who have unmet need for family planning. They explained that currently married women who have unmet need for family planning are currently pregnant or amenorrheic women whose pregnancy or last birth was the result of contraceptive failure, and currently married women who either do not want any more children or want to wait before having their next birth, but are not using any method of family planning.

With regard to the definition of demand for family planning, Westoff and Ochoa (1991) also categorized current users or “met need” into two categories. The first category consist of the currently married women who are using contraception to space their next pregnancies and the second category consist of the currently married women who are using contraception to limit their fertility or those who say that they want no more children. On the other hand, the unmet need is divided into four groups. First, currently married women who are not currently using contraception and who are pregnant or amenorrheic but they want their pregnancies later or in other words, their pregnancies were mistimed. Second, currently married woman who are not currently using contraception and who are pregnant or amenorrheic but their pregnancies were unwanted. Third, currently married women who are not currently using contraception and who are not pregnant, but who say that they want a child later. Fourth, currently married woman who are not using contraception and who are not pregnant, but who say that they want no more children (Westoff and Ochoa, 1991).

Figure 1.8 shows the currently married women in South Sulawesi interviewed at the 2007 Indonesia Demographic and Health Survey according to the above categories.

Figure 1.8. The Demand for Family Planning in South Sulawesi 2007 Diagram



Source: Computed by the author from Indonesia Demographic and Health Survey 2007 Dataset

As mentioned earlier, the demand for family planning is the total of current use and unmet need (Westoff and Ochoa, 1991). According to IDHS 2007 dataset, the total demand for family planning in South Sulawesi is 67.4% which is composed of the 53.4 percent of women who are currently use contraception. 1.14 percent who are pregnant but they say want to have a child later, 0.51 percent who are pregnant but their pregnancies were unwanted, 4.86 percent who want to avoid another pregnancy and 7.23 percent who want to wait at least two years before another pregnancy (figure 1.8).

Table 1.2. Percentage of Currently Married Women with Unmet Need, Met Need and Total Demand for Family Planning in South Sulawesi, 2007

Unmet need			Met Need			Total Demand			
Spacing	Limiting	Total	Spacing	Limiting	Total	Spacing	Limiting	Total	% of Actual demand
9.2	4.6	13.9	24.8	28.6	53.4	34.1	33.3	67.4	79.4

Source: Indonesia Demographic and Health Survey 2007 dataset.

Table 1.2 shows the proportion of currently married women in South Sulawesi with unmet need, met need and total demand for family planning. However, the proportion of currently married women who are currently using contraception and whose need for family planning is being met is 53.4. Thus, the proportion of currently married women whose need for family planning is not being met in South Sulawesi is 13.9%. In other words, it can be revealed that nearly 14 percent of married women ages 15-49 in South Sulawesi in 2007 are not using family planning, but they say would like to delay (9.2 percent) or avoid (4.6 percent) another pregnancy (table 1.2).

1.2 The Significance of the study

There are only few studies on the unmet need and demand for family planning in Indonesia, indeed there is no studies regarding the demand for family planning in South Sulawesi. According to Indonesia Demographic and Health survey, the trend of unmet need for family planning in Indonesia is increasing from 8.6 percent in 2002 to 9.1 per cent in 2007. This pattern shows that the extent of unmet need for family planning is still relatively high in Indonesia, particularly in South Sulawesi. Mujianto (1999) believes that the level of contraceptive use obviously affect the pattern of unmet need. There is a relationship between low level of contraceptive use and high level of unmet need for contraception. In contrast, there is also a linkage between high level of contraceptive use and low level of unmet need for contraception.

There are several studies on the demand for family planning in developing countries. It seems that there is strong connection between demographic, socioeconomic factors and the use of contraception. A study by Ullah and Chakraborty (1993) which observed some selected demographic and socioeconomic factors affects the use of contraception among currently married women in Bangladesh. According to this study, socioeconomics factors such as

education, occupation, and availability of electricity had a positive impact on the use of contraceptive methods among currently married women in Bangladesh. The demographic factors, the experience of child loss had a negative impact on the use of contraceptive.

1.3 Research Questions

Based on the fact that South Sulawesi has high number of unmet need for family planning and it has considerably low in the number of contraceptive use as well as low demand for family planning, this study therefore raise a research question of what is the trends of demand for family planning in South Sulawesi and what factors affect the demand for family planning in South Sulawesi?

1.4 Objectives of the Study

The overall objective of this research is to obtain better understanding of the demand for family planning in South Sulawesi Province, Indonesia. The study has the following specific objectives:

1. To observe the trends of demand for family planning, the family planning variables, and the demographic, socio-economic characteristics of currently married women in South Sulawesi Province.
2. To identify the factors influencing total demand for family planning.
3. To offer future policy development in respect to the implementation of the family planning program in South Sulawesi Province.

1.5 Hypotheses

Several theoretical and findings have been revealed from studies in family planning, in with relation to demand for family planning. Hypothesis

which will be examined in this study is that there is a correlation between demographic, socioeconomic, family planning variables and the demand for family planning. The above general hypothesis can be listed into more detail such as:

1. Demand for family planning has a strong association with the age of woman which increases considerably up to the age group 30-34.
2. The number of living children have a significant positive impact on the demand for family planning
3. Demand for family planning is higher in urban areas than in rural areas.
4. Women's education, women's occupation, religion, which are categorized as socio-economic variables have a positive impact on the demand for family planning.
5. Exposure to family planning program on television and husband who approved of family planning which are categorized as family planning variables have a significant positive influence on the demand for family planning.

1.6 Methodology

1.6.1 Data Sources

This study uses the Indonesian Demographic and Health Surveys (IDHS) 2007 dataset and other published data, particularly for South Sulawesi province. The survey data are used to analyse factors affecting the demand for family planning in selected province. The unit of analysis of this study is currently married women in South Sulawesi based on a sample of 967 of currently married women. The variables selected for this analysis pertain to currently married women in the age range 15 to 49 years.

1.6.2 Variables Selected

For analysing data for this thesis, the independent and dependent variables have been selected from the 2007 Indonesia Demographic and Health Survey data set. These are divided into three groups. The following variables have been selected for the analysis:

- a. The demographic variables which are considered to have an impact on demand for family planning. There are four demographic variables such as women's age, number of living children, ideal number of children and desire of future children.
- b. Seven socio-economic variables which are expected to influence demand for family planning such as women's education, women's employment status, rural or urban residence, religion, distance to health facility, getting money needed for treatment and transportation to health facility.
- c. Family planning variables which are expected to have an impact on demand for family planning. These comprise two variables, namely husband who approved family planning and heard family planning on TV last month.

1.6.3 Method of Analysis

In order to meet the first objectives, descriptive analysis will be implemented in examining the trends of demand for family planning, the demographic, socio-economic and family planning characteristics of currently married women in South Sulawesi Province. With regard to second objectives which is to identify and to analyse the factors influencing total demand for family planning among currently married women in South Sulawesi, this study perform bivariate and multivariate analysis. In the bivariate analysis, cross tabulations with the Chi-square test will be use to provide information on the relationship between independent variables and dependent variable. Multivariate analysis with binary logistic regression and the odd ratios are involved to present such relationship into more focus, to examine the most

significance variables which assumed to have an impact on demand for family planning and to analyse the probability of being in need of family planning.

1.7 Profile of study areas

Table 1.3. Population, Annual Population Growth Rate, Population Density, Total Fertility Rate and Infant Mortality Rate in South Sulawesi.

Population	
1980	6.062.212
1990	6.981.646
2000	7.159.170
2005	7.509.714
Annual Pop. Growth Rate	
1990-2000	1.49
2000-2005	0.96
Percentage Change	-35.6
Population density	
1980	97
1990	112
2000	129
2005	136
Total Fertility Rate	
1980	4.12
1990	3.04
2000	2.55
Percentage change (1990-2000)	
Percentage change (2000-2005)	
Infant Mortality Rate	
1980	111
1990	70
2000	56.65
Percentage change (1990-2000)	-36.9
Percentage change (2000-2005)	-19.07

Source: www.datastatistik-indonesia.com

South Sulawesi is a province of Indonesia, located on Sulawesi Island. The province is bordered by Central Sulawesi (North), South-Eastern Sulawesi (East) and West Sulawesi (West) (figure 1.9 & figure 1.10). This province divided into 20 regencies with three cities such as Makassar, Palopo and Parepare. A portion of South Sulawesi was split-off to form West Sulawesi province in 2004. The area of South Sulawesi Province is about 45,519.24 km² and the total population was 7.509.714 which is an increase by 23.88 percent compare to its populations of 6.062.212 in 1980 (table. 1.3).

Figure 1.9.

Map of the Sulawesi Island



Figure 1.10.

Map of South Sulawesi



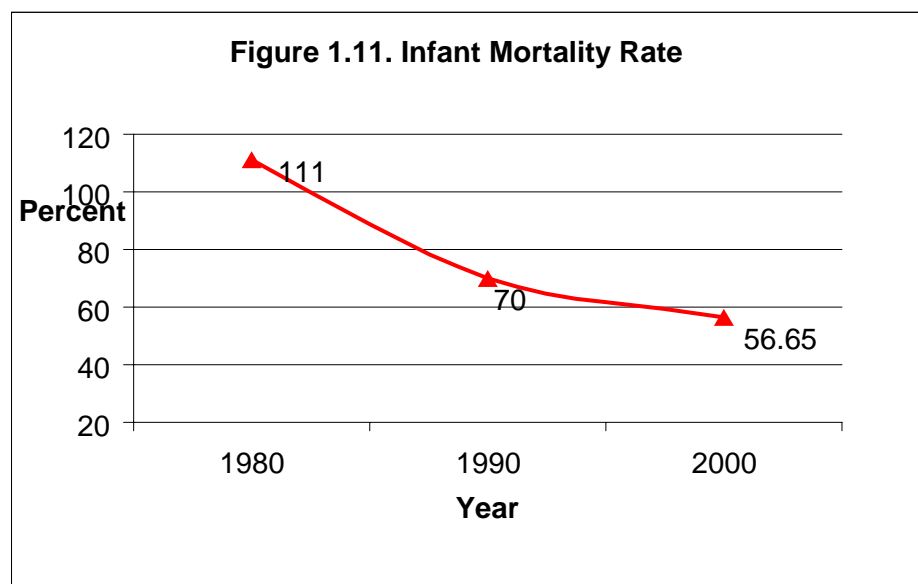
Source: www.peterloud.co.uk/indonesia/sulsel.html and www.forumms.com/images/soth-sul.gif

Table 1.3 shows the rate of population growth, population density, total fertility rate and infant mortality rate in South Sulawesi based on the census data of 1980, 1990, 2000 and intercensal population survey 2005. The table illustrates an annual population growth rate of 1.49 per cent in South Sulawesi

between 1990 and 2000 and 0.96 per cent in the period of 2000-2005. In other words, the population growth in South Sulawesi had declined by 35.6 per cent to 0.96 in the 2000-2005 periods.

With regards to the population density, the densities of this province have consistently increased from 97 people per-square kilometre in 1980 to 136 people per-square kilometre in 2005 despite declining fertility. The densities increased because of population growth caused by a faster decline in mortality compared to fertility plus immigration from other provinces.

The total fertility is the average number of children that would be born alive to a woman during her lifetime (Pollard, et al, 1995). The total fertility rate was decline considerably in South Sulawesi province from 4.12 in 1980 to 2.55 in 2000. A fast decline of infant mortality rate also occurred in South Sulawesi Province. The infant mortality rate has decline by 55.97 percent from 1980-2000.



Source: www.datastatistik-indonesia.com

1.8 Organisation of the Thesis

This study is divided into five chapters. Chapter One describes the background, significance of this study, the study objectives, hypotheses advanced in this study and profile of South Sulawesi province. Chapter Two deals a review of the literature in the field of the demand for family planning. This includes a discussion on the factors such as demographic, socioeconomic and family planning variables that could affect the demand for family planning. The discussion about trends in demand for family planning and the demographic, socioeconomic and family planning variables are made in Chapter Three. Chapter Four attempt to identify and explain the main factors affecting the demand for family planning in South Sulawesi Province. In Chapter Five, the main findings of this study will be concluded together with their implication for theory and policy implications.

CHAPTER TWO

REVIEW OF THE LITERATURE

2.1 Introduction

It is widely accepted that the family planning program in Indonesia which has been implemented since the early 1970s has been successful in reducing the total fertility rate in Indonesia (Hull, Hull and Singarimbun, 1977; McNichol and Singarimbun, 1983). Over many years, the family planning program in Indonesia has given emphasis on providing information, education and communication about family planning in order to change people's attitude about family planning and motivate them to practise contraception. However, Simmons et al (1988) believe that family planning programs should provide services to all women, and not just the currently married women and current users. It appears that the family planning program in Indonesia has concentrated its activities on the role of supplying contraceptives and ignored its significant sociological role to create and increase demand for contraceptives. Related to this issue is the important issues of the level and composition of demand and its societal determinants.

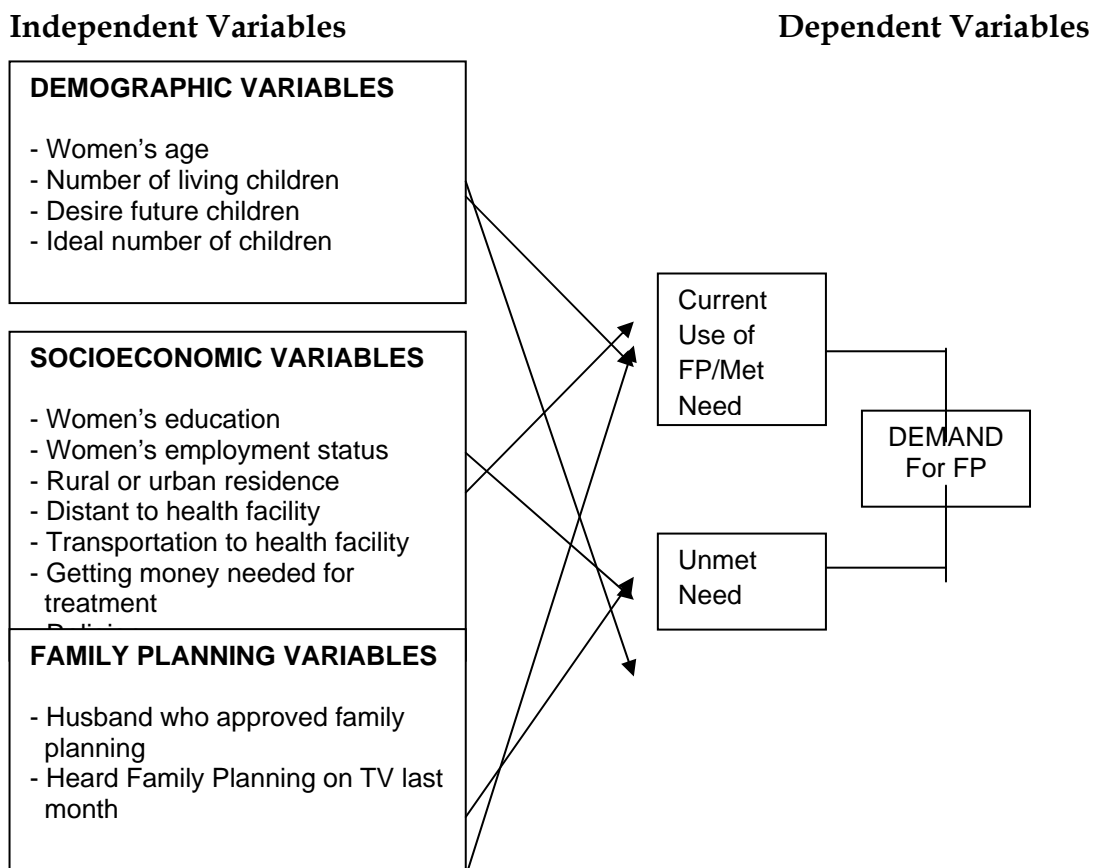
2.2 The demand for family planning

Definitions about unmet need and its components, met need and total demand for family planning have been discussed in detail in Chapter 1. This chapter will discuss some of the models for measuring demand for family planning and review selected studies on unmet need and demand for family planning.

Nortman and Lewis (1981) have developed a model which can be used in examining unmet need for contraception. There are several criteria in the model. Firstly, currently married women who are not using contraception and

who are capable of conception are used for identifying those women who have unmet need for family planning. Second, the pregnancies of currently pregnant women or of those women who are currently amenorrheic due to a recent birth, may be classified as intentional, mistimed or unwanted pregnancy. Therefore, women whose pregnancies are unintentional, pregnant women who wanted to avoid or to postpone their pregnancy and amenorrhoeic women who wanted to delay their pregnancy or avoid any future child bearing would be classified as having an unmet need for family planning services if they were not using any contraception.

Figure 2.1. Framework for the Study of Demand for Family Planning



Source: modified from Easterlin's theoretical framework, 1985

In order to examine the factors that have an impact on the demand for family planning in South Sulawesi Province, frameworks proposed by several demographers will be applied in this study. Easterlin (1985) and Goldman (1989) have introduced frameworks which explore the linkages between socioeconomic, demographic, family planning related variables and demand for family planning. A theoretical framework for this study is presented in Figure 2.1. The independent variables shown in this framework have an impact on both current use and unmet need as parts of the total potential demand for family planning.

The variables included in this study are defined in Table 2.1.

Table 2.1. Definition of Key Variables.

Variable	Explanation	Operational Definition
Dependent Variable		
Demand for Family Planning	The total of current use of contraception and unmet need	1 = Have a demand for family planning 2 = Do not have a demand for family planning
Independent Variables		
Women's Age	The specific age of currently married women in the reproductive ages of 15-49	1 = 15 - 19 years 2 = 20 - 29 years 3 = 30 - 39 years 4 = 40 - 45 years
Number of Living Children	The total number of living children both staying at home and living elsewhere.	1 = 0 - 1 living children 2 = 2 - 3 living children 3 = More than 3 children
Desire Future Children	The number of currently married woman both pregnant and not pregnant who want more children, want no more children and	1 = Want another child 2 = Want no more children 3 = Undecided

	undecided.	
Ideal Number of Children	The number of children either boy or girl that the mothers preferred	1 = 1-2 children 2 = 3-4 children 3 = More than 4 children
Women's Education	Attained level of formal education	0 = No Education 1 = Primary Education 2 = Secondary Education 3 = Higher Education
Women's Employment Status	The work status of currently married women at the time of the survey	1 = Currently working 2 = Not currently working
Rural or Urban Residence	The number of currently married women who live in rural or urban area.	1 = Urban 2 = Rural
Distant to Health Facility	Whether a currently married women considered distant be a big problem or not	1 = Big Problem 2 = Not a big problem
Transportation to Health Facility	Whether a currently married women considered transportation be a big problem or not	1 = Big Problem 2 = Not a big problem
Getting Money Needed for Treatment	Whether a currently married women considered getting money for treatment be a big problem or not	1 = Big Problem 2 = Not a big problem
Religion	Variety of religion that currently married women belief	1 = Non Islam 2 = Islam 3 = Other
Husband who approved FP	Whether husband approve their wives use of contraception or not	1 = Approve 2 = Disapprove 3 = Don't know/unsure
Heard Family Planning on TV last month	Whether a currently married women heard family planning program on TV or not	1 = Yes 2 = No

2.3 Relationship between Selected Demographic, Socio-Economic and Family Planning variables and Demand for Family Planning.

Several studies have stated that factors such as breast feeding and pregnancy or fertility planning status have an impact on the demand for family planning (Hebert and Huffman, 1981; Salway et al, 1991). Other factors that affect demand for family planning are demographic, socio-economic and family planning variables. Sinaga (1996) studied the factors affecting demand for family planning in Kalimantan, Indonesia 1994, based on data collected at the 1994 IDHS 1994. He found that demand for family planning in Kalimantan was directly and significantly associated with socio-economic variables, family planning variables and demographic variables

The Royal Government of Cambodia also conducted a study about the demand for family planning in Cambodia based on Cambodia Demographic and Health Survey 2000 and found that there is an association among demographic, socioeconomic, family planning variables with demand for family planning. Ullah and Chakraborty (1993) considered demographic, socioeconomic and family planning variables have a positive relationship with demand for family planning.

2.3.1 Demographic Variables

Demographic characteristics are important predictors of contraceptive use and demand for family planning. Among the demographic variables, age of woman is considered to be the most important factor in affecting the demand for family planning, especially for the relationship with contraceptive use. Sinaga (1996) showed that among the demographic variables, current age of the women is directly and significantly associated with demand for family planning. Similar with Sinaga's studies, the Royal Government of Cambodia (2000), also found that demand for family planning has a strong association with the age of the woman. The study demonstrated that demand for family

planning increases steadily from the age group 15-19 to the age-group 30-34, afterward it declines in the age-group 45-49.

In other studies, it has been found that older women in the age group 30-39 and women of moderate parity or having three to four living children or two living sons are appeared to have the largest significant increase in using contraception (Alimoeso and Lewis, 1987; McGinn et al, 1989). McGinn et al (1989) mention that around 23 percent of women aged 35 years and with 6.5 births stated that they did not want any more children and they were using contraception.

A similar pattern also appeared in Korea which indicates that the age of the women and the number of living children affect contraceptive use (Alimoeso and Lewis, 1987). Younger women may be more open to new ideas or better informed about contraception, but older women may have more control over household resources and greater ability to make and act on decisions about contraception (Miles et al, 1998)

Many studies have agreed with the idea that the number of living children is an important factor affecting contraceptive use. The number of living children is a measure of a woman's previous experience with childbearing, and of the demand already placed on household resources. It is expected that the larger the number of children the woman has, the higher will be the probability of the woman practising contraception. Women with two or more living children are likely to be more interested in limiting childbirth than are childless women or those with only one living child, whereas those with no living children may be trying to delay the start of childbearing, all else being equal (Burgard. S, 2004). In Nigeria, a study conducted by Oyeka (1989) showed that, among non-users of family planning, the willingness to practise contraception has a relationship with the number of living children. The more the number of living children, the more will be the proportion of women who use contraception. Equally importantly, the number of living children is

considerably related with the demand for family planning (Sinaga, 1996; Royal Government of Cambodia, 2000).

In relation with a desire for future children, it is accepted that this variable affects the demand for family planning. A study in Bangladesh conducted by Ullah and Chakraborty (1993) found that women who desire additional children were more likely to not practise contraception than those who did not desire additional children. Generally, women who are using contraceptives but who desire more children are practising contraception to space births. On the other hand, women who desire no more children, use contraception in order to limit their family size (Chang Freedman and Sun, 1981).

The ideal number of children is found to have an important association with demand for family planning. A study conducted by Sinaga (1996) in Kalimantan, Indonesia shows that demand for family planning has a significant negative relationship with ideal number of children. The lower the ideal number of children, the higher the proportion of currently married women in need of family planning. Similarly, the Royal Government of Cambodia (2000) mentions that women's preference about their ideal number of children has an association with demand for family planning; with women whose ideal family size is three or less children have a higher demand for family planning.

2.3.2 Socioeconomic variables

Level of education of either the women or their husbands is related with demand for family planning. This fact is supported by Sinaga's study (1996) in Kalimantan, Indonesia which comes up with the idea that women's and their husbands' education have a relationship with demand for family planning; the higher the level of education of both wife and husband, the higher the demand for family planning. A similar pattern also appeared in Cambodia

which points out that demand for family planning is strongly associated with educational attainment of women and their husbands.

Education may affect contraceptive use in multiple ways. One of those ways is to expose women to modern ideas about contraception and family-size limitation. Women with more schooling may be more comfortable interacting with medical personnel and may have better access to sources of modern birth control than women who have less education. According to Ullah and Chakraborty (1993) the most important variables in affecting Bangladesh women's decision to use contraception is women's education. They proved that higher level of education encourage women to practise contraception than women who have no education. A strong and positive association between wife's level of education and the use of contraception has also been found by the United Nations (1979) based on the results of a comparative analysis of selected knowledge, attitude and practice (KAP) surveys in 12 countries of Asia, Africa and Latin America.

Another way of education to affect contraceptive use is by enhancing women's ability to exercise control over household income, sexual relationships and childbearing preferences. Educated women are more likely to marry later and participate in the labour force more. As women's opportunity cost of having more children or having children frequently becomes high, they tend to control their fertility and are more likely to use effective methods of contraception. In other words, better-educated women may be more likely than others to earn incomes or to live in households with greater incomes (Burgard.S, 2004). Thus, having greater economic resources or health insurance could improve their access to birth control and the type of contraception that they would prefer to use.

In addition to individual income, the work status of women and household income resources also may affect the demand for family planning and current use of contraception. Sinaga (1996) states that women's occupational status is significantly relate with demand for family planning.

Husband's and wife's occupations are also related with the demand for family planning (Royal Government of Cambodia, 2000). In addition, Ullah and Chakraborty (1993) believe that this factor is significantly linked with current contraceptive use. A study by Sumarsono et al (1991) demonstrates that some economic factors have important effects on contraceptive use in Indonesia. He used data from the 1987 National Indonesia Contraceptive Prevalence Survey and found that non-agricultural employment is related with higher levels of contraceptive use.

There are other studies to explain that women's work and control over income have connections with the desired number of children. Kritz and Makinwa-Adebusoye (1994, cited in Gage. A.J. 1995) found that among the Hausa and Kanuri of Nigeria, women's work and control over earnings were significant determinants of the desire for no more children. Similarly, a study conducted also in Nigeria by Kritz and Gurak (1991 cited in Gage. A.J. 1995) show that among rural Yoruba women from Oyo, those who controlled a greater amount of household expenditure were significantly less likely than others to desire more children and less likely to have had a recent birth, and therefore more likely to demand and use contraception.

It is widely acknowledged that urban-rural disparities play a significant role on demand for family planning and family planning services. Sinaga (1996) confirms that urban currently married women are more likely to be in need of family planning than rural currently married women. This finding is similar to the relationship between place of residence and demand for family planning observed in a study conducted in Cambodia. The study notes that demand for family planning is strongly associated with type of place of residence (both current and previous) (Royal Government of Cambodia, 2000).

People living in urban areas, particularly women who seek the services of a health facility where contraception is available seem to have a better accessibility to such facilities. Thadeus & Maine (1994) point out that urban residents have moderately improved access to health facilities. Health

care providers are easily reached, transportation and infrastructure are well developed and they are more informed about health related issues. On the other hand, women living in rural areas are likely to have poorer access to information about contraception or availability family planning services (Burgard. S, 2004). Poverty, generally associated with rural living usually prevents women from accessing adequate health services. Health facilities which are situated at long distances are accompanied with unfavourable infrastructure, costs or even non-existent transportation, all of which discourage rural residents to seek health care (Thadeus & Maine, 1994).

In analysing accessibility to health facilities, particularly regarding the distance factor, some scholars have endeavoured to explore the connection between access to health facility and contraceptive use. Steele et al (1999) demonstrate that the rate of modern contraceptive adoption within 12 months of a live birth decreases from 65 percent if a health centre provides family planning services within 10 kilometres of the cluster to 43 percent if there is no health centre nearby. The availability of family planning services at a public health centre or a pharmacy within 5 kilometres of the cluster was associated with discontinuation, but not with the behaviour of switching contraceptives. Failure rates among pill users with access to a nearby public health centres were less than half of those experienced by women in areas where the distance to the nearest health centre was more than 5 kilometres. (Steele et al, 1999).

Considering the influence of the distance factor and service indicators on contraceptive behaviour, Magnani et al. (1999) have found that the number of sources of family planning and of pill supplies available within 30 kilometres was associated with increased use. They also found that the number of methods available at the nearest set of public clinics increased contraceptive use between 1992 and 1995. Among those who were nonusers in 1992, particularly those living far away from public health clinics stated that they did not intend to use a method.

Access and availability problems are might not have a direct affect on discontinuation of the pill, but they may contribute to discontinuation for other reasons. For example, women may be less willing to put up with side effects if supplies are also inconvenient to obtain. As mentioned earlier, pharmacies tend to be situated in better-off areas, and the availability of pharmacies in a community may indicate more convenient access to pill re-supplies as well as a greater diversity of source options (Steele et al, 1999)

Indeed, the investigation of the cost and the accessibility of contraceptive use such as the distance factor to health facility, access remains a problem in most developing societies (Robey et al, 1996) and Indonesia is no exception particularly rural area in South Sulawesi. Research has revealed that large segments of the population which are concentrated in rural areas face considerable difficulty in obtaining low-cost, high quality family planning services (Robinsin et al. 1981)

It is important to investigate and to describe the association between religious background and contraceptive use in this study. Why this variable should be included in this study can be explained by studies done in Pakistan by Shah and Shah 1984 (cited in Casterline et al, 2001) which conclude that the primary reasons for non-use of contraceptives among apparently motivated women are the perception that family planning is unacceptable on religious grounds, fear of contraceptive side effects on health grounds, opposition from the husband and family planning services. They also found that the most common reasons given for not using a contraceptive is religious concerns. Moreover, Hashmi et al 1993 (cited in Casterline et al, 2001) identify religious concerns as the second most common reason given for non-use of contraception. Mahmood 1992 (cited in Casterline et al, 2001) analysed the 1979-80 Population, Labour Force and Migration (PLM) survey data and inferred from the pattern of effects of socioeconomic and demographic variables that psychological and socio-cultural factors, in particular strong religious and social values are the key to understanding unmet need. In a subsequent analysis of

the 1990-91 Pakistan Demographic and health Survey, Mahood and Ringheim 1996 (cited in Casterline et al, 2001) conclude that the primary determinants of contraceptive use are knowledge of a supply source, husband and wife communication and religious attitudes.

2.3.3 Family Planning variables

In analysing the relationship between family planning variables and demand for family planning, it is essential to consider husband's approval of family planning. Khalifa (1988) found that husbands in urban Sudan are often involved in making family planning decisions and wives are influenced by their opinions. Another study by Joesoef et al (1988) also found that before the wife decides to use contraception, they must discuss the method with their husband. Husband and wife in Bangladesh appeared more comfortable in using contraception if they had communication about family planning (Ullah and Chakraborty, 1993). Furthermore, Sinaga (1996) agrees that discussions of family planning with partner (husband) are considerably linked with demand for family planning. It seems that husband's approval in family planning might lead to convenience to both husband and wife's behaviour. A study in Tanzania found that discussion about family planning issues between husbands and wives have developed more positive attitudes (Jato et al. 1999).

There is also an association of mass media exposure, particularly with regards to family planning program, with the pattern of contraceptive use. Some scholars have attempted to find a useful explanation of the effects of mass media campaign on contraceptive use. According to a study conducted in Nepal, exposure to messages in the mass media has an indirect effect on contraceptive use by increasing interpersonal communication and encouraging positive changes in attitudes and perceived social norms regarding family planning (Storey et al, 1999). In Mali, exposure to a campaign was linked to an increase in favourable attitudes toward contraception and a decline in the

proportion of men and women who believed that Islam opposes family planning (Kane et al, 1998).

Exposure to messages broadcast through a variety of channels is currently considered the most effective way to change people's knowledge, attitude and behaviour. Piotrow et al (1997) believe that behavioural change communication (BCC) campaign which usually consists of a combination of radio spots or advertisements such as radio dramas, television advertisements, video, print material such as newsletter and leaflets, posters, clinic based counselling and community activities is considered a good strategy for extending the reach of a message to a larger audience and for reinforcing its effect. A study conducted by Gupta et al (2003), measuring behavioural change communication (BCC) such as (1) heard a message promoting family planning on the radio; (2) seen such a message on television; (3) Seen a family planning poster and (4) read some materials promoting family planning in a newspaper, magazine, brochure or leaflet revealed that exposure to BCC messages is associated with increased contraceptive use and increased intention to use.

2.4 Contraceptive use and Demand for Family Planning in Indonesia

Since the 1970s, the Indonesian national family planning programme has contributed to considerable gains in the use of family planning in the country. Contraceptive prevalence rate (CPR) has more than tripled in only 27 years. The CPR increased from 19% in 1976 to 60.3% in 2003 (WHO, 2003). The success in increasing the CPR is attributable to a strong national family planning program, together with collaborative effects of various programs such as economic development, improved women's education. The relative importance of these factors in influencing the expansion of contraceptive use in Indonesia may be understood by looking at the available data,

Over a decade, the current use of contraception has increased substantially for people of higher education categories. Between 1997 and 2007, women in Indonesia with primary completed schooling have exhibited the highest gains in contraceptive use (Table 2.2), compared with other educational groups. Women with some secondary or higher education have increased their CPR by 4.1 percent. In contrast, there are also some reductions in the proportion of contraceptive users, such as among women with no schooling and with some primary schooling. It is interesting to see that women with low or no education have recorded decreases in their CPR, while women with more or higher education have recorded increases in their CPR.

Table 2.2. Percentages of Currently Married Women who are Currently Using Any Method of Contraception by Education in Indonesia, 1997 & 2007.

Education	1997	2007	Percentage Increase (+)/Decrease (-)
No Education	44.2	42.3	- 4.5*
Some Primary	54.7	54.0	- 1.3*
Primary Completed	60.5	64.0	+ 5.7**
Some Secondary +	62.3	64.9	+ 4.1**

Source: Indonesia Demographic and Health Survey, 1997&2007 published data.

As seen in Table 2.2, contraceptive use increased with currently married women's level of education. In 2007, 42.3 percent of currently married women with no education were using a method, compared with 64.9 percent for those with secondary or higher education. Overall, for all education categories, 61.4 percent of currently married women in 2007 were currently using contraception (see Table 2.3). Younger and older currently married women were less likely to be using contraception than currently married women in the mid-childbearing ages (25 to 39 years). It is clear that the use of family planning is higher among

the urban currently married women than among the rural currently married women (Table 2.3).

Table 2.3. Percentage of Currently Married Women Who Are Currently Using Any Method of Contraception by Background Characteristics. Indonesia 2007.

Background Characteristic	Currently Using	Not Currently Using
Age:		
15-19	46.8	53.2
20-24	61.5	38.5
25-29	64.1	35.9
30-34	69.1	30.9
35-39	68.6	31.4
40-44	59.6	40.4
45-49	42.1	57.9
Residence:		
Urban	62.5	37.5
Rural	60.6	39.4
Living Children:		
0	8.3	91.7
1-2	68.1	31.9
3-4	67.7	32.3
5+	46.7	53.3
Total	61.4	38.6

Source: Indonesia Demographic and Health Survey, 2007 published data.

Table 2.3 also shows that the use of contraception increased initially with the number of living children (from no child to 1-2 living children), reaching 68 percent among currently married women with 1-2 two living children, then declined among currently married women with 3-4 living children and more

than five living children. The reason for the low CPR among women with 5+ living children may be that these women are older, aged 40 years and over.

Table 2.4. Percentage of Currently Married Women with Unmet Need, Met Need and Total Demand for Family Planning by Selected Background Characteristics, Indonesia, 2007.

Background Characteristic	Unmet Need			Met Need			Total Demand		
	Spa-cing	Limi-ting	Total	Spa-cing	Limi-ting	Total	Spa-cing	Limi-ting	Total
Age:									
15-19	7.3	2.5	9.8	41.8	5.1	46.8	49.1	7.6	56.6
20-24	7.9	1.9	9.8	51.3	10.2	61.5	59.4	12.1	71.5
25-29	7.7	1.9	9.6	44.5	19.5	64.1	52.5	21.5	74.0
30-34	5.3	3.9	9.2	31.5	37.6	69.1	36.9	41.6	78.5
35-39	2.7	6.8	9.5	14.6	54.0	68.6	17.4	61.0	78.4
40-44	1.0	8.6	9.6	4.1	55.5	59.6	5.1	64.1	69.2
45-49	0.5	5.5	6.0	1.4	40.7	42.1	1.9	46.3	48.2
Residence:									
Urban	4.0	4.7	8.8	23.7	38.8	62.5	27.9	43.6	71.5
Rural	4.5	4.7	9.2	26.1	34.5	60.6	30.7	39.3	70.0
Education:									
No Education	3.0	7.7	10.6	8.7	33.6	42.3	11.7	41.3	53.0
Some Primary	3.2	6.2	9.4	16.5	37.6	54.0	19.8	43.8	63.6
Comp. Primary	4.1	4.9	9.0	25.6	38.4	64.0	29.8	43.4	73.2
Some Secondary	5.2	4.0	9.2	32.2	33.3	65.5	37.6	37.4	74.9
Secondary +	4.9	3.4	8.4	28.4	36.0	64.4	33.5	39.5	72.9
Total	4.3	4.7	9.1	25.1	36.3	61.4	29.5	41.1	70.6

Source: Indonesia Demographic and Health Survey, 2007 published data.

Table 2.4 presents the pattern of contraceptive use by age, rural-urban residence and education, which can provide an insight into the potential need for family planning that is not being met. It can be seen from the table that women in urban areas are more likely to be users of contraception than women in rural areas (62.5 versus 60.6 percent).

The proportion of the use and non-use of contraception indicate the enthusiasm to manage fertility and the tendency to use contraception. Contraceptive users may be those who are motivated to control fertility either because they wish to have no additional children or because they wish to postpone the next birth. From Table 2.3 it can be seen that around 4.7 percent of currently married women in Indonesia have an unmet need to limit their fertility and another 4.3 percent have an unmet need to space their births. Currently married women with no schooling who want to have no more children and not using contraception form have the highest proportion (7.7%) in the unmet need for limiting category. Furthermore, among the currently married women whose need for family planning was being met, a larger proportion belonged to the limiting category than the spacing category. By calculating the total unmet need and the total met need, therefore, the total demand is estimated at 70.6 percent.

CHAPTER THREE

TRENDS IN DEMAND FOR FAMILY PLANNING AND DEMOGRAPHIC, SOCIOECONOMIC AND FAMILY PLANNING CHARACTERISTICS OF CURRENTLY MARRIED WOMEN IN SOUTH SULAWESI, INDONESIA

3.1 Introduction

In order to describe the trends in demand for family planning and selected demographic, socio-economic and family planning characteristics of currently married women in South Sulawesi, this chapter is divided into four sections.. The first section gives an account of the trends in demand for family planning in South Sulawesi in 1991, 1994, 1997, 2002-03 and 2007 based on Indonesia Demographic and Health Surveys of the respective years. The second, third and fourth sections discuss respectively the selected demographic, socio-economic and family planning characteristics of currently married women in South Sulawesi as revealed in the 2007 Indonesia Demographic and Health Survey (2007 IDHS).

3.2 Trends in demand for Family Planning in South Sulawesi

This study tracks the trends in demand for family planning in South Sulawesi from 1991 to 2007 in order to gain an understanding about demand for family planning and analyse the diversity of demand for family planning which occurred with different rates in various years in South Sulawesi. Using data collected at the 2007 Indonesia Demographic and Health Survey (2007 IDHS), this study examines the trends in the demand for family planning and its component parts - met need or current use of contraception and unmet need for planning.

Table 3.1 shows the trends in demand for family planning from 1991 to 2007 in South Sulawesi. In general, the total demand for family planning (the sum of contraceptive use and unmet need) increased virtually in the period

1991-2007 except in 1997. The proportion of women who both wanted children later and who did want no more children and using and not using contraceptives (total demand for family planning), increased modestly from 51.6 percent in 1991 to 57.4 percent in 1994, and then declined to 53.7 percent in 1997. Afterwards, it went up again from 61.5 percent in 2002 to 67.4 percent in 2007.

Table. 3.1. Trends in Demand for Family Planning in South Sulawesi in 1991, 1994, 1997, 2002 and 2007

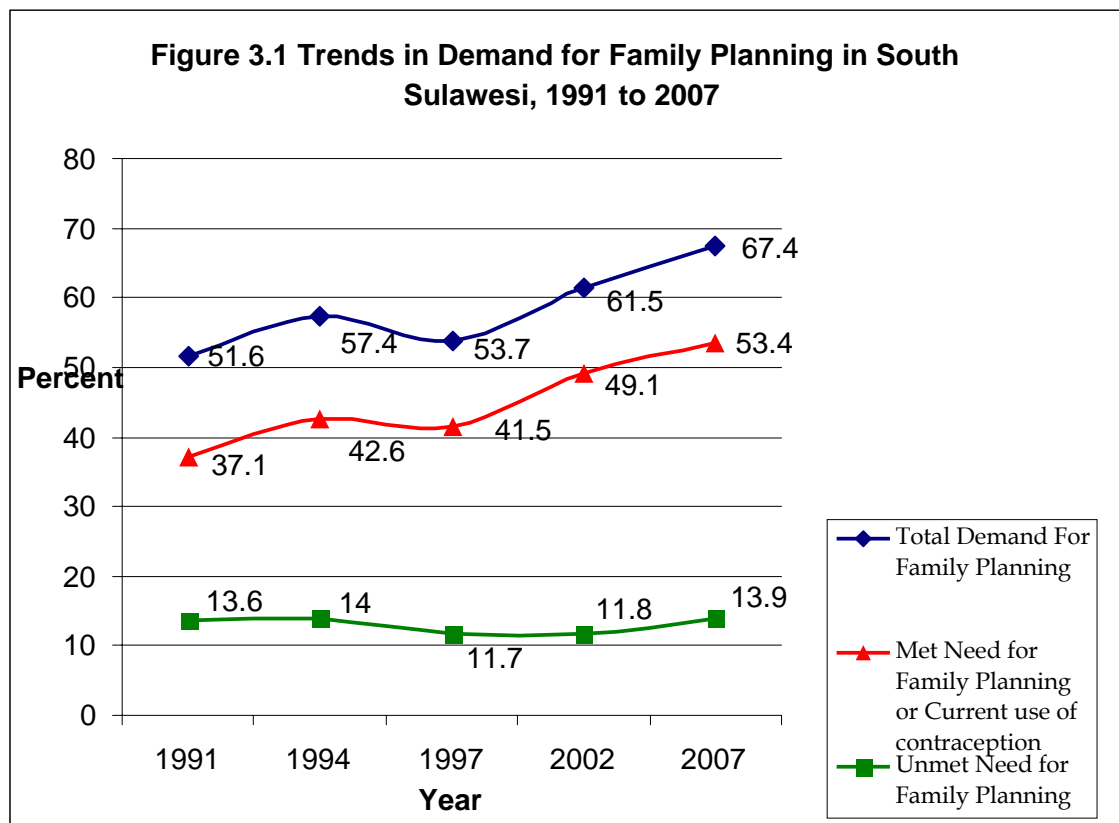
	1991	1994	1997	2002	2007
Total Demand For Family Planning	51.6	57.4	53.7	61.5	67.4
Met Need for Family Planning or Current use of contraception	37.1	42.6	41.5	49.1	53.4
Unmet Need for Family Planning	13.6	14.0	11.7	11.8	13.9

Source: Indonesia Demographic and Health Survey, 1991, 1994, 1997, 2002 and 2007

The decreased level of demand for family planning in 1997 is perhaps due to the economic crisis which occurred in Indonesia at that time. Arndt and Hill 1998 (cited in Frankenberg et al, 2003) note that the crisis in Indonesia experienced the hardest hit among Asian countries with the gross domestic product per capita shrinking by 12 percent in 1998 and the currency depreciating by about 80 percent. It is suspected that the crisis might have led to a difference in women's behaviour concerning contraceptive use and discontinuation in using contraception. However, a study conducted by Frankenberg et al (2003) using the 1997 and 1998 Indonesia Family Life Survey (IFLS) data demonstrate that there is no impact on proportion of couples practising contraception in Indonesia during the first year of the crisis.

The percentage of currently married women who both wanted children later and wanted no more children and were using contraceptives (the met

need) is the primary component of the total demand for family planning. As can be seen from Table 3.1, overall, the trends in contraceptive use from 1991 to 2007 in South Sulawesi have similar trends with demand for family planning. A more obvious image which illustrates a similar pattern of contraceptive use (met need) and demand for family planning is shown graphically in Figure 3.1. It is clear from Figure 3.1 that there is a tendency for contraceptive use to increase sharply in South Sulawesi; it rose from 37.1 percent in 1991 to 53.4 percent in 2007 but experienced a small reduction in 1997.



Source: Indonesia Demographic and Health Survey 2007 dataset.

The unmet need is defined simply as the proportion of all currently married, fecund women who both want children later and want no more children but are not practising any method of contraception. It represents the other component of the total demand for family planning. Figure 3.1 gives an idea that the proportions of currently married women with unmet need have a

slight initial increase from 13.6 percent in 1991 to 14 percent in 1994 and followed by a decline to 11.7 percent in 1997. Thereafter, a rise in unmet need happened in 2002 to 2007 from 11.8 percent to 13.9 percent. Generally, Figure 3.1 should show a U shape for unmet need in South Sulawesi, rising in the early stages of the transition as interest in both family limitation and spacing grows and declining in the later stages when family planning use is adopted. However, in the next stages with continuing population increase in South Sulawesi, the proportion of women with unmet need for family planning may still be increasing.

3.3. Demographic Characteristics of Currently Married Women.

Various selected demographic characteristics of currently married women in South Sulawesi are explained in this section. These characteristics are women's age, number of living children, desire future children and ideal number of children. The explanation of these characteristics could provide useful information in terms of demographic factors which affect demand for family planning or contraceptives.

3.3.1. Currently Married Women's Age and Number of Living Children.

The data presented in Table 3.2 breaks down the number and percentage of currently married women into four groups, namely 15-19, 20-29, 30-39 and 40-49. The modal age-group is the 30-39 years comprising 39.6 percent of the currently married women in South Sulawesi, which is followed by the 20-29 year age group comprising 30 percent of the women. Only 4 percent of the currently married women in South Sulawesi are aged 15-19 years. The median age of currently married women in South Sulawesi is 33.7 years which could affect the demand for family planning, as most experts believe that the older the women, the lower would be the proportion who would be in need of family planning.

Table 3.2 also indicates that most currently married women (44.7 percent) had 2-3 living children. This is followed by 0-1 living children (30.1

percent). Thus, nearly three-fourths of the currently married women of South Sulawesi had three or fewer living children, while one-fourth had more three living children. This indicates a fairly high level of fertility if the number of children who were born alive but since died is taken into account. The median number of living children in South Sulawesi is 2 and the number of living children is 2.6.

Table 3.2. Age and Number of Living Children of Currently Married Women in South Sulawesi, 2007.

	Frequency	Percent
Women's Age :		
15 - 19	38	4.0
20 - 29	290	30.0
30 - 39	383	39.6
40 - 49	256	26.5
Total	967	100.0
Median age	33.7	
Number of Living Children :		
0 - 1 living children	291	30.1
2 - 3 living children	432	44.7
More than 3 living children	244	25.2
Total	967	100.0
Median number of living children	2	
Mean number of living children	2.6	

Source: Indonesia Demographic and Health Survey 2007 dataset.

3.3.2. Desire for Future Children and the Ideal Number of Children.

The proportion of currently married women who desired future children and their ideal number of children is shown in Table 3.3. According to this table,

in South Sulawesi, 47.3 percent of currently married women said that they wanted another child, a finding which has important implications for demand for family planning. This is followed by a group of currently married women who wanted no more children which comprises 43.8 percent of the currently married women. A small proportion of about 9 percent of the currently married women in South Sulawesi were not decided about their desire for future children. This is a good sign in that more than 90 percent of the currently married women of South Sulawesi have a conscious idea about the number of children they desire to have, because, according to van de Walle (1992), numeracy about the desired number of children is a precursor to fertility decline. It is also a good sign that more than 40 percent of these women do not desire to have another child.

Table 3.3. Percentage of Currently Married Women who Desire for Future Children and Ideal Number of Children in South Sulawesi, 2007.

	Frequency	Percent
Desire for Future Children :		
Have another child	457	47.3
Wants no more children	423	43.8
Undecided	86	8.9
Total	967	100.0
Ideal Number of Children :		
1 - 2 children	337	34.8
3 - 4 children	368	38.1
More than 4 children	98	10.1
Other	164	17.0
Total	967	100.0
Mean Ideal Number of Children	3.12	

Source: Indonesia Demographic and Health Survey 2007 dataset.

The ideal number of children of the currently married women of all ages 15-49 in South Sulawesi is presented in Table 3.3. More than 38 percent of the women stated their ideal number was 3-4 children. An ideal number of 1-2 children were stated by an almost equally large percentage of women (34.8 percent). A tenth of women stated their ideal number of children was more than 4, while 17 percent of the women had “other” responses, most of which was presumably in the “undecided” category. The mean ideal number of children was 3.1, well above the small family norm of 2 children.

In addition to close to 50 percent of the currently married women stating their ideal number of children as more than 3, close to a fifth of the women (17 percent) gave non-numerate answers on the subject of ideal number of children. This does not augur well for fertility decline in South Sulawesi.

3.4. Socioeconomic Characteristics of Currently Married Women.

There are seven variables selected for discussion in this section that represent the socio-economic characteristics of the currently married women of South Sulawesi. These variables are: education, employment status, religion, place of residence, whether distance to a health facility is a problem or not, whether transportation is a problem or not and finally, whether getting money needed for treatment is a problem or not. These socioeconomic characteristics will be presented with some description so that valuable background information could be gained in analysing demand for family planning.

3.4.1. Women’s Education and Women’s Employment Status.

Table 3.4 display the level of education of currently married woman in South Sulawesi in 2007. It can be seen from this table that the main level of education of currently married women in South Sulawesi are primary and secondary education. Precisely, 43.6 percent of currently married women have primary education, followed by 41.7 percent of currently married women who HAVE completed secondary education. Only 6.5 percent of currently married

women in South Sulawesi have reported that they have no education. This finding is essential and interesting information in analysing the correlation between women's education and the demand for family planning which is expected that women with higher education will be more concern with adopting contraception.

Table 3.4. Percentage of Currently Married Women by Level of Education and Employment Status in South Sulawesi, 2007.

	Frequency	Percent
Women's Education :		
No Education	63	6.5
Primary	422	43.6
Secondary	403	41.7
Higher	80	8.2
Total	967	100.0
Women's Employment Status :		
Not currently working	399	41.3
Currently working	567	58.7
Total	967	100.0

Source: Indonesia Demographic and Health Survey 2007 dataset.

When investigating demand for family planning, it would be interesting to take into account the socioeconomic characteristics of women such as their employment status. In South Sulawesi, the employment status of currently married women reflects a high percentage currently working (see Table 3.4). More than 50 percent of currently married women in South Sulawesi are working.

3.4.2. Religion and Place of Residence.

Islam is the majority religion of South Sulawesi, which is reflected in the statistic that more than 90 percent of the sample of currently married women of the province is Muslim (see Table 3.5).

Table 3.5. Percentage of Currently Married Women by Religion and Place of Residence in South Sulawesi, 2007.

	Frequency	Percent
Religion :		
Non Islam	82	8.5
Islam	882	91.3
Other	2	0.1
Total	967	100.0
Place of Residence :		
Urban	293	30.3
Rural	674	69.7
Total	967	100.0

Source: Indonesia Demographic and Health Survey 2007 dataset.

South Sulawesi is highly rural, as nearly 70 percent of the currently married women in South Sulawesi lived in rural areas (Table 3.5). The province of South Sulawesi has an area of 45,764.53 square km which includes 20 regencies and three cities (Biro Pusat Statistik, 2008). These three cities are Makassar, Pare-pare and Palopo which together form only 1.15 percent of whole area of South Sulawesi.

3.4.3. Distance, transportation to health facility and getting the money needed to meet the cost of contraceptives.

The accessibility and the cost of contraceptive use are considered as the essential aspects in this study. The investigation of issues of accessibility in reaching contraception such as distance and transportation to the health facility is an important issue, as they remain problems in most developing countries (Robey et al, 1996).

Table 3.6. Percentage of Currently Married Women by Distance, Transportation to Health Facility and Getting the Money Needed to Meet the Cost of Contraceptives, South Sulawesi, 2007.

	Frequency	Percent
Distance to Health Facility :		
Big problem	220	22.8
Not a big problem	745	77.2
Total	967	100.0
Transportation to Health Facility :		
Big problem	198	20.5
Not a big problem	767	79.5
Total	967	100.0
Getting Money Needed for Treatment		
Big problem	282	29.2
Not a big problem	684	70.8
Total	967	100.0

Source: Indonesia Demographic and Health Survey 2007 dataset.

Indonesia as well as South Sulawesi contains many rural or remote areas where distance and transportation to health facilities could be matters of concern to women seeking health or contraceptive services. The other matter that could be of concern to women is the cost of contraceptives and the ability to pay for it. However, based on Table 3.6, more than 70 percent of the currently

married women in South Sulawesi in 2007 had stated that distance to the health facility, finding transportation to the health facility and getting the money needed for contraceptive services is not a big problem. More precisely, 77 percent thought distance was not big problem, nearly 80 percent thought finding the transportation to the health facility was not a big problem and nearly 71 percent thought it was not a big problem to find money for contraceptive services. However, nearly a fourth, a fifth and nearly a third respectively of the women who thought that distance, transport and money were big problems, should be especially targeted by the family planning program for alleviating their problems in order to reduce the unmet need and increase the total demand for family planning.

3.5. Family Planning Characteristics of Currently Married Women.

The family planning program which is implemented in Indonesia affect women's behaviour in adopting methods of contraception. By providing knowledge, information and family planning services, the family planning program enables the women to gain sufficient knowledge of family planning methods and be familiar with places to obtain family planning services. The selected family planning characteristics that will be described in this section are husband's approval of family planning and whether the woman heard about family planning on television (TV) last month.

The role of husbands in deciding whether their wives are allowed to use contraception is important in South Sulawesi. Lerman et al (1989) believe that husbands significantly influenced the wife's ability to successfully use contraception. Based on Table 3.7, it could be stated that for a vast majority of currently married women in South Sulawesi (nearly 80 percent), the husbands approved of their wives' use of family planning. For only 7.5 percent of the women, the husbands did not approve. Interestingly, 14.4 percent said they were not sure whether their husbands approved of family planning or not.

Table 3.7. Percentage of Currently Married Women who Their Husband Approve Family Planning and Heard about Family Planning on TV Last Month in South Sulawesi, 2007.

	Frequency	Percent
Husband who Approve FP :		
Approve	752	78.1
Disapprove	72	7.5
Don't know/Unsure	139	14.4
Total	963	100.0
Viewed Family Planning Message on TV Last Month :		
Yes	202	21.0
No	762	79.0
Total	964	100.0

Source: Indonesia Demographic and Health Survey 2007 dataset.

Another aspect that plays an important role in promoting the family planning program and convincing married women in adopting contraception is mass media campaign which, in this study is implemented through the medium of television (TV). There are various types of mass media communication for providing information regarding family planning. The mass medium TV plays a particularly important role in conveying message about family planning to the masses. This effectiveness of mass media campaign on family planning was demonstrated by Zodgekar (1996) who conducted a study in India, which showed that women who are not using contraception and who are exposed to mass media messages about family planning are considerably more likely to say that they intended to use contraception compared to women not using family planning and not exposed to mass media. However, in the present study, the proportion of currently married women who have heard about family planning during the month preceding the survey is very small (21 percent). Thus, nearly four-fifths of the women had heard about family planning on TV. This is an opportunity for the family planning program to

extend TV coverage with messages about family planning so that more women receive the message, potentially use family planning and reduce unmet need for family planning in South Sulawesi.

3.6. Conclusion.

The trends in the demand for family planning, and the demographic, socio-economic and family planning characteristics of currently married women in South Sulawesi have been described in this chapter. Generally, the trends in the demand for family planning as well as contraceptive use have increased reasonably from 1991 to 2007. However, more attention has to be paid on the trends of unmet need in South Sulawesi. The trends in unmet need start to increase gradually from 1997 to 2007 indicating that there is also an increment in the proportion of currently married women who are not practicing any method of contraception when they should.

With reference to demographic characteristics of currently married women, the data indicate that most women in South Sulawesi desire to have additional children, with the proportion of currently married women who want to have another child being larger than that of those who want no more children. In addition, the majority of currently married women in South Sulawesi prefer to have large family sizes, with the percentage of women who said that their ideal number of children was three to four children is larger than those whose ideal number of children is one to two children. More attention should be put on these findings due to its effect on the demand for family planning, particularly on unmet need for family planning. With respect to the fact that most currently married women had 2-3 living children, it would become a potential issue for fertility in the next stages if the women kept reproducing until they achieved their ideal number of children. An important point to remember is that two-thirds of the currently married women were over the age of 30 years and therefore, they were nearly past their peak ages of childbearing. Therefore any program to reduce the level of unmet need and to

increase the demand for family planning in South Sulawesi should be focussed on limiting methods.

Concerning socio-economic characteristics of currently married women, the data point out that the level of education of currently married women were mostly secondary education and higher. More than half of the currently married women were currently working. Almost all of currently married women were Muslims and most of them lived in rural areas. The majority of the currently married women stated that there is no big problem in relation with distance to health facility, transportation to health facility and getting money needed for contraception.

This chapter also showed the family planning characteristics of currently married women in South Sulawesi such as husbands who approved family planning and hearing of family planning messages on TV. According to the 2007 IDHS data, almost 80 percent of currently married women had approval from their husbands to use family planning methods. But only about a fifth of the women had heard about family planning on TV. It seems that the family planning program in South Sulawesi has a tremendous opportunity to increase mass media campaign on family planning through the medium of television.

CHAPTER FOUR

ASSOCIATION BETWEEN SELECTED VARIABLES AND THE DEMAND FOR FAMILY PLANNING IN SOUTH SULAWESI

4.1. Introduction.

The association between selected variables and the demand for family planning in south Sulawesi are analysed in this chapter. This chapter consist of two main parts. The first part of this chapter will utilize bivariate analysis in order to examine the relationship between selected variables and the demand for family planning. Using results of the first analysis in the first part, multivariate analysis are employed in the second part. In the second part, analyses of the simultaneous impact of selected variables on the demand for family planning will be produce through binary logistic regression procedures.

4.2. Bivariate Analysis.

This section will examine the relationship between selected variables with the demand for family planning as dependent variables. The independent variables divided into three groups. First, the demographic variables which consist of the women's age, number of living children, desire future children and ideal number of children. Second, the socioeconomic variables which consist of women's education, women's employment status, religion, place of residence, distant to health facility, transportation to health facility and getting money needed for treatment. Lastly, the family planning characteristics variables consist of husbands who approve family planning and Heard family planning on TV last month.

4.2.1. Demographic Variables and Demand for Family Planning.

Based on table 4.1, it is revealed that demand for family planning has directly and highly significantly ($p < 0.001$) correlated with selected

demographic variables such as currently married women's age, number of living children and desire future children. In this study, however, another demographic variable which is ideal number of children has been found to have insignificant relationship with the demand for family planning.

As it is expected, the association between current women's age and demand for family planning was found to be extremely significant. While younger women (15-19 years old) and older women (40-49 years old) were least likely to have a demand for family planning, the group of currently married women aged between 30 and 39 years old have the strongest demand for family planning and followed by the age group of women between 20 - 29 years old (table 4.1). This actual fact happened because currently married women in aged between 30 and 39 years old are supposed to already have enough children and at high risk aged of pregnancy. On the contrary, younger women (15-19 years old) seem to have a tendency to get children once they married and older women (40-49 years old) are in the situation of infrequent sexual relationships and menopause.

The findings of this study show that the number of living children is highly significantly associated with the demand for family planning. The number of living children appears to be one of the important aspects affecting demand for family planning. The demand for family planning continues to increase as the number of living children increases until 3 living children. Apparently, women who have more than 3 children are less likely to have demand for family planning because of there were usually older and infecund (table 4.1).

In connection between desire future children and demand for family planning, desire for future children is strongly significantly associated with demand for family planning. The percentage of currently married women who were in need of family planning is higher for those who said that they wanted no more children than those who said that they wanted another child (table 4.1). This result verify the findings of Ullah and Chakraborty's study (1993) that

women who desire additional children were more likely not practise contraception than those who did not desire additional children.

Table 4.1. Percentage of Currently Married Women by Selected Demographic Characteristics and Demand for Family Planning in South Sulawesi, 2007.

Demographic Characteristics	Do not have a demand	Have a demand	Chi-square (df)***
Women's Age :			
15 - 19	41.0	59.0	**27.74 (3)
20 - 29	30.0	70.0	
30 - 39	25.6	74.4	
40 - 49	44.7	55.3	
Number of Living Children :			
0 - 1 living children	50.5	49.5	**63.56 (2)
2 - 3 living children	22.7	77.3	
More than 3 living children	28.7	71.3	
Desire Future Children :			
Have another children	39.2	60.8	**51.53 (2)
Wants no more children	21.3	78.7	
Undecided	54.1	45.9	
Ideal Number of Children :			
1 - 2 children	32.1	67.9	Ns 0.37 (3)
3 - 4 children	33.4	66.6	
More than 4 children	33.7	66.3	
Other	31.1	68.9	

Notes: *** = Degrees of freedom
 ** = Strong Significant
 * = Significant
 Ns = Not significant

Source: Indonesia Demographic and Health Survey 2007 dataset.

It was also found that there is insignificant relationship between demand for family planning and ideal number of children (table 4.1). This outcome dissimilar to previous studies which show that ideal number of children has a significant relationship with demand for family planning. A study by Sinaga (1996) found that the lower the ideal number of children, the higher the proportion of currently married women in need of family planning. In this study, the insignificant result might come from the nearly equivalent of proportion in several criteria of this variable. It could be seen in table 4.1, almost all group in ideal number of children have nearly similar value.

4.2.2. Socioeconomic Variables and Demand for Family Planning.

Based on the bivariate analysis, it was found that in general there was a statistically significant relationship between selected socioeconomic variables and the demand for family planning in South Sulawesi. The demand for family planning is found to be directly and significantly associated with women's education, distant to health facility and transportation to health facility. On the other hand, many selected socioeconomic variables have no significant relationship with demand for family planning such as, women's employment status, religion, place of residence and getting money needed for treatment (see table 4.2).

As expected, there is a significant relationship between women's education and demand for family planning. This finding confirms the findings of previous studies that level of education is a determinant of the demand for family planning. Several studies proved that the higher the level of education of both wife and husband, the higher demand for family planning (Sinaga, 1996; Royal Government of Cambodia, 2002). Similarly, in South Sulawesi, the highest proportion of currently married women who were in need of family planning was observed in the high group of level of education which are secondary and higher education.

Table 4.2. Percentage of Currently Married Women by Selected Socioeconomic Characteristics and Demand for Family Planning in South Sulawesi, 2007.

Socioeconomic Characteristics	Do not have a demand	Have a demand	Chi-square (df)***
Women's Education :			
No Education	32.3	67.7	* 8.06
Primary	37.4	62.6	(3)
Secondary	28.5	71.5	
Higher	28.8	71.3	
Women's Employment Status :			
Not currently working	33.3	66.7	Ns 0.32
Currently working	31.6	68.4	(1)
Religion :			
Non Islam	35.4	64.6	Ns 0.60
Islam	32.3	67.7	(2)
Other	50.0	50.0	
Place of Residence :			
Urban	28.7	71.3	Ns 2.98
Rural	34.4	65.7	(1)
Distant to Health Facility :			
Big problem	38.6	61.4	*4.65
Not a big problem	30.9	69.1	(1)
Transportation to Health Facility :			
Big problem	40.4	59.6	**6.83
Not a big problem	30.6	69.4	(1)
Getting Money Needed for Treatment			
Big problem	32.6	67.4	Ns 0.001
Not a big problem	32.7	67.3	(1)

Notes: *** = Degrees of freedom

** = Strong Significant

* = Significant

Ns = Not significant

Source: Indonesia Demographic and Health Survey 2007 dataset.

Percentage of demand for family planning is almost equal in currently married women who currently working and those who are not currently working (table 4.2). Perhaps, this circumstance may lead to the outcome of this study regarding women's employment status which revealed that current working status of women has no influence on their demand for family planning. This idea supported by other earlier studies which stated that there is no significant relationship between employment status and demand for family planning (Sinaga, 1996; Royal Government of Cambodia, 2002).

However, this finding is unparallel with study by United Nations (1979) which found that currently married women who are currently working have higher level of contraceptive use than those who are not currently working.

This study also takes into account of the association between religion and demand for family planning. It is widely known that in some part of the world, contraception is unacceptable due to religious concerns such as in Pakistan (Shah and Shah 1984, cited in Casterline et al, 2001). A study conducted by Moelyo H (1997) who investigates differentials in unmet need for family planning in Nusa Tenggara, Indonesia confirmed that the relationship between the unmet need and religion is significant in urban areas. The proportion of Islam and Non Islam in Nusa Tenggara is equal. In this analysis, however, the majority (91.3 percent) of the currently married women in South Sulawesi are Muslim (table 3.5). Although almost all currently married women in South Sulawesi is Muslim, the percentage of Muslim women who need family planning is nearly similar with Non Muslim women who need family planning. Therefore, it is not surprising that there is no significant connection between religion and demand for family planning in South Sulawesi (table 4.2).

It is unexpected in this study that the place of residence has no influence on their demand for family planning. Although demand for family planning is slightly higher in urban areas than in rural areas and many advantages of urban women compared to their rural counterpart in terms of adopting family planning, it revealed that this variable has weak impact on the demand for

family planning. It is quite interesting to carry out broader study to answer why this result expose in South Sulawesi.

In connection with accessibility, distant to health facility is associated with demand for family planning. Currently married women who said that distant to health facility is not a big problem expectedly having a higher demand for family planning than those who said that distant to health facility is a big problem (table 4.2). This finding seems support the idea that the nearer the health facility, the higher demand for family planning. It is a simple fact that women who have short distant to health facility have many advantages compared to those who have extended distance to health facility in terms of access to family planning services and supplies.

In fact, available transportation would give women more be in motion in reaching health facility. Transportation to health facility has strong associations with the demand for family planning. Demand for family planning is lower when the women consider that transportation to health facility is a big problem and it is higher when they experience that transportation to health facility is not a big problem. Like the association between distant to health facility and demand for family planning, this variable associated with demand for family planning due to the fact that its have an effect on the frequency of women go to health care.

Concerning the cost of demand for family planning, getting money needed for treatment which is related with family planning services has no affect on the demand for family planning. It can be seen from table 4.2 that demand for family planning among currently women who said that getting money for treatment is a big problem has similar proportion with demand for family planning among those who said that getting money for treatment is not a big problem.

4.2.3. Family Planning Variables and Demand for Family Planning.

The association of demand for family planning with several family planning variables is shown in table 4.3. Approval of family planning by husband has strong association with the demand for family planning. Approval of family planning by husband produces a greater demand for family planning than disapproval of family planning by husband.

Table 4.3. Percentage of Currently Married Women by Selected Family Planning Characteristics and Demand for Family Planning in South Sulawesi, 2007.

Family Planning Characteristics	Do not have a demand	Have a demand	Chi-square (df)***
Husband who Approve FP :			
Approve	24.9	75.1	**92.74
Disapprove	54.2	45.8	(2)
Don't know/Unsure	62.6	37.4	
Heard Family Planning on TV Last Month :			
Yes	29.2	70.8	Ns 1.40
No	33.6	66.4	(1)

Notes: *** = Degrees of freedom

** = Strong Significant

* = Significant

Ns = Not significant

Source: Indonesia Demographic and Health Survey 2007 dataset

As Ullah and Chakraborty (1993) argued, in most families in Bangladesh, the husband's consent is required before his wife can accept a contraceptive method. This idea is parallel with the result in this study.

This study also found that heard family planning on television one month preceding the survey was not directly associated with the demand for family planning even though demand for family planning is higher in currently

women who heard family planning on TV than those who not heard family planning on TV one month preceding the survey. This result is contrary with the idea that women who are exposed to mass media messages about family planning are considerably more likely to say that they intended to use contraception compared to women not exposed to mass media (Zodgekar, 1996).

4.3. Multivariate Analysis.

Binary Logistic Regression were used in the analysis of the demand for family planning to investigate how several variables in demand for family planning are transfigured when the analyses are changed for the simultaneous effects of the different demographic, socioeconomic and family planning characteristics. This logistic regression also used to model the impact of those characteristics. In support of logistic regression analysis, first group (category) in every variable were used as reference categories. The odds ratios show the likelihood that current married women in a given category would have a demand for family planning relative to the women in the reference category.

The result of the logistic regression analysis is presented in table 4.4 which show that the significant variables are women's age, number of living children, desire future children and husband who approve family planning. Other independent variables which are ideal number of children, women's education, women's employment status, rural or urban residence, distant to health facility, transportation to health facility, getting money needed for treatment, religion and heard Family Planning on TV one month preceding the survey did not have a significant independent effect on the demand for family planning.

Table 4.4. Binary Logistic Regression of Demand for Family Planning by Selected Variables among Currently Married Women in South Sulawesi, 2007.

Variable	Odd Ratio	P Value
Women's Age :		
(15 - 19)	1.000	0.000
20 - 29	7.204	0.000
30 - 39	6.212	0.000
40 - 49	3.332	0.000
Number of Living Children :		
(0 - 1 living children)	1.000	0.000
2 - 3 living children	0.225	0.000
More than 3 living children	0.994	0.976
Desire Future Children :		
(Have another children)	1.000	0.000
Wants no more children	1.650	0.099
Undecided	4.078	0.000
Whether Husbands Approve FP :		
(Disapprove)	1.000	0.000
Approve	4.308	0.000
Don't know/Unsure	1.558	0.173

Model Chi-square 222.584

Degrees of freedom 9

Probability 0.000

Notes: Reference category is in parentheses.

Source: Indonesia Demographic and Health Survey 2007 dataset

The impact of women's age on the demand for family planning is found to be the largest among the impact of all the variables in the model. In general, women aged 20 years and over have much higher odds of having demand for family planning compared to women aged 15-19 years. The odds of having demand for family planning is 7.2 times higher for women aged 20-29 years

compared to women aged 15-19 years. These odds are also very high for women aged 30-39 and 40-49, although the odds decline a little for the latter age-group.

With respect to the impact of the number of living children on demand for family planning, the results of the multivariate analysis are not consistent with what was found in the bivariate analysis. While the bivariate analysis showed that demand for family planning was greater for women with larger number of living children (Table 4.1), the multivariate analysis (Table 4.4) shows an opposite pattern in that the odds of having demand for family planning are less for women with 2 or more living children compared to women with one or no child. It is difficult to explain this apparent anomaly.

The desire for future children is found to have a net significant impact on the demand for family planning. Based on Table 4.4, it can be seen that relative to currently married women who desire another child, women who want no more children and women who are undecided about desire for future children have higher odds of having a demand for family planning. In other words, both these latter groups are more likely to have a demand for family planning as compared to women who desire another child. This is expected, as women who desire no more children would practise contraception (met need) or have an unmet need for family planning.

Husband's approval of family planning also emerged as one of the determinants of the demand for family planning. Currently married women who had approval from their husbands to practise family planning had 4.3 times higher odds of demanding family planning than women whose husbands disapproved of family planning. This indicates how essential a husband's approval is in the wife's acceptance of contraception.

4.4. Conclusion.

Based on the bivariate analysis, it is found that demand for family planning is associated with a number of demographic, socioeconomic and family planning variables pertaining to the currently married women of South

Sulawesi. Among demographic variables, women's age, number of living children, and desire for future children were found to have strong association with demand for family planning. However, ideal number of children was found to have no relationship with demand for family planning. It is argued that this variable had an insignificant relationship because there is no certain ideal regarding the number of children a woman in South Sulawesi should have.

Demand for family planning is influenced not only by demographic factors but also by socioeconomic and geographic variables such as women's education, distance to health facility and transportation to health facility. However, all these variables were found to have only weak association with demand for family planning as shown in Table 4.2. Women's employment status, religion and place of residence were found to have no association with demand for family planning. With respect to family planning variables, husband's approval of family planning use by the wives was found to have a very strong association with demand for family planning. But, viewing of TV messages about family planning has no association with demand for family planning, implying that the medium of TV has played no role in creating demand for family planning.

The socio-economic variables were not included in the multivariate analysis, as in the bivariate analysis, they showed no association with demand for family planning. The variables included in the multivariate analysis are women's age, number living children, desire for future children and husband's approval of family planning. Of these variables, women's age was found to be the most important variable in contributing to the demand for family planning. The number of living children, appeared to have an unexpected opposite effect on demand for family planning in that women with more than two living children had less demand for family planning compared to women with one or no child. Women who desired no more children and women whose husbands approved of family planning had higher odds of having demand for family

planning compared respectively to women who desired another child and women whose husbands disapproved of family planning.

CHAPTER FIVE

CONCLUSION

5.1. Introduction.

This chapter presents the major findings of the study and recommends the major implications of the findings for further research and program strategy for improving family planning program in Indonesia. The study is based on an original analysis of data obtained from the Indonesia Demographic and Health Survey 2007.

5.2 Major Findings.

The 2007 Indonesian Demographic and Health Survey data show that between 1991 and 2007 the demand for family planning and current use of contraception in South Sulawesi have increased. However, special attention needs to be paid to the trends of unmet need for family planning which has increased moderately and gradually between 1997 and 2007 indicating that there is also a growth in the proportion of currently married women who were in need of family planning but were not using the same.

The mean ideal number of children of currently married women in South Sulawesi is 3.1 which indicate that women in South Sulawesi prefer to have more children than that recommended under the small family norm of two. Further, the number of women who want one additional child is larger than the number of women who do not want any more children, which indicates that desired fertility is larger than actual fertility. All the women wanting one additional child would not be practising contraception until they have achieved their desired fertility. Therefore, according to the recommended two child small family norm, these women would be classified as potentially having an unmet need for family planning.

It has been found that in South Sulawesi, most of the currently married women had completed primary and secondary education and more than half of

the women were currently working. Most of the currently married women resided in rural areas and the religion of most women was Islam. The majority of currently married women said that there is no big problem in relation with distance to a health facility, transportation to health facility and getting money needed for treatment.

The family planning characteristics of currently married women in South Sulawesi were represented by two variables namely, husband's approval of family planning use by the wives and viewing of family planning messages on TV during one month preceding the survey. The currently married women who had a demand for family planning were more likely to have an approval from their husbands in using contraception. Almost 80 percent of the women with demand for family planning had obtained approval from their husbands to use family planning. This percentage is larger than that of women who did not have a demand for family planning.

In the bivariate analysis, this study has examined the relationship of demand for family planning among currently married women of South Sulawesi with demographic, socioeconomic and family planning characteristics of the women. Several selected demographic variables such as women's age, number of living children, and desire for future children were found to be associated with demand for family planning. Only ideal number of children was found to have no relationship with the demand for family planning. In relation to the association between demand for family planning and socioeconomic variables, this study has found that women's education, distance to health facility and transportation to health facility were found to have significant relationships with demand for family planning. On the other hand, women's employment status, religion and place of residence were found to have no significant association with the demand for family planning. In addition, the family planning variable signifying husband's approval of family planning was found to have an association with the demand for family planning.

In the multivariate analysis, only four selected demographic and family planning variables which were selected for analysis, as the socioeconomic variables had no significant relationship with demand for family planning in the bivariate analysis. The four selected demographic and family planning variables were found to have an impact on demand for family planning. Women's age, desire for future children and husband's approval were the variables which had the strongest relationship with demand for family planning. The number of living children showed an unexpected relationship with demand for family planning.

5.3. Policy Implications

This study is motivated by the necessity of policy makers at the provincial level to recognize the demand for family planning and its correlation with many aspects such as demographic, socioeconomic and family planning so that they could formulate appropriate strategies regarding the goals of the family planning program.

The influence of the desire for additional children on demand for family planning has been strong. Most women in South Sulawesi desired to have additional children. Therefore, the main effort should be taken to re-invigorate the prosperous and small family norm promoted by the government in the 1970s and 1980s. Re-emphasizing the perception of small family norm through family welfare and happy family campaigns in the society would provide a useful intervention to further increase the demand for family planning and its fulfilment towards a reduction of fertility.

Another important aspect in the observed association of demographic factors with demand for family planning is women's age. The analysis in the present study has shown that age of the woman has a significant effect on demand for family planning. Therefore, it is important to target the women of those age-groups which have shown low demand for family planning.

This present study suggests that by obtaining approval from husbands, the currently married women have a greater likelihood of adopting

contraceptive methods, and thereby increase the demand for family planning. This in turn requires that women should have sufficient information and knowledge about family planning which they could use in arguing about contraception with their husbands. It is widely accepted that one of way to get information, education and knowledge of family planning is from family planning fieldworkers who have been playing an important role in promoting family planning to downsize fertility levels. The number of family planning fieldworkers has declined considerably at the district level due to uncertainties in the political commitment at lower levels of government after decentralisation. The number of field workers must be increased for sustaining the viability of the family planning program.

Education of women has been found to exert a significant influence on the demand for family planning. The highest proportion of currently married women who had demand for family planning belonged to the highest level of education. Therefore, programs for maintaining and supporting education of women should be reinforced.

The bivariate analysis has revealed that, whether transportation was an issue or not in reaching a health facility was found to have a moderate but statistically significant relationship with demand for family planning. Furthermore, whether distance to a health facility was a big problem or not also had a moderate association with demand for family planning. Based on these findings, it is undeniable that accessible health facilities related either with distance or the existence of transportation is very important to be concerned in order to raise the demand for family planning.

In conclusion, South Sulawesi has a high level of unmet need for family planning and a relatively low level of met need (i.e., current use of contraceptives). However, the total demand for family planning, consisting of unmet need and met need is relatively low. Fertility in South Sulawesi is comparatively high. Therefore, in order to reduce the fertility of the province, the total demand for family planning and its fulfilment should be increased.

However, even at its current level of demand for family planning, a complete reduction of unmet need would help raise the fulfilment of demand and help in reducing the fertility of the province.

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