

**Fertility Preferences: Ideal Family Size, Contraceptive use and their
Determinants in the Occupied Palestinian Territory**

**تفضيلات الخصوبة: حجم الأسرة المثالي و استخدام وسائل منع الحمل ومحدداتهما في الأرض
الفلسطينية المحتلة**

By Nadine “Mohammad Said” Kamal

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Advisor

January, 14, 2005

**This Thesis was submitted in partial fulfillment of the requirements for the Masters Degree in Public
Health from the Faculty of Graduate Studies at Birzeit University, Palestine**

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DEDICATION

I dedicate this work to the soul of my father Dr. “Mohammad-Said” Kamal who dedicated his life to improving the quality of healthcare services for the Palestinian people.

To my mother “Qamar Kamal” who without her support this thesis could have never been completed.

To my husband “Hussam Adili” for his patience and his loving support.

To my son “Nabil H. Adili” who I hope will be proud of me when he grows up.

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LIST OF ABBREVIATIONS

C.I.: Confidence Interval

DHS: Demographic and Health Survey

ICPH: Institute of Community and Public Health

IUD: Intrauterine Device

PCBS: Palestinian Central Bureau of Statistics

OPT: Occupied Palestinian Territory

OR: Odds Ratio

TFR: Total Fertility Rate

SPSS: Statistical Package for Social Sciences

UNRWA: United Nations Relief and Work Agency

UPMRC: Union of Palestinian Medical Relief Committees

ABSTRACT

This research aims to shed some light on fertility preferences and contraceptive behavior among ever-married Palestinian women in the age group 15-49 years old (a total of 5363 women), using secondary data collected by the Palestinian Central Bureau of Statistics (PCBS), and supported by a series of focus-group discussions with women to deepen the insight and explain further the findings generated from the statistical analyses. In the 2000-PCBS Demographic and Health Survey (DHS2000) women with living children were asked about the total number of children they wish to have in ideal situations, that is, if they had the chance to start all over again. The mean ideal number of children was 4.5 and was significantly influenced by the women's educational levels, crowding ratio of the household, region, women's current family size and whether women had any children who died. Moreover, a substantial proportion (35.1%) had children above their stated ideal family size, and this was significantly associated with the women's age, their age at first marriage, education, crowding ratio, having children who died and the use of contraception. Other factors influencing the gap between ideal and actual family size were revealed by the qualitative analysis of focus group discussions, and included social and family pressure, male preference and the need for children as a source of support in old age. Women reported starting to practice contraception only after they had exceeded their ideal number of children, and using contraception among women desiring to stop childbearing was associated with women's age,

education, employment status of head of household, current number of children, having children who died, region and crowding ratio.

الخلاصة

يهدف هذا البحث إلى تسليط الضوء على تفضيلات الخصوبة وممارسات استعمال وسائل منع الحمل بين النساء الفلسطينيات اللواتي سبق لهن الزواج أو اللواتي ما زلن متزوجات في الفترة العمرية بين 15 إلى 49 عاماً والذي ما مجموعه 5363 امرأة. تم ذلك باستخدام بيانات ثانوية جمعت وأدخلت من قبل الجهاز المركزي الفلسطيني للإحصاء، إضافة إلى إجراء سلسلة من مجموعات النقاش البورية التي هدفت إلى توفير تفسيرات أعمق للنتائج الإحصائية.

وقد تم سؤال النساء المجيبات (اللواتي لديهن أطفال) في المسح الصحي الذي قام به الجهاز المركزي للإحصاء عام 2000 حول العدد المثالي للأولاد الذي تتمنى كل امرأة إنجابه إذا كانت ستبدأ من جديد. وقد سجل عدد الأطفال المثالي 4.5 ووجد أن هذا العدد يتأثر تأثيراً إحصائياً واضحاً بالمستوى التعليمي للمرأة، نسبة الاكتظاظ في المنزل، المنطقة، عدد الأطفال الحالي ووفاة طفل أو أكثر في العائلة.

أيضاً تبين أن العديد من النساء أنجبن أطفالاً أكثر من حجم الأسرة المثالي، وقد تباين ذلك مع اختلاف عمر المرأة، مستوى تعليمها، نسبة الاكتظاظ في المنزل، ووفاة طفل أو أكثر في العائلة. كذلك أظهرت نتائج البحث النوعي أن العديد من النساء تجاوزن حجم الأسرة المثالي وذلك كنتيجة للضغوطات العائلية والاجتماعية ولرغبتهم بإنجاب طفل ذكر وأيضاً بسبب حاجتهم للأولاد لتقديم العون لهم في مراحل الشيخوخة.

وقد تبين أن عدداً من النساء في هذا البحث لم يلجأن إلى استعمال أساليب منع الحمل المختلفة إلا بعد أن تجاوزن حجم الأسرة المثالي. ووجد أن استعمال وسائل منع الحمل في حالة عدم الرغبة في إنجاب المزيد من الأطفال ارتبط بشكل واضح بعمر المرأة، مستواها التعليمي، الحالة الوظيفية لرب الأسرة، عدد الأطفال الحالي ووفاة طفل أو أكثر في العائلة، كذلك المنطقة ونسبة الاكتظاظ في المنزل.

CHAPTER ONE: INTRODUCTION

Fertility rates in Palestine have long been considered some of the highest rates in the Arab world. This was attributed to many factors including the low age at first marriage among women, male child preference, the low rates of women's employment and the traditional views on childbearing in the Palestinian communities urging women to have more children.¹ The total fertility rate (TFR) in Palestine was reported as 6.4 children per woman between the periods 1985-1989, 6.1 in 1995, 6.0 in the year 1997, and dropped to 5.9 in 1999.² However it is fertility levels in the Gaza Strip that are significantly higher relative to those in the West Bank: the TFR in the Gaza strip reached as high as 6.8 children in 1999 (among the highest in the world), while it was 5.5 births in the West Bank for the same year.³ Most neighboring countries had lower total fertility rates: Jordan for instance registered a TFR of 4.4 and 3.7 births in 1997 and 2002 respectively⁴, Egypt (3.5 births) in 2002⁵, Morocco (2.5 births) between 2003 and 2004⁶, while Yemen reported a TFR of 6.5 births in 1997⁷. In his analysis, Fargues claimed that although Palestine has undergone the essential preconditions that should shift its fertility into transition, including the substantially high levels of education its population has achieved, the decrease in infant mortality, and the increase in urbanization, in addition to economic deprivation that should lead to a decrease in total

¹ *Palestinian central bureau of statistics, health survey, 2000*. Final report. November, 2001.

² Ibid.

³ Ibid.

⁴ http://www.measuredhs.com/countries/country.cfm?ctry_id=18 (accessed December, 15, 2005)

⁵ http://www.measuredhs.com/countries/country.cfm?ctry_id=10 (accessed December, 15, 2005)

⁶ http://www.measuredhs.com/countries/country.cfm?ctry_id=27 (accessed December, 15, 2005)

⁷ http://www.measuredhs.com/countries/country.cfm?ctry_id=46 (accessed December, 15, 2005)

fertility rates, still, fertility levels continued to be above demographic transition. He further elaborated that “*fertility in Palestine is high because it is desired.*” Fargues pointed to the fact that many Palestinian leaders have long been lobbying for increasing the birth of numerous children in order to defeat Israel using high fertility as a weapon. He also argued that high fertility in Gaza was also due to the closure of the highly dense territory whereby freedom of movement and mobility were restricted, in addition to the lack of employment opportunities, all factors that left Palestinians in the Gaza Strip with only one choice, that of having large families. Moreover, Fargues added that high fertility in the Palestinian territory is merely an issue of desire and preference for having more children where there is a significant valuation of motherhood, and women are prized for having children, especially boys. He highlighted the notion that integrates this desire with the political context, by calling mothers who raise their boys to become men as “Mothers of the nation”.⁸

Studying the trends in fertility preferences usually provides an insight into women’s preferred family size and how this varies across different socio-economic and demographic features. Although not always translated into actual behavior, ideal family size is still considered a reflection of the actual demand for children rather than actual fertility rates.⁹ It is thus inferred that fertility desires emerge as a direct reflection of

⁸ Fargues P. Protracted national conflict and fertility change: Palestinians and Israelis in the twentieth century. *Population and development review*; 26 (3): 441-82; September, 2000.

⁹ Nayab D. Fertility preferences and behavior: a case study of two villages in the Punjab, Pakistan. Pakistan institute of development economics; 1999.

nation's cultural, social and economic backgrounds.¹⁰ However, not many women actually achieve their desired fertility: ideal family size may exceed or go below women's current fertility levels. In this thesis, a main interest is focusing on studying those cases when the current number of children exceeds the stated ideal family size of women, as such cases may represent a group of women with unwanted or mistimed fertility, which may indicate some kind of unmet need. Unmet need for family planning methods may result in increasing the prevalence of unplanned or unwanted pregnancies that predispose both the mother and the child to several negative health and social consequences.¹¹

Published data indicate that a total of 113.6 million women in developing countries had an unmet need for contraception in the year 2000. In Arab countries, it has been shown that unmet need was highest in Yemen reaching as high as 38.6% of married women of child bearing age, while it was lowest in Egypt, reported as 11.2%. The use of contraception is seen as an important factor contributing to reducing unmet need by assisting women in avoiding mistimed and unwanted pregnancies.¹²

This study aims to explore the stated fertility preferences of ever-married Palestinian women in the age group between 15 and 49 years, in terms of their ideal family size and

¹⁰ Sahleyesus D. "Attitudes towards family size preferences among urban Ethiopians". (revised version of paper presented in at the annual meeting of the Canadian population society, university of western Ontario, London, ON), June 2005.

¹¹ Magadi M. Unplanned childbearing in Kenya: the socio-demographic correlates and the extent of repeatability among women. *Social science and medicine*; 56: 167-78; 2003.

¹² Shah M. et al. Unmet need for contraception in Kuwait: issues for healthcare providers. *Social science and medicine*; 59: 1573-80; 2004.

its determinants, and to illustrate the relation between the expressed preferences and the actual practices of women, relative to their current family size. In addition, the use of contraception will be examined with regards to its prevalence and determinants among women who desire to stop childbearing, and in order to link contraceptive use to differences between ideal family size and actual practices. This research is based on the analysis of secondary data from the Demographic and Health Survey 2000, that was collected by the Palestinian central bureau of statistics (PCBS). The analysis contained in this thesis was supported by focus-group discussions completed with women of various socio-economic and demographic characteristics, in an attempt to generate deeper explanatory information regarding women's fertility preferences, their determinants, and the use and non use of family planning services that could assist in the explanation of the statistical results.

It is hoped that the analysis contained in this thesis would provide insight to policy makers and health planners in Palestine as to women's fertility desires versus their actual practice, and thus identifying areas for the further development of policies as well as comprehensive family planning services in Palestine.

OBJECTIVES

The main objectives of this research are:

1. To describe the fertility preferences of ever-married Palestinian women in the age group 15-49 years and their determinants.
2. To identify the gap between women's fertility preferences and actual fertility and the determinants of the deviation between stated ideal family size and current number of children.
3. To examine the use and nonuse of contraceptive methods among women desiring to stop childbearing across various demographic and socioeconomic characteristics and to link contraceptive use to the gap between preference and actual practice.

RESEARCH QUESTIONS

The main research questions are as follows:

1. What is the mean ideal number of children as expressed by ever-married women in the age group 15-49 years old with living children?
2. How does the mean ideal number of children vary by:
Age, age at first marriage, education employment status and type of occupation of women, in addition to employment status and type of occupation of head of household; type of health insurance, crowding ratio of the household, region and type of locality, all representing possible demographic and socio-economic determinants of women's preferences; and, current number of children and their

sex mix and whether a woman had any children who died as possible other important determinants of the ideal family size that women express, which are not merely demographic determinants, but also ones that are influenced and modified by women's experiences in the context of her social environment.

3. What is the relation between the expressed ideal number of children and women's actual family size?
4. What are the determinants of the deviation between the ideal number of children and the actual family size?
5. What are the determinants of use of contraception among women who desire to stop childbearing? Does contraceptive use influence the gap between stated preferences and actual practices?

HYPOTHESES

1. The Ideal family size is higher among older, less educated, unemployed women and those who married at a younger age. It is also higher among women with an unemployed head of household and those living in more crowded houses (a proxy measure of poverty). The ideal family size is in contrast, smaller among urban women, those with a private health insurance (proxy for family affluence), those with a fewer current number of children and those who do not have any children who died.
2. The use of contraceptive methods among women desiring to stop childbearing is higher for women in their thirties, women with a higher educational attainment,

those who are employed and with heads of household also employed, and those having a private health insurance. It is also more prevalent among West Bank women compared to Gaza, and those living in urban areas compared to rural areas or camps, those with a high number of living children and women who did not experience the death of any children.

3. The current family size exceeds the ideal number of children expressed by women, partially due to not using contraception.

CHAPTER TWO: LITERATURE REVIEW

Data on women's fertility preferences provide valuable information regarding future fertility trends and is considered important in uncovering women's ideal family size and its composition. Measures of fertility preferences further assist health planners and demographers in determining the unmet needs for family planning and highlight the general attitudes of a society towards childbearing and the value of children.¹³ Moreover, in developing countries and in the absence of high prevalence of contraceptive use, fertility preferences can reflect the actual demand for children better than can data on actual fertility.¹⁴

As classified by McClelland (1983), four questions are best used to capture the preferences of women regarding their desired family size: "how many more", "over again", "ordering" and "projective". "How many more" describes how many children a woman wants to have in addition to what she already has, "over again" answers the question of how many children a woman would have if she goes back in time when she did not have anymore children, "ordering" gives respondents the possibility of ordering a number of possible answers to their desired family size. "Projective" on the other

¹³ *Ghana demographic and health survey 2003*. Ghana statistical service, Ghana Noguchi memorial institute for medical research; Ghana ORC Macro, USA. September 2004.

¹⁴ Nayab D. *Fertility preferences and behavior: a case study of two villages in the Punjab, Pakistan*. Pakistan institute of development economics (PIDE), 1999.

hand provides information on the general preferences of women regarding family size rather than her own ideal number of children.¹⁵

Meanwhile, researchers attempting to measure fertility preferences have reported a number of difficulties in obtaining reliable information about women's reproductive intentions. Those included the abstract nature of the questions as researchers may not take into consideration the social, behavioral and psychological factors that interfered with women's responses, and the constraints under which women were when responding to those questions. Also, in countries where voluntary fertility control is absent, information on women's fertility preferences may have less value as women would be less capable of accomplishing their stated desired family size. Rationalization and the adjustment of ideal family size (both upward and downward) in relation to what women already have was also documented in the literature, where women may adjust their desires to their actual family size.¹⁶ Some other social scientists however, like Westoff, Freedman et al., Mauldin, Khan and Sirageldin believe that measuring women's fertility intentions is reliable and highly predictive of future fertility. In this regards, Bulatov, Pullum, Namboodiri and Lee elaborated that if those measures are properly designed and performed then they should yield important information about

¹⁵ Nayab D. *Fertility preferences and behavior: a case study of two villages in the Punjab, Pakistan*. Pakistan institute of development economics (PIDE), 1999.

¹⁶ Rasul A. Fertility preference: a study of some basic concepts and considerations. *The Journal of family welfare*. 39(1): 24-32. March 1993.

the actual fertility behavior, taking into consideration that fertility intentions are a consequence of a dynamic process and a continuous flow of decisions.¹⁷

Demographic and health surveys (DHS's) from several countries measure the mean ideal family size of women and compare values across different demographic and socioeconomic variables. In Jordan, the mean ideal number of children was recorded as 4.2 for both years 1997 and 2002¹⁸, while was slightly higher in Yemen, recorded at 4.5 children for the year 1997¹⁹ and was however, significantly lower in Egypt and Morocco at 2.9 children for the year 2000 in Egypt²⁰ and between the years 2003-2004 in Morocco²¹, while was as low as 2.4 children in Turkey for the year 1998²². The ideal family size in Arab countries in general is higher than those found in Europe. A survey in twelve European countries revealed that, the average desired family size was 2.16 children per family in 1998.²³

DHS reports indicate that with increasing women's current number of children, their ideal family size increases, probably due to the rationalization effect or due to attitudes

¹⁷ Nayab D. *Fertility preferences and behavior: a case study of two villages in the Punjab, Pakistan*. Pakistan institute of development economics (PIDE), 1999.

¹⁸ http://www.measuredhs.com/countries/country.cfm?ctry_id=18. (accessed December, 8, 2005).

¹⁹ http://www.measuredhs.com/countries/country.cfm?ctry_id=46 (accessed December, 8, 2005).

²⁰ El-Zanaty F., Way A. *Egypt demographic and health survey 2000*. Ministry of health and population; national population council; Measure DHS+ ORC Macro. January 2000.

²¹ http://www.measuredhs.com/countries/country.cfm?ctry_id=27 (accessed December, 8, 2005).

²² *Turkey demographic and health survey 1998*. Hacettepe university, institute of population studies; measure DHS+ macro International Inc. October, 1999.

²³ Bongaarts J. Fertility and reproductive preferences in post-transitional societies. No.114, 1998. <https://www.popcouncil.org/pdfs/wp/114.pdf> (accessed December 8, 2005).

women had acquired 20 or 30 years ago.²⁴ It may also be true that women desiring larger families tend to have a higher number of children.²⁵ Moreover, age was shown to be directly related to ideal family size, with older women desiring larger families, in addition to those with lower educational levels and those living in rural areas.²⁶

Sahleyesus identified two major forces influencing women to adopt a certain ideal number of children.²⁷ One important force is represented in the social and cultural features of the society where extended families and large family values prevail, whereas socioeconomic constraints contribute to lowering desired family size. Sahleyesus further indicated in his study of family size preferences among Ethiopian women that children are viewed as a source of joy and social security in old age and in his research, hardly any women expressed a desire not to have any children at all. In fact, there was a rejection against women choosing to be childless. On the other hand, socioeconomic constraints were considered important in decreasing desired family size by increasing the cost of childrearing, especially in relation to the education of children.²⁸ In a study of fertility in three countries of the Middle East (Jordan, Lebanon and Syria), Tabbarah postulated that ideal family size is highly determined by the perception of children as a source of utility and disutility. Utility represented the psychosocial value of children in

²⁴ *Philippines national demographic and health survey 2003*. National statistics office, ORC macro. October, 2004.

²⁵ *Turkey demographic and health survey 1998*. Hacettepe university, institute of population studies; measure DHS+ macro International Inc. October, 1999.

²⁶ El-Zanaty F., Way A. *Egypt demographic and health survey 2000*. Ministry of health and population; national population council; Measure DHS+ ORC Macro. January 2000.

²⁷ Sahleyesus D. "Attitudes towards family size preferences among urban Ethiopians" (revised version of paper presented at the annual meeting of the Canadian population society, university of Western Ontario, London, ON), June 2005.

²⁸ *ibid*

terms of fulfillment and prestige, while disutility was viewed with regards to the extent to which children would compete with extra familial activities. Tabbarah added that with development and modernization, this balance is altered where families will be more nuclear in nature and thus the relative utility of psychosocial fulfillment of numerous children will be reduced. Moreover, and although in developing countries, children have long been considered as contributors in household economy across their lifetime, with increasing education, the cost of any additional child would rise significantly especially with the extended period of support that parents need to provide for their children before they will generate any income. This can further alter the hypothesis that children are a source of utility, by increasing their cost and thus their disutility. In addition, and with increasing education and communication, mobility of people increases and they would have interests far beyond merely family building. Additionally, with better education and higher income, people would be able to satisfy their new demands without the need to rely on their children as the main source of support.²⁹

Women's education is considered as key factor in decreasing ideal family size mainly through the following pathways: education raises age at marriage, it opens up employment opportunities for women, enables them to make more conscious decisions about their fertility, introduces them to methods of birth control and assists them in

²⁹ Tabbarah R. "Completing the fertility transition: Jordan, Lebanon and Syria". <http://www.un.org/esa/population/publications/completingfertility/RevisedTABBARAHpaper.PDF> (accessed December, 8, 2005).

rationally dividing their time between activities outside and inside the house.³⁰ Beydoun described the relationship between education, household economics and the demand for children as an interaction between both education and income. He explained that illiterate women with high household income demand a high number of children especially in the Arab world where children are considered as the sole source of self-actualization among women with no education. On the other hand, educated women with a similar income level concentrate more on the quality of children than just on quantity.³¹

Women's employment is also substantially linked to fertility preferences. However and as shown in the analysis of Kidane, it is not any type of employment, but only employment in the formal sector that has a significant impact on fertility and the demand for children. In this study, women working in informal occupations were likely to report trends in their fertility very similar to those for women who do not work outside their homes. This was explained by the fact that women working in informal occupations can take their children with them to work and thus employment would not be expected to compete with their role in childcare.³² In another study in Lebanon, it was found that women working in prestigious positions reported desiring higher numbers of children than did women working in lower status jobs, although still lower

³⁰ Kidane A. Female employment and fertility in selected Ethiopian communities: a microeconomic analysis. Union for African population studies, summary report, 11, March 1995.

³¹ Beydoun M. Marital fertility in Lebanon: a study based on the population and housing survey. *Social science and medicine*; 53: 759-71, 2001.

³² Kidane A. Female employment and fertility in selected Ethiopian communities: a microeconomic analysis. Union for African population studies, summary report, 11, March 1995.

than the ideal family size expressed by women staying at home as housewives. This was explained by the fact that women in higher status jobs (termed as white-collar jobs) were able to provide satisfactory daycare for their children during their working hours and when they came back home they had paid assistance in household duties so they still had time with their children and thus could afford higher numbers of children. On the other hand, women in blue-collar, lower status occupations who worked mainly out of economic need, and unlike those with white-collar positions who worked out of career aspiration, could not afford to have their children taken care of in a convenient way, neither they were able to get assistance in their household responsibilities where they had to put their children aside and complete their work at home.³³

It is noteworthy that the relationship between observed fertility and the stated desired family size of women is not always superimposing. Bongaarts claims that in developed countries, it is most likely that women's fertility preferences will substantially exceed their observed fertility, unlike the situation in developing countries and mainly in countries that are in the early phases of fertility transition, where actual fertility trends will usually exceed desired family sizes.³⁴ As explained by Bongaarts, there are three factors that contribute to enhancing fertility relative to the desired family size: unwanted fertility, child replacement, and gender preference. A study in twenty developing countries revealed that on average, 22 % of fertility was unwanted, (Bongaarts 1997).

³³ Saxena P., Aoun H. Women's education, economic activity and fertility: relationship re-examined, a study based on Lebanese community. *Al-Bhath*. XLV, 1997.

³⁴ Bongaarts J. Fertility and reproductive preferences in post-transitional societies. No.114, 1998. <https://www.popcouncil.org/pdfs/wp/114.pdf> (accessed December 8, 2005).

The rise in levels of unwanted fertility may be attributed to the decline in ideal family size and thus many births would later be considered as unwanted, in addition to the slow pace of prevalence of use of contraception that cannot avoid the rise in unwanted childbearing. Moreover, having experienced the death of one child may lead women to exceed their stated ideal family size either through the interruption of lactation and thus they will be more exposed to the risk of an unwanted pregnancy, or due to the “replacement” effect: women replacing their children who died. This replacement effect is mostly prominent in countries with high child mortality.³⁵

Gender preference is also believed to have a significant impact on increasing current number of children relative to women’s stated ideals. Women may prefer to have an ideal family with a certain number and sex composition, however this ideal number may be achieved but not with the desired sex ratio, so they will continue childbearing until a child of the desired sex (especially boys) is born. Male sex preference is mostly prevalent in countries in Asia and the Middle East and to a lesser extent in Latin America.³⁶ Data from two Egyptian surveys performed in 1979-80 and 1990-91 concluded that the presence or absence of a son significantly influenced fertility and the use of contraceptive methods. Women with no sons showed higher odds of continuing childbearing than did women with two or more sons. And the presence or absence of a

³⁵ Bongaarts J. Fertility and reproductive preferences in post-transitional societies. No.114, 1998. <https://www.popcouncil.org/pdfs/wp/114.pdf> (accessed December 8, 2005)

³⁶ Ibid.

daughter did not seem to alter women's fertility behavior or their contraceptive practice.³⁷

A study in Thailand and some South-Asian countries classified the determinants of male sex preference into micro and macro-level factors. Micro-level factors included those related to parents and more specifically maternal characteristics such as her autonomy and socioeconomic status. Improving women's autonomy is believed to increase her preference for girls and to result in a more egalitarian view of the sex composition of the family. On the macro-level, population policies aiming to reduce fertility are expected to highlight sex preference, where women limiting their family size to as small as two children would normally express higher interest for having at least one son. Modernization is also considered as an important factor in reducing bias towards having male sons, by generating a more equitable view of children.³⁸

A recent study in Minya, Egypt indicated that women living with their family-in-law were less likely to express girl or equal preferences. Similarly, uneducated women and those who never worked outside their homes were more likely to exhibit male preference relative to educated women and those who had ever worked for cash. Also,

³⁷ Yount K., Langsten R., Hill K. The effect of gender preference on contraceptive use and fertility in rural Egypt. *Studies in family planning*; 31 (4): 290-300; 2000.

³⁸ Wongboonsin K., Ruffolo V. Sex preference for children in Thailand and some other South-East Asian countries. *Asia-Pacific population journal*; 10 (3): 43-62; 1995.

urban women and those with a Christian religion expressed more egalitarian views towards girls than did rural or Muslim women.³⁹

An analysis of the Arab family describes its structure as being based on the social stratification on the basis of sex or age, giving men and older people a higher status than women, children and poor people. As expressed by Holma et. al, women in the Arab world are excluded from many domains like education and the public sector where they are limited to their housekeeping and childcare roles. Women are also subject to discrimination in issues like marriage, divorce, inheritance and property ownership.⁴⁰

A further description of patriarchal characteristics in the Lebanese society, defined Patriarchy as the “*privileging of males and seniors and the justification of male senior privilege in the idioms and moralities of kinship, sanctified by religion.*”⁴¹ In her analysis, Joseph pointed out to the notion of patriarchy in Lebanon as being kin based in a way that men acquire their authority from being fathers, brothers, uncles and husbands. Furthermore, membership in the kin group is passed from fathers to children, and there is a cultural trend leading married couples to live and stay near the husband’s family.⁴² In other words, it is apparent that gender relations and the domination of men

³⁹ Yount K. Women’s family power and gender preferences in Minya, Egypt. Department of global health and sociology, Emory university; the Emory center for myth and ritual in American life, working paper (42), May, 2005.

⁴⁰ Holma E., Jaatinen S., Ollila N. The Arab family and the challenge of social transformation. <http://www.sci.utu.fi/kehitysmää/The%20Arab%20Family.doc> (accessed December, 10, 2005).

⁴¹ Joseph S. Among brothers: patriarchal connective mirroring and brotherly deference in Lebanon. (Cairo papers in social sciences, 24 (1/2).

⁴² Ibid.

over women in society are important factors that contribute to continuing male preference, and consequently influencing both the desired and actual family size.

Unplanned and unwanted fertility can also contribute to large family sizes and the gap between the stated ideal and the real. A study aiming to identify the main factors contributing to the prevalence of unplanned childbearing in Kenya indicated that factors such as urban/rural residence, region, ethnicity, the preceding birth interval, ideal family size, maternal age and education, and the use of contraception were highly correlated with the extent and repeatability of unplanned childbearing. The practice of contraception was substantially linked to whether women had an unwanted or a mistimed pregnancy. Unexpectedly, women who ever used any of the birth control methods were more likely to report having a mistimed or an unwanted pregnancy. These findings suggest that women would consider the use of contraception only after they had exceeded their desired family size.⁴³

In contrast, a research project completed in Bureij refugee camp in the Gaza Strip indicated that although attitudes towards family planning among women of reproductive age were positive, contraceptive use, mainly of the modern methods variety was still as low as 25%. Reasons why women were not practicing contraception despite their desire to avoid pregnancy were mainly lack of knowledge, fear of side effects, and husband's opposition. No woman stated that her non-use was due to religious considerations.

⁴³ Magadi M. Unplanned childbearing in Kenya: the socio-demographic correlates and extent of repeatability among women. *Social science and medicine*; 56: 167-78; 2003.

Meanwhile, the use of contraception was highest among women in their thirties, those who were better educated and those who had at least one or two sons. Moreover, women who perceived their husband as opposing to the use of contraception and those who had their first birth after the age of twenty years, were less likely to practice contraception when wanting to control pregnancy.⁴⁴ On the other hand, findings from Kuwait revealed that women who considered themselves as being at low risk of pregnancy were less likely to use contraception when needed. Women in the older age category were also less likely to practice contraception when needed and they attributed this to the infrequency of their sexual activity. Other reasons included those due to health concerns and fear of side effects, disapproval of husband and their perception of Islam as forbidding the use of family planning methods.⁴⁵

In summary, this review of the literature points to the complexity of fertility decisions, with various forces acting as determinants. These forces have different impact in different cultures and also depend on women's status, educational level and socioeconomic position. In the following chapters an attempt will be made to identify the main determinants of family size and the gap between the ideal and actual number of children in the Palestinian context and its relation to contraceptive use.

⁴⁴ Donati S., Hamam R., Medda E., Family planning KAP survey in Gaza. *Social science and medicine*; 50: 841-49; 2000.

⁴⁵ Shah M. et al. Unmet need for contraception in Kuwait: issues for health care providers. *Social science and medicine*; 59: 1573-80; 2004.

CHAPTER THREE: METHODOLOGY

A combination of methodologies was used in this research including quantitative and qualitative methods.

I. Quantitative methods

A. *Data set and the questionnaires*

Quantitative methodologies were performed utilized secondary data collected by the Palestinian Central Bureau of Statistics (PCBS). Based on the 1997 census in the Occupied Palestinian Territory (OPT), a representative stratified cluster random sample of 481 enumeration areas was used to select qualified households for use in this survey. A total of 6349 households were qualified for the survey (4295 in the West Bank and 2054 in the Gaza Strip). The overall response rate was 99.4% and a total of 6204 households were interviewed, of which 5729 ever married women in the age group 12-54 years old were interviewed.⁴⁶

The 2000 health survey questionnaire consisted of three major parts:

1. Household questionnaire: which included demographic information on household members, of which are age, sex, education, labor force status, marital status of people twelve years old and above, membership in health insurance schemes, smoking status, chronic diseases status, and other aspects that are not

⁴⁶ *Health survey- 2000*, final report. Palestinian central bureau of statistics. Ramallah: November, 2001.

relevant to the analysis of this thesis. The questionnaire also included data on dwelling such as number of rooms, main sources of drinking water, sewage disposal system, type of toilet and type of floor material, possible proxy measures of the socio-economic status of the family.

2. Mother's health questionnaire: this part dealt with ever married women under fifty five years old and gathered information on maternal care, vaccination, vaccination against tetanus, breast-feeding, family planning, reproduction and fertility preferences, health awareness and knowledge of AIDS. This part also included the important information on current number of boys and girls women had at the time of the survey.
3. Child's questionnaire: for children under five years old and included data on education and child labor of the age group (5-17 years old), as well as information regarding vaccination, childhood diseases, height and weight of children under five years old.

Data collection started on April 10th, 2000 and ended in May 31st, 2000. Data was entered by PCBS using IMPS statistical software,⁴⁷ and made available to users, including students, in SPSS format. The analysis contained in this thesis entailed merging the relevant variables from the different files, and was restricted to ever married women in the age group (15-49) years old. Thus the eligible cases that were included in this analysis consisted of 5363 cases.

⁴⁷ *Health survey- 2000*, final report. Palestinian central bureau of statistics. Ramallah: November, 2001.

B. Variable definition and measurement

Six main outcome variables were examined for their possible association with the hypothesized explanatory variables:

1. **Educational attainment:** this variable was in the form of an ordinal variable that was regrouped into four categories for the purpose of completing the analysis of this thesis:
 - ✓ Never attended school, which included both women who described themselves as totally illiterate and those who could read and write.
 - ✓ Below secondary schooling: including both elementary and secondary attainment.
 - ✓ Secondary schooling: those who have completed high school.
 - ✓ Above secondary schooling: including women with an associate diploma or a bachelor or postgraduate level of educational attainment.

2. **Current number of children:** this was a constructed continuous variable, calculated from four variables contained in the data set: the number of sons alive living with mother and the number of sons alive not living with mother; the number of daughters alive living with mother and daughters alive but not living with mother. This new calculated variable was then used in both its continuous and categorical forms where it was recoded into 1,2,3,4,5 and 6+ children. The current number of children variable was used both as an outcome and an

independent variable and was named as both *Current number of children* and *Current family size*.

3. **Preference for more children:** this is an ordinal variable that was used alternatively in its original form and the recoded form (want more children, want no more children and other). “Other” included women stating that they cannot get pregnant, not their decision or those who were undecided.

4. **Ideal number of children:** this variable was used in both its continuous and categorical forms; it was recoded into a categorical variable with five groups (0-2, 3,4,5,6+). This recode was similar to regrouping in the literature. The ideal family size of 0, 1 or 2 children were grouped together as very few women reported ideal numbers of 0 or 1 child (28 cases, and 34 cases respectively). To achieve a normal distribution of the frequency curve, all cases reporting an ideal number above fifteen (8 cases) were unselected, i.e. removed from this analysis. This variable was also used under the name *Ideal family size*.

5. **Deviation of ideal number of children from current family size:** this is a calculated variable obtained by subtracting the current family size from the ideal number of children, and identifying the possible gap between current and ideal number of children. This continuous variable was then further categorized into three groups: women having an ideal number of children below their current

family size, women having exactly the same number as their stated ideal, and women having an ideal number of children beyond their current family size at the time of the survey.

6. **Contraceptive use:** this is a binomial variable (yes, no) that was in the original data set, but was used with a restricted selection of women desiring not to have more children. It described the current use of any contraceptive method at the time of the survey, including both modern and/or traditional methods.

Explanatory variables:

- Woman's age: a continuous variable that was categorized into three groups: 15-24, 25-34 and 35 years and above. This categorization was due to the significance of these age phases in the reproductive cycle of women (beginning of her reproductive cycle, middle and end).
- Age at first marriage: a continuous variable that was categorized into two groups: eighteen years or below and above eighteen years.
- Educational attainment: *see above*
- Women's employment status: this is an ordinal variable that was recoded into a binomial variable: working and non working women, as we were strictly interested in the current employment status of women. In this regards, working and non-working variables included:

- ✓ Working: women who worked 1-14 hours per day (less than full time), and those who worked for 15 hours or more per day (full time, according to the PCBS definitions).
- ✓ Non-working: unemployed women (seeking work) who had a previous work experience, unemployed women (i.e., now seeking work) who never worked, full-time students, full-time housekeepers, unable to work, weren't working or not looking for work.
- Women's type of occupation: this is an ordinal variable that was recoded into five main categories:
 - ✓ Office positions: this included women working as managers or legislators, professionals, technicians and associate professionals, services and sales workers
 - ✓ Clerks
 - ✓ Agriculture or fishery work
 - ✓ Elementary occupations: this included: crafts and related workers, plant and machine operators and other elementary jobs
 - ✓ Not stated
- Employment status of head of household: *the same as women's employment status*
- Type of occupation of head of household: *the same as women's type of occupation.*
- Region: this is a binomial variable (West Bank and Gaza Strip) that was found as is in the data set.
- Type of locality: this is an ordinal variable (urban, rural, refugee camp) that was found as is in the data set.

- Type of drinking water: this is an ordinal variable that was recoded into a binomial variable (water piped and not piped into dwelling), due to the very small percentages of households with other sources. Water not piped into dwelling included the following sources: piped into yard, public tap, rain water collection with connection into dwelling, rain water collection without connection into dwelling, spring/stream, tanker/ truck, bottled water, other.
- Type of floor material: this is an ordinal variable that was recoded into a binomial (tile or ceramic and not tiled) variable due to the very small percentages of cases with other floor types (other than tile or ceramic). Un-tiled floors included the following floor materials: earth/sand, wood planks, cement, other.
- Type of toilet: this is an ordinal variable that was recoded into a binomial variable (flush toilet and traditional toilet) because of our interest in only those two types. They were categorized as follows: flush toilet: including households with only a flush toilet and those with both a flush and a traditional toilet; traditional toilet: household with only a traditional toilet and those with no facility at all.
- Crowding ratio: a continuous variable that was calculated from other variables in the data set (total persons at home/ total number of rooms at home) as the ratio of number of persons living in the household to the number of rooms in the household; and was recoded as follows: ≤ 2.0 , 2.1-3.0, and ≥ 3.1 .
- Type of health insurance: an ordinal variable that was used as is and included: governmental, military, United Nations Relief and Works Agency (UNRWA), social insurance, private insurance, and women with no health insurance at all.

- Current family size and sex composition
 - ✓ Current number of children (or current family size): *see above*
 - ✓ Current number of sons: a continuous variable that was calculated from the sum of the number of sons alive living with mother and the number of sons alive but not living with mother.
 - ✓ Current number daughters: a continuous variable that was calculated from the sum of the number of daughters alive living with mother and the number of daughters alive but not living with mother.
- Women with children who died: this variable is a binomial variable (0, 1+) that was used in its original form.

C. Data analysis

Data analysis was performed using the Statistical Package for Social Sciences (SPSS) version 12.0 with the exception of linear regression that used the “Stata” software. Initially, simple summary measures were used to describe the basic characteristics of the study sample, basically, percentages and means. Bivariate cross tabulation was then carried out where the relationship between six outcome variables was tested: education, current number of children, preference for more children, ideal family size, difference between the stated ideal family size and the current number of children and contraceptive use. Pearson chi-square and P values were used to test statistical significance. After the identification of the statistically significant determinants in the bivariate analysis, multivariate analysis was performed to identify the main

determinants of the three dependent variables pertaining to our research questions: ideal family size, deviation of current family size from the stated ideal, and contraceptive use. Only variables that showed statistical significance in the bivariate analysis were used in the regression analysis using the “enter” method.

Linear regression was utilized to study the determinants of ideal family size due to the continuous nature of the variable and was run using “Stata” software instead of SPSS due to applicability reasons. Logistic regression was performed using SPSS and was used to identify determinants of the deviation between ideal and current numbers of children, and only cases where the current number of children exceeded or matched the stated ideal family size were compared. Logistic regression was also used to identify the determinants of contraceptive use, restricting the analysis to women desiring to stop childbearing.

II. Qualitative methods: focus-group discussions

A. Design of focus-group discussions

Four focus-group discussions were held between January and February 2005, including a total of 34 married women in their reproductive age living in urban, rural and camp locales. A female moderator helped guiding the sessions, in addition to the main researcher. All women in all focus-group discussions were currently married and most had living children or were pregnant at the time of the interview. Each session lasted for an average of 1-1.5 hours.

Due to barriers of the Israeli military closure of the OPT, our selection of focus-group locations was limited to the Ramallah district in the West Bank. Inter-regional or inter-district variations could not thus be measured. Our analysis was therefore restricted to variations among urban, rural and camp settings, in addition to other demographic and socioeconomic characteristics of the respondents.

B. Basic characteristic of women participating in the focus-group discussions

The first focus-group discussion was held in Ramallah city at the Institute of Community and Public Health at Birzeit University, and was composed of well educated working women. The majority of women in this group were specialists in one or more of the health fields and included both Christian and Muslim women. The

second session was held in Sinjel village, where health workers from the Union of Palestinian Medical Relief Committees (UPMRC) health center invited women for the focus-group discussion that took place in the health center itself. Those were the same women that regularly attend other health education sessions organized by the health center. Thus this group, in addition to the first group in Ramallah city may have been better informed than the other two groups about health and reproductive matters, creating a possible bias in the results pertaining to study fertility decisions and their parameters. The group in Sinjel village was comprised of lower socioeconomic class women who were all Muslims. Another focus-group discussion was held in Qalandiya refugee camp, near Ramallah city, and the doctor working at the health center of the Union of Health Work Committees ((UHCW) assisted in gathering women visiting the woman's health clinic to participate in the discussion group. Women in this group were also of a lower socioeconomic class, most were refugees while the rest were married to refugees and moved to live in the camp with their husbands. All were Muslims as well. In Birzeit town, women were invited by a local inhabitant and the session was held in a local meeting place and gathered lower middle class women and the majority were Christians. With the exception of the first focus-group discussion held in Ramallah city, women in the other three sessions had an average of secondary or below secondary educational attainment.

C. Analysis of focus-group discussions

The focus-group discussions were transcribed by the research assistant in Arabic, and were later translated into English by the main researcher, who later extracted the main themes and categorized them into two main relevant topics: ideal family size and its determinants and unwanted or unplanned pregnancy and its determinants.

CHAPTER FOUR: RESULTS

I. Univariate and bivariate analyses

1. a. Basic characteristics

A total of 5363 surveyed women were included in our sample, composed of currently or ever-married women aged fifteen to forty-nine years old. The average age was 31 years and 50% of women were below the age of thirty. The majority was currently married (95.7%) while 4.3% (230 women) were either divorced or widowed. As illustrated in Table1, the average age of women at first marriage was 18.9 years, slightly lower for women in the Gaza Strip (18.7 years and 19.1 for Gaza and the West Bank respectively) while the median age at first marriage was 18 years old for both women living in the West Bank or in the Gaza Strip. The average age at first marriage was almost equal in urban, rural or camp settings.

Table 1: variations of selected demographic characteristics by region

Selected demographic characteristics	West Bank	Gaza Strip	Occupied territory (Total)	N
Mean age	31.5 (8.40)	31.1 (8.57)	31.4 (8.46)	5363
Mean age at first marriage	19.1 (3.91)	18.7 (3.67)	18.9 (3.83)	5363
Age at first pregnancy	19.9 (4.36)	19.6 (3.79)	19.8 (4.16)	5040*
Age at first Birth	20.4 (3.84)	20.3 (3.69)	20.4 (3.79)	4808**

* N=5040: 323 missing cases

**N=4808: 555 missing cases

Fifty percent of women had their first pregnancy before the age of nineteen (Mean age 19.8), and fifty percent had their first birth before they were twenty years old (Mean age 20.4).

In almost all cases (96.3%), the head of the households in which these women lived was reported as being a male: the husband in 84.5% of the cases. The average age of household heads was higher than that for the surveyed women, around forty years. Two thirds of the respondents were from the West Bank (63.5%) and the rest (36.5%) were from the Gaza strip. Overall, 47.7% lived in urban areas, 32.9% in villages and a lesser percentage (19.4%) lived in refugee camps. Meanwhile, 41.4% of women in our sample stated that they were registered refugees: 26.5% of women in the West Bank compared to 66.5% of those from the Gaza Strip ($P \leq 0.001$).

1. b. Educational attainment

More than half of the surveyed women (57.8%) had completed elementary or preparatory education (below secondary level), 17.2% had reached secondary level and 8.9% had continued to above secondary education; yet, 16.0% had never attended school of which, 50% reported themselves as being completely illiterate.

As noted in Table 2, education was significantly related to age, where only 5.9% of women in the age group (15-24 years old) stated that they had never attended school, compared to 12.3% of those 25 and 34 years old and 27.2% of those who were thirty five years or older. Moreover, with increasing age, fewer women reported continuing up to the preparatory or secondary level. At the same time, education was also related to age at first marriage, where women married above the age of eighteen years were far more likely to continue to secondary or post secondary education (25.1% and 16.8% respectively) compared to those married at or before the age of eighteen (10.8% and

0.9% respectively). Also, more women who were married at an early age below twenty years reported never attending any formal schooling (16.4%) than those married after they were twenty years old (14.9%) (Table 2).

Table 2 : percentage distribution of women's educational attainment by age and age at first marriage

Age*	Levels of educational attainment				N
	Never attended school	Below secondary	Secondary	Above secondary	
15-24	5.9	71.2	18.8	4.0	1314
25-34	12.3	56.8	18.4	12.5	2147
≤ 35	27.2	49.8	14.9	8.1	1902
Total	16.0	57.8	17.2	8.9	5363
Age at first marriage*					
≤ 18	17.3	70.9	10.8	0.9	2950
>18	14.5	41.9	25.1	16.8	2413
Total	16.0	57.8	17.2	8.9	5363

* $P \leq 0.001$

The percentage of women who never attended any school was higher among West Bank women, compared to those from the Gaza Strip (18.4% and 12.0% respectively), while educational attainment above secondary level was similar for women living in both regions but significantly different for the secondary level where 13.1% of West Bank women reported having had secondary level education compared to 24.4% of those living in the Gaza Strip (Table 3). The difference in educational attainment among women living in urban, rural or camp setting was statistically insignificant.

Table 3: percentage distribution of women's educational attainment by region

Region*	Levels of educational attainment				N
	Never attended school	Below secondary	Secondary	Above secondary	
West Bank	18.4	59.6	13.1	8.9	3405

Gaza strip	12.0	54.7	24.4	8.8	1958
Total					5363

* $P \leq 0.001$

1. c. Employment status and type of work of women and heads of households

Only 7.2% of women reported themselves as currently working. Of those, over two thirds (69.8%) came from the West Bank (7.9% of West bank women) compared to less than one third (30.2%) from the Gaza Strip (5.9% of women in the Gaza strip), ($P=0.008$). Almost half (43.0%, ($P \leq 0.001$)) of working women were in their thirties. Of those currently working, more than two thirds occupied office positions (professionals, technicians, working in sales or the service sector and although to a lesser extent, high ranked jobs as managers or legislators) and 5.2% reported being clerks, 6.8% worked in agriculture or fishery, while 22.1% were involved in elementary occupations. In contrast, the majority of household heads (mostly males, 82.6%) were working at the time of the survey, slightly less in the Gaza Strip (80.9%) compared to 83.4% in the West Bank. Overall, 64.3% of heads of household reported working in elementary jobs, 31.8% occupied office positions and only 3.9% were working in agriculture or fishery.

1. d. Characteristics of the dwelling

As noted in Table 4, most of the households were reported as having running water piped into their dwellings and had tiled or ceramic floors.

Table 4: percentage distribution of selected basic dwelling characteristics

Characteristics of the dwelling	%	N*
Type of drinking water		
Piped into dwelling	82.7	3994
Not piped into dwelling	17.3	834
Total		4828
Type of floor material		

Tile or ceramic	81.0	3913
Not tiled	19.0	915
Total		4828
Type of toilet		
Flush toilet	45.7	2448
Traditional toilet	48.8	2358
No facility	0.5	22
Total		4828
Crowding ratio		
≤ 2.0	59.9	2894
2.1-3.0	26.3	1271
≥ 3.1	13.7	663
Total		4828

*N=4828: 535 missing cases

Half of the households (45.7%) had a flush toilet. Of the total, more than half (59.9%) of respondents reported living in houses with a crowding ratio of 2.0 or fewer persons per room, 26.3% between 2.10 and 3.0 persons per room, while 13.7% of households had a crowding ratio of greater than three persons per room (Table 4).

1. e. Type of health insurance

As shown in Table 5 below, the surveyed women reported relying on different types of health insurance systems: 26.6% said that they were enrolled in the governmental health insurance scheme, 15.8% in the UNRWA scheme and 11.8% were affiliated with private insurance companies. Still, a remarkable proportion (38.4%) of women said that they were with no health insurance at all.

Table 5: percentage distribution of women with various types of health insurance

Type of health insurance	Frequency (%)	N
Government	26.6	1247
Military	4.6	245
UNRWA	15.8	845

Social insurance	2.9	156
Private	11.8	631
Without Insurance	38.4	2059
Total	100.0	5363

2. a Current number of children and its determinants

The average number of living children at the time of the survey was 4.2, with 2.1 sons and 2.0 daughters.⁴⁸ A total of 775 women (15.4% of the total sample) reported having given birth to one or more children who died at any stage of their life.

As noted in Table 6 below, there were important variations in the mean number of children by selected demographic and socio-economic characteristics. As one would expect, given younger ages and therefore, shorter active fertility periods, the mean number of children was 2.0 for those in the age range 15-24 years old compared to 6.6 for those who were thirty five years or older. The mean number of children was also linked to age at first marriage, with a mean of 5.0 children for those who married at or

⁴⁸In this section and for statistical reasons, we unselected all cases reporting a current number of children greater than 14 (4 cases, accounting for 0.1% of the data set).

below the age of 18 years compared to a lower 4.2 for those who married at an age beyond 18 years.

Table 6: mean current number of children by women's age and age at first marriage

Age	Mean current number of children (sd)	N
15-24	2.0 (1.02)	983
25-34	4.2 (1.79)	2020
≥ 35	6.6 (2.75)	1795
Total		4798
Age at first marriage		
≤ 18	5.0 (2.80)	2681
> 18	4.2 (2.52)	2121
Total		4798

With increasing women's level of education, the mean current number of children also declined from 6.1 for women who never attended school to 3.5 children for women with higher than secondary education (Table 7).

Table 7: mean current number of children by women's educational attainment

Education	Mean current number of children (sd)*	N
Never attended school	6.1 (3.02)	802
< Secondary	4.6 (2.63)	2757
Secondary	3.9 (2.31)	828
> Secondary	3.5 (2.02)	411
Total		4798

As shown in Table 8, women currently working outside their homes had a smaller family size (4.1) than those who were not working at the time of the survey (4.7). An unemployed husband or head of household was also associated with a higher mean number of children (5.4), compared to 4.7 for working heads of household.

Table 8: mean current number of children by employment status of women and heads of household

Women's employment status	Mean current number of children (sd)	N
Working	4.1 (2.56)	327
Not working	4.7 (2.71)	4471
Total		4798

Employment status of head of household		
Working	4.7 (2.61)	3682
Not working	5.4 (2.96)	762
Total		4444*

*N=4444: 354 missing cases .

The mean current number of children was higher in the Gaza Strip than it was in the West Bank (5.0 (sd=2.87) and 4.5 (sd=2.59) respectively).

2.b. Women's preferences for having more children and their determinants

Currently married women, who were not pregnant or not sure that they were or not at the time of the survey, (N=4167) were asked the question of whether they would like to have more children. More than half of the respondents (52.0 %) stated that they did not want to have any more children, while 43.8% reported that they wanted more. The remaining percentage, (4.1%) was divided between women who said that they could not get pregnant (2.9%) and those who were undecided or said that it was not their decision (0.6% each). There was a clear association between women's age and fertility preferences. As expected, younger women were more likely to desire having more children than were women in the older age categories as they are in the beginning of their reproductive years (81.4% of women in the age group 15-24 years versus only 16.0% of those thirty five years old or above, $P \leq 0.001$). Also, more women of those married at an age above eighteen years old expressed a desire to have more children, compared to women who were married at a younger age (45.0% versus 42.9% respectively, $P=0.015$).

Women who never attended school reported the lowest percentage of wanting to have more children where only 28.5% reported that they actually wanted to continue childbearing compared to 45.0%, 50.8% and 49.5% of those with below secondary, secondary and post secondary schooling respectively (Table 9).

Table 9: percentage distribution of preference for more children by women's educational attainment

Education*	Preference of more children			N
	Want more children	Want no more children	Other	
Never attended school	28.5	63.4	8.1	645
<Secondary	45.0	51.6	3.4	2426
Secondary	50.8	46.0	3.0	730
>Secondary	49.5	46.7	3.8	366
Total				4167

* $P \leq 0.001$

Unlike women's employment and type of occupation, the employment status of household heads was associated with women's reports on fertility preferences: women with working heads of household were more likely to express a desire to continue childbearing than those whose heads of household were reported unemployed: (41.6% among working heads of household compared to 36.2% among those not working ($P \leq 0.001$)). Furthermore, and in line with the findings regarding current family size, women living in the Gaza Strip showed higher preferences for having more children, than those living in the West Bank (48.2% and 41.4% respectively) ($P \leq 0.001$).

As shown in Table 10, and as one would naturally expect, the desire to have more children was significantly related to the current number of children. Only 10.0% of those having six or more children stated that they would like to have more children compared to 90.7% and 76.7% of those with one or two children respectively.

Table 10: percentage distribution of preference for more children by current number of children

Current number of children *	Preference for more children			N
	Want more children	Want no more children	Other	
1	90.7	6.3	2.9	378
2	76.7	21.1	2.2	494
3	64.0	34.5	1.6	516
4	40.4	57.4	2.2	596
5	25.7	70.8	3.5	514
6+	10.0	86.2	3.8	1330
Total				3828**

* $P \leq 0.001$

**N= 3828: 339

The sex composition of the family was also important in determining whether women wanted to continue or stop childbearing: 72.3% of women with only one male son said that they wanted to have more children, a proportion that dropped to 39.5% for women having two male sons ($P \leq 0.001$), compared to 59.6% of women who had only one daughter and 37.5% of those with two daughters and who stated that they wanted to have more children ($P \leq 0.001$)

2. c. Ideal family size

All currently married women who already had living children and who gave numeric answers (N=4467)⁴⁹ were asked about the ideal number of children that they would like to have if they go back in time and where they still had no children and where they can exactly choose the size of their families.

The mean ideal number of children for those women was reported as 4.5 and as shown in Table 11 below, of all women, 11.7% indicated that their ideal number is two or less children, 8% three children, 45.7% four children, 9.2% five and 25.3% indicated that they would rather have six children or more.

Table 11: percentage distribution of women by their expressed mean ideal number of children

Mean ideal number of children	%	N
0-2	11.8	525
3	8.0	358
4	45.7	2042
5	9.3	417
6+	25.2	1125
Total	100.0	4467

When women were asked to report on their ideal number of male and female children separately, male sex preference was emphasized when the mean ideal number of males was expressed as 2.5 while the ideal number of females was 2.0. The same trend was observed when women were asked about the number of sons or daughters they wished to have in addition to what they already had: the mean number was 1.8 sons and 1.2 daughters.

⁴⁹ In this section and for statistical reasons, we unselected all cases reporting an ideal number of children greater than 15 (9 cases accounting for 0.1% of the data).

Of those women who gave non-numeric answers regarding the ideal number of children (354 women), 75% said that their ideal number depended on God's will and only 6.5% said that they would like to have the most possible number, the remaining 18.0% stated that they did not know what was their ideal number of children.

2. d. Determinants of ideal family size

i. Age

Ideal family size was strongly associated with women's age, with younger women desiring smaller families to a significantly higher extent than older women. The mean ideal number of children increased from 4.2 for women in the age group 15-24 years to 4.4 (sd= 1.70) for women in the age group (25-34) and up to 4.9 (sd= 1.63) children for women thirty years old and above. Likewise, while 16.7% of women in the youngest age group (15-24 years) reported that their ideal number is two or fewer children, this proportion dropped to 11.4% and 9.2% for those in the older age categories (25-34 and 35 and older respectively) ($P \leq 0.001$). Moreover, 32.5% of women thirty five years or older reported that they would prefer to have six or more children, compared to a significantly lesser proportion reported by the younger women (22.5% and 18.5% of those in the age groups (15-24) and (25-34) respectively) ($P \leq 0.001$).

ii. Age at first marriage

As expected, age at first marriage was inversely related to ideal family size: women married at an early age of 18 years or below were more likely to desire bigger families

of six children or more (27.7%) compared to 22.0% of those married above the age of 18 years ($P \leq 0.001$). The mean ideal number of children was slightly higher for women married at or before the age of 18 years, 4.6 (sd= 2.01) compared to 4.4 (sd= 1.78) for women married at an older age (above 18 years old).

iii. Education

Education was related to family size as well and women were less likely to desire big families with increasing levels of their education: while 33.6% of those who never attended school stated that their ideal family size was six children or more, this percentage declined continuously with increasing level of education, down to 26.0% for those with below secondary schooling, 19.4% for secondary and 16.6% for those with above secondary education. Similarly, the mean ideal number of children was substantially influenced by the educational background of women, ranging from 5.0 children for those who had never attended school to 4.6, 4.3 and 4.2 children for those with below secondary, secondary or above secondary level respectively (Table 12).

Table 12: mean ideal number of children and percentage distribution of ideal number of children by women's educational attainment

Education*	Mean Ideal number of children(sd)	Ideal number of children (%)					N
		0-2	3	4	5	6+	
Never attended school	5.0 (2.40)	11.9	6.9	37.8	9.8	33.6	706
Below secondary	4.6 (1.90)	11.1	7.2	47.2	8.6	26.0	2580
Secondary	4.3 (1.60)	12.5	9.2	48.2	10.6	19.4	790
Above secondary	4.2 (1.65)	14.3	12.8	45.3	11.0	16.6	391
Total							4467

* $P \leq 0.001$

iv. Women's employment status

Women's paid work outside the home was significantly associated with her reported ideal family size: 17.9% of working women reported that they preferred to have six children or more compared to 25.7% for non-working women ($P=0.002$) and the mean ideal number of children increased from 4.3 ($sd=1.92$) children for working women to 4.6 ($sd=1.91$) for those who were not working at the time of the survey.

v. Work of head of household and type of occupation

Whereas the employment status of heads of household was not significantly related to the reported ideal family size, the mean ideal number of children varied significantly across the different types of occupation held by women's heads of household, this was especially noted for women with heads of household who worked in agriculture or fishery, where the mean ideal number of children was 4.9 ($sd=2.2$), compared to 4.6 ($sd=2.0$) children for those who were working as clerks or in more elementary jobs (4.9, $sd=1.92$) and (4.5, $sd=1.87$) for women whose head of household worked in office positions. The preference for smaller or larger families was insignificantly related to women along the different occupations held by the head of their households.

vi. Type of health insurance

Our findings indicate that the type of health insurance that a woman was enrolled in was significantly linked to her desired family size. Women who reported being enrolled in

governmental or UNRWA health insurance schemes were more likely to desire bigger families than were women with other types of insurance: around one third of women with governmental or UNRWA health insurance (28.1% and 27.7% respectively) reported that six or more children would be their ideal number of children, compared to 25.4% for those with no health insurance system or those with social insurance (24.8%), (19.5%) of those in the military system and only 16.4% of those relying on private insurance companies ($P=0.003$). The mean ideal number of children was also highest among women relying on either government (4.7, $sd=1.98$) or UNRWA (4.7, $sd=2.00$) health insurances, whereas it was recorded lowest for those with a private health insurance (4.1, $sd=1.74$).

vii. Crowding ratio

Reported ideal family size increased with increasing crowding ratios, where more women of those living in more crowded houses were shown to prefer larger families of six or more children: around one third (31.7%) of women living in houses with a crowding ratio higher than 3 persons per room preferred families of six or more children, compared to 29.1% of those living in houses with 2.1 to 3.0 persons per room and 22.9% of women living in houses of fewer than 2 persons per room (Table 13).

Table 13: mean ideal number of children and percentage distribution of ideal number of children by crowding ratio of the household

Crowding ratio*	Mean ideal number of children (sd)	Ideal number of children (%)					N
		0-2	3	4	5	6+	
≤ 2.0	4.4 (1.82)	12.7	8.5	46.7	9.1	22.9	2377
2.1-3.0	4.8 (2.01)	9.5	7.2	44.8	9.5	29.1	1153
≥ 3.1	4.8 (2.12)	11.0	5.6	42.5	9.2	31.7	590
Total							4120**

* $P \leq 0.001$

**N= 4120; 347 missing cases

viii. Region

As it is the case for current number of children, women living in the Gaza Strip showed a clear preference towards having bigger family sizes compared to those living in the West Bank. The mean ideal number of children was reported as 4.4 for women residing in the West Bank compared to 4.8 for those in the Gaza Strip. Moreover, 22.6% of women living in the West Bank reported that they would prefer to have a family of six children or more compared to 29.0% of women in the Gaza strip. Similarly, and while almost half of the surveyed women in the West Bank (49.0%) reported that their ideal number is four children, this proportion was 39.8% for those living in the Gaza strip (Table 14).

Table 14: mean ideal number of children and percentage distribution of ideal number of children by region

Region*	Mean ideal number of children (sd)	Ideal number of children (%)					N
		0-2	3	4	5	6+	
West Bank	4.4 (1.58)	12.9	7.9	49.0	7.7	22.6	2880
Gaza Strip	4.8 (2.00)	9.7	8.3	39.8	12.4	29.9	1587
Total							4467

*P \leq 0.001

ix. Current family size

As expected, the reported ideal family size was strongly related to the number of living children that women had at the time of the survey. Our results indicate that 40.5% of those having six or more children reported that if they go back in time, they would actually prefer to have six or more children. This proportion dropped for those having five children (24.3%), those having four (20.6%) and for those having three or less children (15.3%). The mean ideal number of children was around four for all women

who had less than six children (4 for women with two or fewer children, 4.2 for those with three children, 4.4 and 4.5 for women who had four and five children respectively), while it was 5.3 for those who had six or more living children (Table 15).

Table 15: mean ideal number of children and percentage distribution of ideal number of children by current family size

Current family size*	Mean ideal number of children (sd)	Ideal number of children (%)					N
		0-2	3	4	5	6+	
0-2	4.0 (1.67)	17.7	10.4	48.8	7.7	15.3	1139
3	4.2 (1.45)	11.1	13.0	49.4	11.3	15.3	640
4	4.4 (1.60)	11.9	4.2	54.0	9.2	20.6	683
5	4.5 (1.76)	11.6	6.6	40.2	17.3	24.3	577
6+	5.3 (2.25)	7.1	6.2	39.6	6.7	40.5	1398
Total							4437**

* $P \leq 0.001$

** N=4437: 30 missing cases

x. Current number of sons and daughters in the family

Our findings revealed that there was no major difference in the influence of either number of boys or girls in the family on the reported ideal family size. With increasing number of either, sons or daughters, there was a parallel increase in the mean ideal number of children, very similar to the pattern observed for the total number of living children.

xi. Women with children who died

Women who experienced the death of at least one child expressed a higher tendency towards having larger families compared to those who did not go through this experience: 34.7% of women who reported having had at least one child who died stated that their ideal number of children would be six or more, compared to 23.5% of those who did not ($P \leq 0.001$). Moreover, 12.5% of women who did not have any children who died reported that their ideal number of children was two or fewer children compared to only 7.1% of those who had one or more dead children ($P \leq 0.001$). The mean ideal number of children also varied from 4.5 ($sd=1.87$) for women with no children who died to 5.0 ($sd= 2.12$) for women who reported one or more dead children.

3. Ideal versus actual family size

Table 16 shows the discrepancy between the stated ideal family size and the current number of children for women who were thirty-five years old or above, assuming that those women (above thirty five years old) had practically accomplished their desired family size and/or that they were approaching the completion of their childbearing years. The results clearly demonstrate the deviation of the current number of children from the stated preferences, especially for women having more than four children: 59.5% of women who had five children stated that they had actually preferred to have anything less than five and 58.5% of those with six or more children stated that they had favored any number less than six children. Moreover, only one quarter (25.8%) of those women having two or fewer children said that if they go back in time they would prefer

to have this number while 74.2% of them said that they would rather have a bigger family of more than two children.

Table 16: percentage distribution of current number of children by stated ideal number of children for women thirty-five years old or above

Current number of children (%)*	Ideal number of children (%)					N
	0-2	3	4	5	6+	
0-2	25.8	9.7	45.2	8.9	10.5	124
3	8.2	27.8	47.4	5.2	11.3	97
4	12.1	5.7	55.4	9.6	17.2	157
5	10.2	7.8	41.5	18.5	22.0	205
6+	6.7	6.6	38.0	7.2	41.7	1006
Total						1589

*P \leq 0.001

4.a. Deviation between the stated ideal family size and the reported current number of children

When the deviation between both the stated ideal family size and the current number of living children was calculated, a significant 35.1% of women had exceeded their ideal number, while 20.4% had exactly matched between their ideal and current number, and a larger proportion reported having fewer children than their stated ideal family size (Table 17).

Table 17: deviation between ideal family size and current number of children

Ideal family size versus current number of children	Frequency %	N
Ideal family size < current number of children	35.1	1560
Ideal family size = current number of children	20.4	908

Ideal family size > current number of children	44.5	1969
Total	100.0	4437

4.b. Determinants of the deviation between the stated ideal family size and the current number of children

a. Age

As expected, women's age was significantly associated with the extent to which women would exceed their ideal number of children: more women who were thirty five years or older reported having had children beyond their stated ideal family size than did women in the age group (25-34 years) or those who were fifteen to twenty four years old. Moreover, more women in the age group (twenty five to thirty four years) reported having had exactly the same number as their ideal, compared to women in the other age groups: 24.2% of women 25-34 years old compared to 11.8% of women in the younger (15-24 years) group, and 21.1% of those above thirty five years old, and a far larger proportion of younger women (15-24 years old) (82.0%) reported having children below their ideal family size, relative to women in older age categories (45.3% and 21.1% for women in the age groups (25-34) and 35 years or above respectively, (Table 18).

Table 18: percentage distribution of the deviation between ideal family size and current number of children by women's age

Age*	Ideal family size versus current number of children			N
	Ideal family size < current number of children	Ideal family size = current number of children	Ideal family size > current number of children	
15-24	6.2	11.8	82.0	938
25-34	30.5	24.2	45.3	1910
≥ 35	57.8	21.1	21.1	1589

Total				4437
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*P≤ 0.001

b. Age at first marriage

As shown in Table 19, more women married at or below the age of eighteen years old, reported exceeding their ideal family size relative to those married at an older age (39.6% of women married at or before the age of 18 compared to 29.6% of those married in an older age). Moreover, more of those married at an older age had exactly the same number of children as their ideal than did those married at an age of 18 or below (22.1% of women married after the age of 18 versus 19.2% of those married at or before 18 years old).

Table 19: percentage distribution of the deviation between ideal family size and current number of children by women's age at first marriage

Age at first marriage*	Ideal family size versus current number of children			N
	Ideal family size < current number of children	Ideal family size = current number of children	Ideal family size > current number of children	
≤ 18	39.6	19.2	41.2	2473
> 18	29.6	22.1	48.3	1964
Total				4437

*P≤ 0.001

c. Education

With increasing level of education, more women were shown to achieve their desired family size compared to women with lower educational backgrounds: 24.6% of women with post secondary education reported having exactly the same number of children as their ideal, versus 23.5% of those with secondary education, 19.2% of those with below secondary level and 19.4% of women who never attended school. Also, more than 50% (50.9%) of women who had never attended school had exceeded their ideal number,

relative to a far lower 35.6% of women with below secondary, 27.2% of those with secondary education and 19.7% of those with a post secondary educational attainment (Table 20).

Table 20: percentage distribution of the deviation between ideal family size and current number of children by women's educational attainment

Education*	Ideal family size versus current number of children			N
	Ideal family size < current number of children	Ideal family size = current number of children	Ideal family size > current number of children	
Never attended school	50.9	19.4	29.8	702
Below secondary	35.6	19.2	45.2	2566
Secondary	27.2	23.5	49.3	783
Above secondary	19.7	24.6	55.7	386
Total				4437

* $P \leq 0.001$

The relation between education and the deviation of the ideal number of children from the current family size was still significant after controlling for age, and more younger women who reported never attending any school had exceeded their ideal family size relative to those who had completed higher levels of education. Also a smaller proportion of women who were thirty five years or above and had attained higher levels of education reported exceeding their ideal family size compared to those who never attended any school.

d. Employment status and type of occupation of head of household

More women of those whose head of household was reported unemployed had exceeded their ideal family size (42.7%) in comparison with those whose head of household was working at the time of the survey ($P=0.003$). Moreover, a smaller proportion of women whose head of household was working in office positions or as clerks, had children more than their stated ideal (34.1% and 31.4%, respectively), compared to those whose heads of household were working in agriculture and fishery or in other elementary occupations (39.6% and 39.3% respectively) ($P=0.004$).

e. Type of health insurance

Our findings revealed a significant association between the type of health insurance women were affiliated to and the extent to which they would achieve their ideal family size: more women of those enrolled in the social insurance system had exceeded their ideal number of children (40.6%) relative to those with other types of health insurance (38.9% of those with government insurance, 36.2% of those with UNRWA insurance, 33.9% of those with private insurance, 33.5% of women with no insurance at all and 22.9% of women with military insurance). Moreover, more women of those having a private insurance had exactly the same number of children as their stated ideal (25.5%, compared to 21.5% of those with government insurance, 19.9% of women with no insurance, 19.3% of women with social insurance, 18.0% of women with UNRWA insurance and 14.9% of women enrolled in the military insurance system) ($P \leq 0.001$).

f. Crowding ratio

As shown in Table 21, more women living in more crowded houses had exceeded their ideal number of children than did women living in less crowded houses: 58.1% of women living in households of more than three persons per room had children beyond their stated ideal, compared to 53.2% of those living in households of a calculated crowding ratio of 2.1 to 3.0 and 24.3% of those living in households of two persons or fewer, per room. Also, more women of those living in less crowded houses had an exact match between their current number of children and their expressed preferences compared to women living in more crowded houses: 22.4% of those living in houses of fewer than two persons per room had exactly the same number of children as their stated ideal, compared to a smaller 19.8% of women living in houses of 2.1 to 3.0 persons per room and 17.1% of those living in households with a calculated crowding ratio above 3.1 (Table 21).

Table 21: percentage distribution of the deviation between ideal family size and current number of children by crowding ratio of the household

Crowding ratio*	Ideal family size versus current number of children			N
	Ideal family size < current number of children	Ideal family size = current number of children	Ideal family size > current number of children	
≤ 2.0	24.3	22.4	53.3	2357
2.1-3.0	53.2	19.8	27.0	1151
≥ 3.1	58.1	17.1	24.8	589
Total				4097**

*P≤ 0.001

**N=4097: 340 missing cases

g. Type of locality

Our findings indicate that type of locality was significantly related to the extent of deviation between women's ideal family size and their current number of children; more women living in urban areas had exactly the same number of children as their stated ideal (22.2%), compared to 19.8% of those residing in refugee camps and 18.4% of women in rural areas ($P= 0.019$). Similarly, more rural women had exceeded their ideal number of children than had women in the urban or camp settings, (37.5%, 33.0% and 36.4% for rural, urban and camp respectively) ($P= 0.019$). On the other hand, whether women lived in the West Bank or the Gaza Strip was not significantly related to any discrepancy between their ideal number of children and the reported current family size.

h. Having children who died

Having one or more children who died was associated with more women exceeding their ideal family size: 51.6% of women who had at least one child who died had more children than their stated ideal, compared to a far lower 32.3% of those who did not pass through this experience ($P\leq 0.001$). Also, a smaller proportion of women who had one or more children who died had exactly matched their ideal number of children with their current family size (17.2%), compared to 21.1% of those who did not have any children who died ($P\leq 0.001$). Women who had one or more children who died were as

well less likely to report having children fewer than their stated ideal (31.8%) compared to those who did not pass through this experience (46.6%) ($P \leq 0.001$).

i. Contraceptive use

A significant relationship was observed between the use and non-use of contraception and the extent to which women would achieve their desired family size. As noted in Table 22, 41.6% of women who were practicing some kind of contraception had exceeded their ideal family size, compared to 27.4% of those who were not. Moreover, and as would be expected, more women of those who were practicing contraception (22.9%) had exactly the same number of children as their stated ideal, versus 18.4% of those who were not doing or using any contraceptive method.

Table 22: percentage distribution of the deviation between ideal family size and current number of children by use of contraception

Use of contraception*	Ideal family size versus current number of children			N
	Ideal family size < current number of children	Ideal family size = current number of children	Ideal family size > current number of children	
Yes	41.6	22.9	35.5	2344
No	27.4	18.4	54.2	1178
Total				3522**

* $P \leq 0.001$

**N= 3522: 915 missing cases

5.a. Reports of desiring no more children by contraceptive use

When currently married women (who were not pregnant or not sure that they were or not at the time of the survey and who were not sterilized, nor were their husbands, (N=4172) were asked about whether they were using or doing anything to limit or delay

any potential pregnancy, 60.3% (N=2514), reported that they were currently using some kind of contraception. Around half (47.4%) of the women currently using contraception were using an intrauterine device (IUD), 11.0% were using the pill, 18.0% relied on traditional methods such as withdrawal or periodic abstinence and 11.0% reported depending on the contraceptive effect of lactation amenorrhea. The majority of women reported knowing one or more method for contraception whether it was a modern or a traditional method.

Of those women who previously stated that they desired to stop childbearing, 75.3% said that they were practicing some kind of contraception while 24.7% said that they were not despite reports that they did not want any more children (Table 23).

Table 23: percentage distribution of use of contraception by preference for more children

Preference for more children* (%)	Use of contraceptive methods (%)		Total
	Yes	No	
Want more children	50.1	49.9	1752
Want no more children	75.3	24.7	2121
Other	17.0	83.0	165
N	2503	1535	4038**

* $P \leq 0.001$

** N=4038: 1324 missing cases

When attempting to examine the relation between the desire of birth spacing and contraceptive use, 67.9% of women stating that they wanted to delay their next birth (to above one year interval) were practicing some kind of contraception while 32.1% of them were not using or doing anything for control ($P \leq 0.001$).⁵⁰

⁵⁰ The same patterns regarding the differentials of use of contraception among women desiring to stop childbearing were observed for women desiring to space their births.

5.b Determinants of contraceptive use among women who do not want any more children ⁵¹

i. Age

Unlike women's age at first marriage, their current age was significantly associated with whether they were going to use a family planning method or not. Table 24 clearly shows that women in the age group 25-34 years were the most likely to practice contraception compared to women in younger or older age groups: 83.1% of women between 25-34 years old were using some kind of contraception when desiring to stop having more children compared to 76.3% of women under twenty five years and 69.9% of those who were thirty five years old or older at the time of the survey.

Table 24: percentage distribution of use of contraception while desiring to stop childbearing by women's age

Age*	Use of contraception while desiring to stop childbearing (%)		N
	Yes	No	
15-24	76.3	23.7	152
25-34	83.1	16.9	798
≥ 35	69.9	30.1	1171
Total			2121

*P≤ 0.001

ii. Education

Women's educational levels were also associated with the use of contraception, with significantly more educated women reporting doing something to control pregnancy when desiring to stop having more children compared to those who never attended

⁵¹ In this section, only women reporting that they did not want to have more children were selected.

school: 80.0% of women with post secondary education and who wanted to cease childbearing reported practicing contraception, compared to 65.1% of women who never attended school and 77.6% and 79.4% of women with below secondary and secondary education respectively (Table 25).

Table 25: percentage distribution of use of contraception while desiring to stop childbearing by women's educational attainment

Education*	Use of contraception while desiring to stop childbearing (%)		N
	Yes	No	
Never attended school	65.1	34.9	403
Below secondary	77.6	22.4	1225
Secondary	79.4	20.6	324
Above secondary	80.0	20.0	169
Total			2121

* $P \leq 0.001$

iii. Employment status of head of household

Unlike women's employment status, work of the head of household (the husband in 84.5% of cases) was significantly related to women's using a family planning method or not. Women whose head of household was reported unemployed were less likely to use contraception when desiring to stop childbearing: only 65.8% of women with non-working head of household stated that they were practicing contraception along with their desire to stop having more children, compared to 77.6% of those whose head of household was reported working at the time of the survey ($P \leq 0.001$).

iv. Crowding ratio

Women living in more crowded houses of more than three persons per room were the least likely to report using birth control methods when desiring to stop having more children compared to those living in houses with a smaller crowding ratio: contraceptive use was recorded as 69.5% among women living in houses with a crowding ratio higher than 3.0, compared to 76.0% and 77.9% of women living in houses with a crowding ratio between 2.1 and 3.0 and below 2.0 respectively (Table 26).

Table 26: percentage distribution of use of contraception while desiring to stop childbearing by households crowding ratio

Crowding ratio*	Use of contraception while desiring to stop childbearing (%)		N
	Yes	No	
≤ 2.0	77.9	22.1	951
2.1-3.0	76.0	24.0	725
≥ 3.1	69.5	30.5	378
			2064**

*P= 0.002

**N= 2064: 57 missing cases

v. Region

Although there were no major differences among women living in a city, village or camp regarding contraceptive use and not wanting any more children, living in the West Bank was associated with a higher proportion of women using birth control methods when desiring to stop childbearing than women living in the Gaza Strip (76.6% and 72.8% respectively) (Table 27).

Table 27: percentage distribution of use of contraception while desiring to stop childbearing by region

Region*	Use of contraception while desiring to stop childbearing (%)		N
	Yes	No	
West Bank	76.6	23.4	1408
Gaza Strip	72.8	27.2	713
Total			2121

*P= 0.005

vi. Current number of children and sex composition in the family

The results in Table 28 indicate that the percentage of women using contraception varied significantly among women at different parity levels: contraceptive use increased after having two children, recorded as 79.5% at parity three relative to only 54.0% among women with two or fewer children. Moreover, contraceptive use reached its peak at parity four where 82.5% of women with four children stated that they were using or doing something to control pregnancy when they wanted to stop having more children, dropping again to 78.7% for women having five and 74.3% for women having six or more children. It is important to note that the mean total number of children after which women reported starting using a contraceptive method was recorded as three. The mean number of boys after which women started using contraception was however slightly greater than the number of girls, being 1.6 and 1.4 respectively, and thereby indicating some kind of male preference while still aiming for a mixed-sex family.

Table 28: percentage distribution of use of contraception while desiring to stop childbearing by current number of children

Current number of children*	Use of contraception while desiring to stop childbearing (%)		N
	Yes	No	
0-2	54.0	46.0	126
3	79.5	20.5	176
4	82.5	17.5	331
5	78.7	21.3	356
6+	74.3	25.7	1124
Total			2113**

*P≤ 0.001

** N= 2113: 8 missing cases

vii. Women with children who died

As expected, having children who died was significantly linked to whether a woman desiring to stop childbearing would use contraception or not. Women with one or more children who died were less likely to use family planning methods than were those who did not pass through this experience despite their desire to stop childbearing (67.2% compared to 77.4% respectively) (Table 29).

Table 29: percentage distribution of use of contraception while desiring to stop childbearing by number of children who died

Number of children who died*	Use of contraception while desiring to stop childbearing (%)		N**
	Yes	No	
0	77.4	22.6	1710
1+	67.2	32.8	409
Total			2119

* $P \leq 0.001$

** N=2119: 2 missing cases

II. Multivariate analysis

A. Determinants of ideal family size

Linear regression was performed to identify the main factors determining ideal family size among currently married women who already had living children and who gave numeric answers. The following determinants that were statistically significant in the bivariate analysis were entered into a linear regression model: age, age at first marriage, education, women's employment status as well as that of head of household in addition to the type of occupation held by heads of household, type of health insurance, crowding ratio, region, current number of children and having children who died. Age was excluded from the best fit model because it was statistically insignificant due to its high correlation with the current number of children. Age at first marriage was also excluded due to its insignificance as it correlated with age, current number of children and women's employment status. Employment status of both women and their heads of household and their type of occupation were shown to be statistically insignificant and were therefore excluded from the best fit model. Type of health insurance was also shown insignificant in the general regression model possibly due to the small size of some of the subgroups in the variable.

After adjusting the model to the significant variables, and as shown in Table 30, education to a below secondary level was not statistically related to the likelihood of women desiring larger or smaller families relative to those who never attended school.

Women with secondary or post secondary education were less likely to desire higher numbers of children (OR= -0.32; C.I. 95%: -0.53 to -0.12) and (OR= -0.26; C.I.95%: -0.51 to -0.015), compared to women who never attended school. Women living in more crowded houses, and in contrast to the results found in the bivariate analysis, were less likely to prefer a higher number of children than those living in less crowded houses (OR= -0.060; C.I.95%: -0.11 to -0.01). Women living in the Gaza strip were more likely to prefer a higher number of children (OR= 0.29; C.I. 95%: 0.17 to 0.41) relative to women living in the West Bank. Furthermore, with increasing current family size, women were more likely to desire a higher number of children than those with smaller families. (OR=0.20; C.I.95%: 0.17 to 0.22). In addition, women who did not experience the death of at least one child were less likely to prefer a high number of children (OR= -0.18; C.I. 95%: -0.33 to -0.02) compared to women who had one or more children who died.

Table 30: Best fit linear regression model assessing the relation between ideal family size and selected determinants

Variable	OR (95% CI)	P-value
Education		
Never attended school	Reference	
Below secondary	-0.11 (-0.73 to 0.05)	0.190
Secondary	-0.33 (-0.54 to -0.12)	0.002
Above secondary	-0.26 (-0.51 to -0.02)	0.038
Crowding ratio (continuous)	-0.060 (-0.11 to -0.01)	0.014
Region		
West bank	Reference	
Gaza Strip	0.29 (0.17 to 0.41)	$P \leq 0.001$
Current number of children (continuous)	0.20 (0.17 to 0.22)	$P \leq 0.001$
Number of children who died		
0	-0.18 (-0.33 to -0.02)	0.031
1+	Reference	

B. Determinants of having a smaller ideal family size than the current number of children

Logistic regression was performed to identify the significant determinants that were associated with women exceeding their stated ideal family size. The following variables that were statistically significant in the bivariate analysis were entered into a logistic regression general model: age, age at first marriage, education, employment status and type of occupation of head of household, type of health insurance, crowding ratio, type of locality, having children who died and use of contraception. After adjusting the general model to the statistically significant determinants, the employment status and type of occupation of head of household, type of health insurance, and type of locality were excluded as there was no statistically significant relationship between them and having children beyond the stated ideal family size.

As shown in Table 31, the logistic regression best fit model yielded five significant determinants that included: women's age, women's age at first marriage, women's education, crowding ratio of the household, having children who died and contraceptive use. With increasing age, women were more likely to exceed their desired number of children and those above thirty five years old were around four times (OR= 4.6; C.I.95%: 3.03 to 7.01) more likely to have children beyond their desired family size than were women between the ages of fifteen and twenty four years, while women in the age group (25-34 years) were twice (OR=2.05; C.I.95%: 1.36 to 3.09) more likely to exceed their desired number than were those in the younger age category. Women married above the age of 18 years old were less likely to exceed their ideal number of children compared to women married at or below the age of 18 (OR= 0.63; C.I. 95%: 0.50 to 0.78), and women with secondary (OR= 0.70; C.I.95%: 0.49 to 0.98) or post secondary education (OR= 0.55; C.I. 95%: 0.36 to 0.86) were less likely to exceed their ideal family size compared to women who never attended school. On the other hand, education to a minimum of below secondary level was not significantly associated with whether women would exceed their desired family size or not. Moreover, women living in more crowded households were more likely to have children above their ideal number relative to those living in less crowded houses (OR= 1.80; C.I.95%: 1.56 to 2.07). Also, women having one or more children who died, were more likely to exceed their ideal number of children (OR= 1.50; C.I. 95%: 1.14 to 1.99), compared to those who did not. Furthermore, women who reported that they were practicing contraception at the time of the survey were more likely (1.56; C.I. 95%: 1.24 to 1.97) to exceed their

ideal family size than were women who reported doing or using nothing for birth control indicating that women start using contraception after exceeding their ideal family size.

Table 31: best fit logistic regression model assessing the relation between having children above the stated ideal family size and selected determinants among women exceeding their ideal family size

Variable	OR (95% C.I.)	P-value
Age (years)		
15-24	Reference	$P \leq 0.001$
25-34	2.05 (1.36 to 3.09)	0.001
≥ 35	4.6 (3.03 to 7.01)	$P \leq 0.001$
Age at first marriage (years)		
≤ 18	Reference	
> 18	0.63 (0.50 to 0.78)	$P \leq 0.001$
Education		
Never attended school	Reference	$P \leq 0.001$
Below secondary	0.94 (0.71 to 1.24)	0.654
Secondary	0.70 (0.49 to 0.98)	0.037
Above secondary	0.55 (0.36 to 0.84)	0.008
Crowding ratio (continuous)	1.80 (1.56 to 2.07)	$P \leq 0.001$
Number of children who died		
0	Reference	
1+	1.50 (1.14 to 1.99)	0.004
Use of contraception		
Yes	1.56 (1.24 to 1.97)	$P \leq 0.001$
No	Reference	

C. Determinants of contraceptive use among women who do not want to have more children

Logistic regression was performed to identify the main factors determining the use of contraceptive methods among women who reported that they did not want to have more children. The following determinants that were statistically significant in the bivariate analysis were entered into a logistic regression model and were all shown statistically significant: age, education, employment status of the head of household, crowding ratio, region, current number of children and having children who died.

As indicated in Table 32, women in the age group (25-34) were the most likely to practice contraception when desiring to stop childbearing, compared to women in the other age groups (OR=2.20; C.I. 95%: 1.70 to 2.85). Educated women were almost twice more likely to use contraception than were women who never attended any school: (OR= 1.71; C.I. 95% :1.31 to 2.23), (OR= 2.04; C.I. 95%: 1.39 to 2.98), (OR= 2.12; C.I. 95%:1.32 to 3.41) for women with below secondary, secondary and above secondary education respectively. Moreover, women with working heads of household were more likely to practice contraception (OR=1.51; C.I.95%: 1.17 to 1.96) than were those who reported having an unemployed head of household. Women at higher parity levels were more likely to use contraception (OR= 1.09; C.I. 95%: 1.03 to 1.15) than were those with lower parity levels. In addition, women with one or more children who died were less likely to use contraception than were those who did not go through this experience (OR= 0.67; C.I. 95%: 0.52 to 0.85). Women living in the Gaza Strip were

less likely to do something to control pregnancy (OR=0.75; C.I. 95%: 0.59 to 0.94) than were those living in the West Bank. Furthermore, women living in more crowded houses were less likely to practice contraception (OR=0.83; C.I. 95%:0.71 to 0.96) than were those living in less crowded houses.

Table 32: best fit logistic regression model assessing the relation of use of contraception among women who do not want to have more children and selected determinants

Variable	OR (95% CI)	P-value
Age (years)		
15-24	1.79 (1.08 to 2.96)	0.023
25-34	2.20 (1.70- to 2.85)	$P \leq 0.001$
≥ 35	Reference	
Education		
Never attended school	Reference	
Below secondary	1.71 (1.31 to 2.23)	$P \leq 0.001$
Secondary	2.04 (1.39 to 2.98)	$P \leq 0.001$
Above secondary	2.12 (1.32 to 3.41)	0.002
Employment status of head of household		
Working	1.51 (1.17 to 1.96)	0.002
Not working	Reference	
Current number of children (continuous)	1.09 (1.03 to 1.15)	0.002
Number of children who died		
0	Reference	
1+	0.67 (0.52 to 0.85)	0.001
Region		
West Bank	Reference	
Gaza Strip	0.75 (0.59 to 0.94)	0.012
Crowding ratio (continuous)	0.83 (0.71 to 0.96)	0.010

III. Qualitative analysis of focus-group discussions

A. Basic characteristics of the focus-groups

In total 4 focus-group discussions were completed and included 34 currently married women of various socio-economic backgrounds. The majority had living children or was pregnant at the time of the interview. Three of the four focus-groups consisted of semi-urban, rural or refugee women, all reporting that they were not employed and had attained secondary or below secondary education. As Table 33 shows, women in Birzeit town were generally of lower middle class origins and women from Sinjel were village women that tend to be poor and less exposed than women from Birzeit Town. Women living in Qalandiya were refugees from the poorest sectors of Palestinian society and lived in a camp for Palestinian refugees that was established following the 1948 Arab Israeli war. The urban group in Ramallah city represented well-educated middle class working women who worked mainly in one or more of the health fields.

Table 33: some selected basic characteristics of the participants in the focus-groups

Location	Ramallah city	Birzeit town	Sinjel village	Qalandiya camp
N	10	6	8	10
Mean age	37.0	35.7	34.0	35.5
Mean age at marriage	27.0	21.9	17.6	19.8
Current number of children	1.7	3.6	4.0	4.5
Educational attainment	Post-secondary up to Ph.d	Secondary	Secondary up to 2-year diploma	Mostly secondary with one illiterate older woman and one university student
Occupation of husband	Professionals: doctors, engineers, etc...	Crafts workers and other elementary jobs	Laborers	Elementary jobs
Religion	Christians and Muslims	Christians	Muslims	Muslims

B. Main topics in the focus-group discussions

Two main topics emerged after analyzing the four focus-group discussions, and those included: desired family size and its determinants and unplanned or unwanted pregnancy.

C. Results of the focus-group discussions

C.1. Determinants of ideal family size

The women were asked about their ideal number of children and its determinants. In consistency with our findings in the quantitative research, women in the urban, educated working group reported desiring the smallest number of children compared to women in other groups: participants from Ramallah's focus-group discussion reported the lowest mean ideal number of children, at 2.9 compared to 3.3 for women from Birzeit town, 4.2 from Sinjel village and 4.1 from Qalandiya refugee camp. The following factors were viewed as detrimental in deciding on ideal number of children among women in the four focus-groups:

i. Old age support

Most women described old age support as the ultimate reason why they desired to have higher numbers of children. Women stated that if they wanted to have a big family, it was because they believed that children would provide them with the financial, emotional and physical support they would need in old age. Women explained repeatedly saying: "*children are good for the future.*" Many women said that they already raised their children well so that they would be able to take care of them when they become old and that they kept on stressing the importance of family values to their children from early age. One woman in Ramallah city said that she, together with her husband, were establishing business investments as economic incentives for their children so that they would not leave when they grow up. A sixty-year old, illiterate woman in the Qalandiya camp focus-group explained: "*I wish I was able to have ten children, children are the joy of life, they help us financially and emotionally when we*

are old or sick". Another woman in Sinjel village stated that she wanted to have a big number of children so that she can stay with them in turn when she is old, and thus the burden would be shared among a higher number of children. Some women in Sinjel village suggested that they would like to have their children in two groups: one bunch of children while the mother is young and another bunch when the mother is approaching her forties. They explained: *"when we are sixty or seventy years old and in need of our children for either physical or financial help, they will be already forty or fifty years old and they will have their own preoccupations and responsibilities to take care of, however if we have another group of children at an older age, they will be still young, in their twenties or thirties by then and will be free and capable of taking care of us when we are old"*.

Although the importance of children as a source of financial and economic support in old age was valued among women in all four groups, it was less prominent among working women in the urban setting. One woman, highly educated of the working group, described the concept as unfair to the children, and would only help parents build expectations that sometimes children would not be able to meet. She added: *"I do not want to be a burden on my child; I should prepare myself for the future"*. Women in Ramallah City and in Birzeit town explained this notion of financial dependency as due to the lack of social security system leaving elderly people inevitably dependent on their children. Moreover, financial support in old age was viewed among all women as the role of their sons and not of their daughters, as one woman in Qalandiya camp was

quoted saying: *“our son will help us with his money while our daughter will contribute with her effort”*.

Women expressed the importance of having a large number of children not only for financial reasons but for emotional support in old age as well. Women stated that it meant a lot to them to have their children around them when they are old, and that they would like to see themselves surrounded with a big family especially during sickness. Among urban educated working women, the emotional role of children was described as more important determinant than the role of financial support. Meanwhile, in all groups, women agreed that they expected to have the emotional support and care they would need in old age from their daughters rather from their sons. Women also talked about the role of children and mainly daughters in providing physical assistance and healthcare for their parents in old age. One woman stated: *“who will take me to the bathroom when I am old and sick? my son cannot do that but my daughter will.”* Cooking, cleaning and helping in household duties were also considered as important old age assistance provided only by daughters.

ii. Family and social pressure

The importance of social and family pressure in altering women's fertility preferences and ideal family size was an important issue for debate among women in the various

focus-groups. While all women agreed that this pressure was present, and that pressure became part of the decision sometimes, some women such as those in Ramallah City and in Sinjel village stated that regardless of all kinds of interference in their desired family size and fertility preferences, they still did whatever they believed was appropriate. In all focus-groups, younger, low parity, less educated and non-working women were the most likely to report changing their fertility preferences as a result of social or family pressure. Women reported being influenced by their mothers, in-laws and members of their extended families. The pressure was mostly significant in pushing women towards exceeding their desired number of children and more particularly when they had no male sons or only one child of a certain sex. In many cases, women were quoted saying: *“they tell my son: “go and ask your mother to bring you a brother that you can play with””*. In Qalandiya refugee camp, one woman, a mother of six children, discussed the impact of family pressure saying: *“I had always preferred to have four children as an ideal number, two boys and two girls, however I had my son after three girls”*, She added: *“I wanted to stop after having my son, and so did my husband, we were satisfied; I was using an IUD until my mother-in-law dragged me to the gynecologist to remove it and have another boy.”*

Family and social pressure were believed to be of special importance before having the first child. This was mentioned by most women in all focus-groups although to a lesser extent among working women with higher educational attainments. In one case, a 34-year old rural woman that we met in Sinjel, told her story, describing the enormous

effects of social and family pressure towards the question of having children. She had been suffering from infertility for a period of nine years, since her being married. She described her life then as “*a disaster*”. She continued: “*I alienated myself from family, society and all social events and gatherings, and my family in-law was talking about me all around the village as being infertile and unable to have children, describing it as a “social stigma”*. She was driven to physicians in every part of the West Bank; and when all efforts failed, she added: “*they took me to traditional healers (fattaheen)*. After several unsuccessful visits, the healer gave me a suppository-like thing, wrapped in a cloth and asked me to use it. This has caused me serious side effects that lead me to hospital where I was expected to suffer to death.”

As mentioned above, educated working women in the urban group were more likely to report their resistance to social and family pressure. One woman, an educated forty-year old mother of one child, stated that her father has sworn to God that he will never step into her house again if she didn't have a second child. She further stated: “*we are really not able to have another child, we live far from our families, we both work and cannot afford neither the time, the money nor the effort to have another child and my father will eventually accept this fact*”.

Other women however, believed that the pressure existed and women were automatically and/or were subconsciously influenced by it. Women in Birzeit and in Sinjel complained about the fact that this pressure would be stressed when an extended

family lived together or in close proximities. One woman in Birzeit town explained: *“when all the family lives together, everybody interferes, it is better to live far from the extended family as each have their own mentality”*.

iii. Male sex preference

Male sex preference was perceived among most women as a very important factor that might lead to a change in their desired number of children. Women might desire to have a certain number of children, but if this number was attained with no male sons, they would continue childbearing until there was at least one boy and sometimes they might continue trying, aiming to have a second one (a brother for the boy). In Qalandiya refugee camp one woman said that she would continue childbearing even if she had ten girls until there was at least one boy, whereas another woman stated that this would not happen; *“No, not ten children”* she elaborated. Another woman highly educated from the urban working group said: *“I have only one son and I am happy because if my first child was a girl, I would have been obliged to continue childbearing until I have a boy”*, thus indicating that male sex preference was observed among all women regardless of their education, working status, religion or locale.

In this regards, most women pointed out to the impact of family and social pressure towards having at least one or two sons. In Birzeit town, one woman told the story of her sister who had five daughters and no sons and despite her living in a very crowded house, everybody was pushing her to continue having more children until she had a boy,

“this would not happen if she had sons only, she wouldn’t continue until she has a girl, social pressure only exists for having boys”, she elaborated.

On the other hand, and to a lesser extent, some women stated that they exceeded their ideal number of children because they wanted to have at least one daughter. Other women opposed to this idea and said that a problem only exists when you don’t have a boy, because then you won’t have any other choice but to keep on trying.

In this context, and as was mentioned above, boys were preferred due to their importance in providing old age financial support to their parents and to their sisters, particularly among women with lower levels of education and who were reported not employed. One woman in Birzeit town clearly explained: *“a boy is a man, he will support his sister, if we have only girls, it is a problem, because a girl will eventually move with her husband and she will not be independent or capable enough to take care of us when we are old.”* Another woman elaborated: *“a boy supports his family and his sisters, there will be someone who asks about them.”* In contrast, girls were considered as highly dependent on their husbands and thus were not free to offer the needed financial support for their families when needed. One woman said: *“what if my daughter’s husband turns out to be a bad guy, then it is a disaster”*. Another woman explained: *“what if my daughter’s husband prevents her from visiting us?”*. In this regard and as was mentioned in the quotes above, women emphasized the fact that a son

is independent when he grows up and he is free to determine his future and thus he should be more capable of helping his parents when they are old.

An additional reason why boys were seen as important was because they were simply expected to carry father's name and thus would continue family lineage and kinship. Many women stressed on the point that a boy would carry father's name while a girl would follow her husband and his family. In Sinjel village and in the same case discussed above that described the story of a woman that suffered from nine years of infertility, the same young woman continued: *"after I had my two daughters, following nine years of infertility, and when my father-in-law passed away, on that day, my brother-in-law came up and swore to God that he will sell the land and get my husband marry another woman that will bring a boy to the family. He said: "there is no way that our father dies and there is no grandson to carry his name""*. This was seen among all women in the three focus-groups while remarkably less among the working, highly educated urban category.

iv. Social value of children (*Izweh*)

The social value or social status parents feel by having lots of children was mentioned in all groups and was mostly notable among women in Qalandiya camp, *"Children are good and are an asset to the parents in good and/ or in bad days, they add to the prestige of parents and stand by them in front of people (izweh)"* an elderly, illiterate woman in Qalandia camp explained. Two women in Qalandiya refugee camp expressed

their desire to have ten or twelve children, because they highly appreciated the value of a big family. One of those women is a second wife and the other one said that she herself is an only child and wouldn't like her children to grow up alone. Some women said that the importance of a big family was best seen in special events, feasts and in family gatherings, where parents would feel proud if they had a large number of children.

v. *Work*

Work and career factors were only mentioned among women in the urban focus-group. This is expected, as women in all other groups did not work outside their homes. In this group, women argued on the main factor that made women's employment a determinant of her desired family size, and whether it was money or time or career and self-actualization that truly influenced their decision. One woman stated that her career ambitions influenced her to stop having more children after she has had two: "*My career is very important to me and so I could not manage to pursue my ambitions if I had a big family, so I had to stop after having two children*" as she explained. Other women however, stated that work influenced their decision through interfering with the time they needed to take care of their children, so simply they could not handle having too many children.

In another discussion within the same group, one woman suggested that it was a matter of money rather than work, because if women could afford to work part-time jobs and pay for assistance in household duties, then they would have the time to take care of

bigger families; this woman explained: *“money can buy the time we need”*. Another woman, a mother of two children asserted, *“I am always torn between my work and my children which is giving me a continuous guilt feeling; but I can’t quit work due to financial need”*. Others stated that money could not buy everything: *“I need to stay with my child and spend time with him to teach him the basics of life; it is a matter of time rather than money”* as one mother of an only child quoted. Some women expressed that they work for reasons of self-actualization rather than merely money; thus they cannot afford the time to have many children.

vi. *Fear of loss of one child*

This concern was repeated several times mainly in the focus-group with rural women in Sinjel village. Women said that they could not have only one boy and one girl, as one never knew what might happen. Just in case, they would rather have two or three from each sex. When asked about a justification for their fears, one woman quoted: *“when you have a young man in your house, it is like a bomb”* pointing out to the risks of martyrdom or detainment due to the present situation of occupation and uprising. Other women pointed out to the risks of losing their children due to diseases such as cancers or cardiovascular disorders. One educated working woman quoted *“my mother always tells me that a child is like something that a cat can come and grab at any time”*.

vii. *Financial considerations*

Almost all women in the four focus-groups stated that financial constraints were the leading factor that determined their ideal family size and whether they would like to

continue or stop having more children. Educated working women in the urban setting stated that they wished to have more than two to three children but they could not due to the high cost of raising quality children. In this regards, and in the same focus-group, women stressed the importance of providing their children with good education and more precisely the high cost of private schools. Urban women also highlighted the importance of providing their children with a certain standard of living that they considered as quite costly. They talked about such things as quality toys, travel opportunities and other life commodities.

Women in the other focus-groups were also particularly concerned about providing their children with adequate basic and university education and one woman in Sinjel village even mentioned the importance of girls' education, in order for them to be able to support themselves if they got divorced or widowed, as she explained.

Women also expressed their worries regarding the lack of a national health insurance system, explaining that they could not afford to provide healthcare for a high number of children when needed. Moreover, and in their own words, many women elaborated using the same statement: *“raising good children costs lots of money, you cannot have children and neglect them, children need education, healthcare, food, clothing and extra rooms.”* In many cases, women expressed their desire to have larger families, but said that their husbands were asking them to stop, as they could not afford to provide good education, healthcare, clothing and food for a high number of children. One

woman in Bir-Zeit town mentioned that girls expenses were sometimes more than boys because they needed to be well dressed and in good appearance to help them get married.

C.2. Unwanted or unplanned pregnancy

Many women in most focus-group discussions stated that one or more of their pregnancies were unplanned or unwanted. This was mostly seen among women in the town of Birzeit, also in Sinjel village and Qalandiya camp, but to a lesser extent in Ramallah city. Women justified this as due to failure of traditional contraceptive methods that included abstinence (counting method as most women called it) and withdrawal, in addition to lactation amenorrhea assuming that “*breastfeeding prevents pregnancy*”, as many women claimed. Still though, many women in all focus-groups were convinced that traditional contraceptive methods constituted the best and the safest option for family planning. They considered traditional methods as being natural, non-invasive and free of side effects. “*If I go back in time, I will only use the counting method to space or limit pregnancy; I only have to be more accurate in counting the days.*” one woman, a mother of five children, of which two were unplanned, elaborated. Use of traditional methods was considered less important in Ramallah and Sinjel focus-groups while still, most women and irrespective of their education, working status or local agreed that traditional methods are preferred over modern contraceptives before a woman have had at least one baby.

C.3. Reasons for non-use of modern contraceptive methods

Side effects

All women who reported ever using one or more modern contraceptive method stated that they had stopped because they had experienced any of a series of side effects, ranging from weight gain, IUD dislocation to menstrual cycle disturbances. Only one woman, a member in the Qalandiya camp focus-group, said that although she had experienced severe bleeding problems due to the use of an IUD, she preferred to keep it and not take the risk of having more children.

Fear of side effects without prior exposure

Fear of side effects among women who had never used any modern contraceptive method was seen among women in all four groups. It was most prominent in Birzeit town, to a lesser extent in Qalandiya camp and was minimal in Sinjel village and in Ramallah city especially among participants with higher levels of education. Women were most likely to talk about a wide range of side effects that they believed were associated with the use of any modern contraceptive method, including: increasing the risk of cancer, fibrosis, nervousness, cervical ulcers, infections, menstrual disturbances, visual disorders and gastric pain. Women in Birzeit town viewed modern contraceptives as being invasive and involving interferences in body natural hormones and thus negatively affecting fertility. Women stated that their sources of information include their friends, mothers, mothers-in-law, books they buy and sometimes doctors.

Fear of infertility

Fear of infertility when using contraceptives, and more precisely before having the first child was seen among most women irrespective of their education, employment status or local. Some women reported that this issue is emphasized by doctors as well. One woman explained: *“the first baby is a trial; it is to make sure that a woman is fertile and can have children.”* Another woman, a university student in Qalandia camp group, elaborated *“it is impossible that I use something invasive before I get my first child, it is very dangerous.”* Furthermore, many talked about the influence of social and family pressure towards the necessity of getting pregnant immediately after marriage. While one woman from the educated urban focus-group stated that she had chosen to use contraceptive pills for five years before having her first child, another woman from Sinjel village stated: *“I used the pills for six months before having my first baby, but I had to use them in secret, nobody knew about it and people used to feel pity for me that I was not pregnant directly after my marriage.”*

CHAPTER FIVE: DISCUSSION

1.a. Basic characteristics

Our sample of 5363 ever married women, between the age of fifteen and forty-nine years old were mostly married, with only 4.3% either widowed (2.2%) or divorced (2.1%), with a slightly lower percentage of divorce than that recorded for other neighboring countries, like Egypt where around 3.0% of women reported being either divorced or separated according to the 2000 demographic and health survey (DHS)⁵².

The average age at first marriage was 18.9 years while the median age at first marriage was 18 years old, slightly less than the median age registered for the population of married women in the West Bank and Gaza Strip in 2001(19 years old)⁵³. Age at first marriage is an important indicator of fertility in Palestine, as extra or premarital fertility is rare, and is strongly rejected by both cultural and religious norms, so age at first marriage determines the total number of reproductive years for sexually active women.⁵⁴

1.b. Educational attainment

While more than half of the surveyed women (57.8%) reported continuing up to preparatory schooling, only 17.2% had reached secondary level and 8.9% had pursued to post-secondary education. On the other hand, 16.0% reported never attending any

⁵² El-Zanaty F., Way A. *Egypt demographic and health survey 2000*. Egypt: Ministry of health and population, National population council, measure dhs+, ORC macro, January, 2001.

⁵³ <http://www.pcbs.org/populati/4.aspx> (accessed November, 09, 2005).

⁵⁴ Pedersen J., Randall S., Khawaja M. *Growing fast: the Palestinian population in the West Bank and Gaza Strip*. Fafo institute for applied social science. Norway: Centraltrykkeriet AS, 2001.

school at all. These results indicate a lower level of women reaching secondary and post secondary education compared to other countries such as Egypt where 30.5% of women had attained secondary or higher education as reported in the 2000 DHS, while a remarkably higher proportion of Egyptian women reported never attending any school at all (43.2%).⁵⁵

The level of educational attainment was associated with the women's age at first marriage where women married at or below the age of eighteen years old were of lower educational background, especially for post secondary level: 16.8% of women married after the age of 18 years old continued to higher than secondary education, compared to only 0.9% of women married at or before the age of 18 years ($P \leq 0.001$). This is normal as education normally delays marriage, and also, girls who leave school early tend to marry and have children at a younger age; furthermore women who marry and begin childbearing early rarely go back to school as they are taken up by childcare responsibilities.⁵⁶

Our findings illustrated that the educational attainment of women living in the Gaza Strip was higher than that for women living in the West Bank, mainly in the secondary level. This may be due to the fact that a relatively larger proportion of women residing

⁵⁵ El-Zanaty F., Way A. *Egypt demographic and health survey 2000*. Egypt: Ministry of health and population, National population council, measure dhs+, ORC macro, January, 2001.

⁵⁶ http://www.infoforhealth.org/pr/j41/j41chap1_4.shtml (accessed November, 22, 2005).

in the Gaza Strip reported themselves as registered refugees (66.5%). Given that refugees receive free education from UNRWA, these results are understandable.⁵⁷

Meanwhile, and despite the higher levels of educational attainment of women in Gaza, they were less incorporated into the labor force where two thirds of working women in the sample came from the West Bank and only one third from the Gaza Strip and 7.9% of West Bank women reported working at the time of the survey, compared to 5.9% of women in the Gaza Strip ($P = 0.008$). This may be due to the generally higher rates of unemployment and economic deterioration that prevailed in Gaza since 1993 with the arrival of the Palestinian Authority and the closure of the Israeli labor market.⁵⁸

2.a. Current number of children

The average total number of living children was 4.2, with 2.1 sons and 2.0 daughters as reported by women at the time of the survey. The mean total number of children varied largely among women with different basic background characteristics. Older women reported having bigger families, as big as 6.6 (sd= 2.75) children for women thirty five years or older), than did women in the younger age groups. This is normal as older women have most probably completed their family size or approached the end of their reproductive years, while younger women were still adding to their families.⁵⁹

⁵⁷ Pedersen J., Randall S., Khawaja M. *Growing fast: the Palestinian population in the West Bank and Gaza Strip*. Fafo institute for applied social science. Norway: Centraltrykkeriet AS, 2001.

⁵⁸ "Labor markets and human resource and development". In Economic trends in MENA region. http://www.erf.org.eg/html/body_chap52.html: (accessed November, 22, 2005).

⁵⁹ El-Zanaty F., Way A. *Egypt demographic and health survey 2000*. Egypt: Ministry of health and population, National population council, measure dhs+, ORC macro, January, 2001.

When controlling for education, older women still had higher current numbers of children even after having attained secondary or post-secondary education, thus indicating that higher family sizes were associated with age, regardless of education. That is, these findings are not merely the effect of education alone, as age seems to act as an independent determinant of family size. Age at first marriage was also linked to the current number of children: as expected, women married at a younger age (at or below 18 years old), reported having higher numbers of children. This is expected as women who marry early have longer fertility years when they are sexually active.⁶⁰ This relationship stayed constant after controlling for education and women married at younger ages still had higher numbers of children even when they were highly educated, and indicating the independent effect of age at first marriage on the total number of children women have.

The mean current number of children also declined with increasing women's level of education, with women who never attended any school reporting having the largest current family sizes, at around six children (6.1, sd= 3.02) compared to 4.6 (sd= 2.63) children for women with below secondary education. It is known that education affects fertility through many possible paths, including: raising the age at first marriage and thus decreasing the fertility period, leading women to marry men with higher income,

⁶⁰ Pedersen J., Randall S., Khawaja M. *Growing fast: the Palestinian population in the West Bank and Gaza Strip*: Fafo institute for applied social science. Norway: Centraltrykkeriet AS, 2001.

increasing women's chances of employment and by changing many of the rooted values and interests of women regarding children.⁶¹

Women working outside their homes were shown to have smaller families than those who were not working for pay. Normally, this is due to the time women need to devote for childbearing and rearing, something which working women cannot always afford. In this regards, Randall suggested that if female employment becomes more needed in the Palestinian society and more women are participating in the labor force, there will be a significant decline in fertility, as women will not be able to work outside their homes and still maintain short birth intervals especially when they are still in their twenties.⁶² Here, it is interesting to refer to the case of Saudi Arabia, where, despite the relatively high levels of women's education, women participation rate in the labor force is reportedly very low, especially given the affluent national and household economy, and thus fertility in this oil-rich country has remained quite high as women could still afford to stay at home and have larger families despite the advanced levels of their educational attainment.⁶³

2.b. Women's preferences for having more children

⁶¹ Al-Riyami et al., "Women's autonomy, education and employment in Oman and their influence on contraceptive use," *Reproductive health matters* 12 (23): 144-54; 2004.

⁶² Pedersen J., Randall S., Khawaja M. *Growing fast: the Palestinian population in the West Bank and Gaza Strip*: Fafo institute for applied social science. Norway: Centraltrykkeriet AS, 2001.

⁶³ Ibid.

When currently married women were asked about their fertility intentions and whether they would like to have more children, more than half of the respondents (52%) stated that they actually wanted to stop childbearing. The percentage was higher in Egypt in the year 2000 where 65.4% of women expressed a desire to limit childbearing⁶⁴. This difference in expressed fertility preferences was reflected in the registered total fertility rates for both countries: in the Palestinian territories and according to the Palestinian Central Bureau of Statistics (PCBS) 2000 Health survey, total fertility rate was recorded at 5.93 in the year preceding the survey⁶⁵, higher than in Egypt where it was reported at 3.5 children per woman in the 2000 (DHS)⁶⁶.

As expected, fertility preferences were linked to the age of women where the older the woman, the more likely she was to desire to stop having more children. This is an expected result, because older women have accomplished their family size and have probably reached or approached the end of their fertility years. Moreover and in-line with findings in other countries⁶⁷, women who never attended any school showed least preference towards having more children; however, when checked for its relation with current family size, our data revealed that non-educated women were more likely to desire to stop having more children only at higher parity levels (five children or more).

⁶⁴ El-Zanaty F., Way A. *Egypt demographic and health survey 2000*. Egypt: Ministry of health and population, National population council, measure dhs+, ORC macro, January, 2001.

⁶⁵ *Health survey- 2000*, final report. Palestinian central bureau of statistics. Ramallah: November, 2001.

⁶⁶ El-Zanaty F., Way A. *Egypt demographic and health survey 2000*. Egypt: Ministry of health and population, National population council, measure dhs+, ORC macro, January, 2001.

⁶⁷ El-Zanaty F., Way A. *Egypt demographic and health survey 2000*. Egypt: Ministry of health and population, National population council, measure dhs+, ORC macro, January, 2001.

Unlike women's employment status, employment of the head of household was significantly related to women's fertility preferences. Women with working heads of household were more likely to desire having more children compared to those whose head of household was reported unemployed. This emphasizes the issue of financial concerns of women which appeared in the focus-group discussions, where women agreed that financial security was a crucial point in deciding whether they can afford to have more children or not. Hence an unemployed husband seems to be normally associated with a state of financial insecurity where women would feel threatened to have more children as they may not be able to afford the cost of their rearing.

In accordance with fertility reports from the Gaza Strip, Gaza women expressed higher preference towards having more children (48.2%) than those from the West Bank (41.4%) ($p \leq 0.001$) and thus partially explaining the high fertility rates reported in the Gaza Strip (6.81 children per woman), compared to 5.52 children per woman in the West Bank in 1999⁶⁸. This however, contradicts with the finding that unemployment rates are substantially higher in the Gaza Strip, where women were shown to desire less children when having a non-working head of household. The case in Gaza is particular, as a region having one of the highest fertility rates in the world, has been discussed by some demographers who claim that the high fertility rates there were due to the strict military conditions that prevailed in the Gaza Strip in periods of struggle against the occupation. As mentioned earlier in Chapter two, those conditions left Gaza people

⁶⁸ *Health survey- 2000*, final report. Palestinian central bureau of statistics. Ramallah: November, 2001.

locked in their homes with regular nightly curfews. Gaza women were thus forced to turn into their families and invest in having bigger families.⁶⁹

As expected, women's fertility preferences were closely related to how many children a woman had at the time of the survey. Only 6.3% of women with one child expressed a desire to limit childbearing, compared to 21.1% of those having two children, 34.5% of those with three, 57.4% of those with four, 70.8% of those with five and a majority of 86.2% of women with six or more children ($P \leq 0.001$). This indicates that rarely are women satisfied after having only one or two children. The case was different in other countries such as Egypt or Turkey, where there were documents of clear satisfaction after having two children and more than half of women (58.9% and 74.5% respectively) reported wanting to stop childbearing after having two.^{70 71} This again, was reflected in country total fertility rates, lower in Egypt and Turkey than in Palestine (5.93 was the total fertility rate in Palestine in the year preceding the survey⁷², compared to 3.5 children per woman as the total fertility rate in Egypt for the year 2000⁷³ and 2.6 children in Turkey in 1999⁷⁴).

⁶⁹ Sontag D. Gaza adding children at an unrivaled rate. *The New York Times*. International edition; February 24, 2000.

⁷⁰ El-Zanaty F., Way A. *Egypt demographic and health survey 2000*. Egypt: Ministry of health and population, National population council, measure dhs+, ORC macro, January, 2001.

⁷¹ *Turkish demographic and health survey 1998*. Hacettepe university, institute of population studies, Ankara, Turkey. Macro international inc. USA. October, 1999.

⁷² *Health survey- 2000*, final report. Palestinian central bureau of statistics. Ramallah: November, 2001.

⁷³ El-Zanaty F., Way A. *Egypt demographic and health survey 2000*. Egypt: Ministry of health and population, National population council, measure dhs+, ORC macro, January, 2001.

⁷⁴ *Turkish demographic and health survey 1998*. Hacettepe university, institute of population studies, Ankara, Turkey. Macro international inc. USA. October, 1999.

The reasons why some of the Palestinian women aim for more than only one or two children was explicitly justified by women who participated in the focus-group discussions that we completed to bring meaning to the statistical analysis. They explained that they would not be satisfied after having one child as they do not know what might happen to him/her (whether the child will survive till adulthood or not). They pointed out to sources of their worries that included martyrdom and life threatening diseases like cardiovascular strokes or cancers. Therefore, women explained that they would prefer to have more than one or two children in case anything happens to one they would have a replacement. In addition, women expressed a special interest in having at least two children to assure companionship for their child: they highlighted the importance of having two children of each sex as an ideal number, where there will be a brother for their son and a sister for their daughter, and they described this as important in their childhood (as playmates) as well as in adulthood where they will provide social support for each other.

When comparing the stated fertility preferences of women with different numbers of sons and daughters, the importance of having a minimum of one or two male children was highlighted: 72% of women who had only one son stated that they wanted to continue childbearing, a percentage that dropped to 39.5% for women having two sons ($P \leq 0.001$). Meanwhile, 59.6% of women who had one daughter stated that they preferred to have more children, declining to 37.5% of those who had two daughters ($P \leq 0.001$). This corroborates our hypothesis on the presence of a preference for boys

over girls in the Palestinian society and is consistent with findings from other Arab countries like Saudi Arabia, Iraq, Syria and Jordan⁷⁵. This issue was explicitly tackled in our focus-group discussions where almost all women agreed on the importance of having at least one boy in their families. As explained by those women, the value of sons was classified into both economic and social roles that boys play but girls cannot play. Boys were seen as essential in providing economic and financial support for their parents in old age, as they were perceived as autonomous and independent in controlling their future and resources and are hence, more capable of providing the needed support for their parents. This comes with no surprise, as in Palestine, there is no adequate social welfare system and children, mainly sons remain the only available source of support for parents in old age.⁷⁶

Girls, in contrast, were viewed as having limited resources when they grow up as they were considered as totally dependent on their husbands. Women expressed serious concerns regarding the future of their daughters' married life and thus were not sure whether girls were capable of providing their parents with the needed old age financial and economic support or not. This should be expected if we refer to the employment status of women in our sample where only 7.2% of women reported being employed for cash, and so as for women in the focus-group discussions where only one of four groups included working women. It is thus expected that women would not regard girls as a

⁷⁵ Khraif R. "Fertility in Saudi Arabia: levels and determinants." Paper presented in the xxiv general population conference, Salvador, Brazil, August, 2001.

⁷⁶ Donati, S., Hamam, R., Medda, E. Family planning KAP survey in Gaza. *Social science and medicine*; 50(2000): 841-849.

potential source of economic support in the future. In this regards and as was revealed by the analysis of the focus-group discussions as well, working women were less concerned about the economic role of children, particularly boys, than were women who were not reported working outside their homes. In a recent research in Egypt, educated women and those who have ever worked for cash reported a less prominent preference for male children compared to those who were of a lower educational level and who never worked outside their homes.⁷⁷

Women in the focus-group discussions also talked about the social importance of sons in the family. Boys were expected to carry the father's name and continue family kinship and lineage and women described boys as a source of prestige and fulfillment. This is understandable as the Palestinian community is part of Arab culture where sons are still considered as a source of pride and social support for their parents.⁷⁸ Interestingly, this preference was not restricted to Muslim women, as in Birzeit town where the majority of women participating in the focus-group were Christians, women stated that they would certainly continue childbearing until they have at least one boy, pointing out to the same reasons for wanting boys given by women in the other groups.

It is noteworthy as well that male preference was also influenced to a good extent by both family and social pressures. Many women reported altering their desire to stop

⁷⁷ Yount, K. Women's fertility power and gender preference in Minya, Egypt. The embryo center for myth and ritual in American life; working paper no.42, May, 2005.

⁷⁸ Piotrow P., Rimon J. In their own words, a qualitative study of family planning in Jordan. *The John Hopkins school of public health, center for communication programs*. IEC field report, 6: October 1996.

childbearing when they had no boys, mostly due to social or family pressure. It is important to refer here to the story mentioned earlier in the qualitative part of this research describing a woman who after giving birth to two daughters following nine years of infertility, her family in law was angry enough to promise to get her husband to marry another woman who can bring them the boy who shall carry their father's name after his death. It was also observed in the four focus-group discussions that family and social pressure had a substantial impact on changing women fertility preferences. Many women reported being satisfied after attaining a certain number of children, especially after having one boy, but they were greatly influenced by their mothers, mothers-in-law or members of the extended family to continue childbearing until they have a brother for their son.

Meanwhile, girls were highly valued for the emotional support and the physical assistance they provide to their parents especially in old age, that is, for their caretaking role. Almost all women agreed that girls are essential in the family because they are kinder and nicer and a daughter is the only one who can take care of her parents in situations of old age and sickness, but not financially. However, few women elaborated that they actually exceeded their desired family size to have a daughter when they had only sons. In our quantitative analysis, 62.5% of women with four children and no sons said that they wanted to have more children, compared to 45.7% of those with four children, all of which were sons. In addition, social and family pressures were described

as far less important when there were no girls in the family than when there were no boys.

2.c. Ideal family size

When currently married women were asked to express abstractly the number of children they would like to have if they go back in time and when they did not have any children, the reported mean ideal number was 4.5 children. Very few women (11.8%) said that they would like to have a family of two or fewer children and only 8.0% said that they would want three children. Around half of women (45.7%) said that four children was their ideal number, while 9.3% said that it was five and 25.2% said that a number as high as six or more children would be their ideal. When looking at data from other country reports, 4.5 children corresponded generally to the number recorded for women in Jordan where it was registered at 4.2 children for both years 1997 and 2002⁷⁹ (not surprisingly as a large majority of the Jordanian population comes from Palestinian origins), while this figure was much higher than in Egypt, reported at 2.9 children in the 2000 DHS⁸⁰. In countries like Philippines, the mean ideal number of children was reported as 3.2 in the 2003 DHS⁸¹, while it was higher in Ghana at 4.8 children according to the 2003 DHS report⁸².

⁷⁹ *Jordan population and family health survey-1997*. Department of statistics, Demographic and health surveys macro international Inc.

⁸⁰ El-Zanaty F., Way A. *Egypt demographic and health survey 2000*. Egypt: Ministry of health and population, National population council, measure dhs+, ORC macro, January, 2001.

⁸¹ *Philippines national demographic and health survey-2003*. National statistical office, Manila, Philippines. ORC macro, Calverton, Maryland, USA; 2004.

⁸² *Ghana demographic and health survey-2003*. Ghana statistical service; Noguchi memorial institute for medical research, ORC Macro, USA; 2004.

Still, a mean ideal number of 4.5 children in our sample seemed reasonable when looking at the explanations given by women in the focus-group discussions. As mentioned above regarding the relation between preference for more children and current family size for women, women were not satisfied after having only one or two children, as they were repeatedly concerned about the risk of losing one of their children in martyrdom or due to disease leading to death, so they wanted to assure that they had a replacement in case anything happened. Moreover, women were particularly interested in providing their children with companionship (i.e. a brother for the son and a sister for the daughter). This was emphasized by the quantitative findings demonstrating that women would ideally prefer to have an average of 2.5 sons and 2.0 daughters, indicating again some degree of male sex preference. Also, women talked about the importance of having a mixed-sex family, and thus a minimum of four children seems to satisfy the ideal picture of family size for women in our sample. Women generally seemed to agree that any number less than four is very little, as children are beautiful and they are the joy of life. That is, there seems to be an emotional value attached to having children, and not only material and functional ones. This goes in line with the situation in the Arab world in general, as fertility surveys revealed that most Arab women prefer larger families than women in the West. In his research, Donati described the social structure in the Arab world as “*still dominated by*

*pronatalist values*⁸³, a view that seems to support the analysis of the findings of this survey.

2.d. Determinants of ideal family size

Regression analysis assisted in the identification of the determinants that remained significantly associated with ideal family size even with controls. Women's education was significantly related to their stated ideal family size regardless of age, and as documented in worldwide fertility studies, increasing women's level of education decreases their preference for bigger families⁸⁴. In our sample, education to a minimum of below secondary education was not significantly associated with the likelihood of women desiring higher numbers of children. However women with secondary or post secondary education were significantly less likely to desire larger families relative to those who never attended school (OR= -0.33; C.I. 95%= -0.54 to -0.12), (OR= -0.26; C.I. 95%= -0.51 to -0.02) for women with secondary and post secondary education respectively. This was also confirmed in our focus-group discussions, where women in the highly educated working group reported desiring smaller families than did women in the other three focus-groups. There are several possible explanations of how education influences women's family size desires and why more educated women prefer smaller families: education raises age at marriage, it exposes women to more employment opportunities, empowers them to take more independent decision

⁸³ Donati, S., Hamam, R., Medda, E. Family planning KAP survey in Gaza. *Social science and medicine*; 50(2000): 841-849.

⁸⁴ Kidane A. Female employment and fertility in selected Ethiopian communities: a microeconomic analysis. Union for African population studies, summary report, 11, March 1995.

regarding fertility control and family size and assists them to rationally divide their time between household and other activities.⁸⁵ Also, as explained by Tabbarah, with increasing education, communication and mobility, people are likely to focus less on family-related issues while would rather devote more time and effort for other activities.⁸⁶ In another explanation, Al-Riyami et al. hypothesized that educated women are better empowered to rely on themselves rather than on their husbands or children for economic and psychological fulfillment and they are more likely to appreciate conjugal relationship rather than big extended families.⁸⁷

Among participants in the more educated focus-group discussion, there was an observed and substantial interest in raising quality children, an issue that they described as costly and highly determinant of their desired family size. Women in this group, and unlike in other groups, listed issues such as private schooling, quality toys, travel and child activities that they cannot afford to provide for a high number of children, suggesting a different way of life from the traditional one, as expressed by those with lower educational levels, and different aspirations for their children's future.

⁸⁵ Ibid

⁸⁶ Tabbarah R. "Completing the fertility transition: Jordan, Lebanon and Syria" <http://www.un.org/esa/population/publications/completingfertility/RevisedTABBARAHpaper.PDF> (accessed December, 8, 2005).

⁸⁷ Al-Riyami et al. Women's autonomy, education and employment in Oman and their influence on contraceptive use. *Reproductive health matters*; 12 (23): 144-54; 2004.

Education is also positively related to women's employment where women with higher educational levels have greater opportunities to work outside their homes⁸⁸. Although regression analysis did not yield a significant association between family size and women's work outside the home, probably because of the small size of working women in our sample, the focus-group discussions assisted in providing some insight into the question: among highly educated working women, participants talked explicitly about the reasons why they would not prefer to have larger families. Women stated that this was due to the time they have to dedicate to raising quality children, something that they cannot afford in light of the time constraints they are under with their work conditions. Others however, explained their lower family size preferences in terms of limited financial resources: they stated that if they could afford to pay for assistance in household tasks and duties or if they could work part time jobs, then they would definitely prefer to have bigger families. A study in Lebanon, further emphasized our findings in the focus-group discussions, and as mentioned above in the literature review, women with higher educational levels and working in more prestigious white collar jobs desired larger families than did those with lower educational attainment and occupying lower blue collar posts (although still smaller than women staying at home) because they could afford to have paid assistance in household duties and convenient solutions of day care for their children, unlike those with lower status jobs whose work competed with their family and household responsibilities.⁸⁹

⁸⁸ Larsen U., Hollos, M. Women's empowerment and fertility decline among the Pare of Kilimanjaro region, northern Tanzania. *Social science and medicine*, 57,6: 1099-115; September, 2003.

⁸⁹ Saxena P., Aoun H. *Women's education, economic activity and fertility: relationship re-examined (a study based on a Lebanese community)*. Al-Bhath: XLV; American university of Beirut (1997).

As explained by Tabbarah, and referring to the hypothesis explained in the *Literature Review*, the ideal family size is also determined by the marginal utility and disutility generated by children for a certain socio-economic group and thus women consider their ideal number with regard to the perceived value of children in terms of psychological or social fulfillment in addition to their economic role versus the cost of raising them.⁹⁰ Hence, working women, as was emphasized in the focus-group discussions, were less concerned about the economic utility of children even at old age, while they were also more aware of the high economic cost of raising quality children.

Also, if we consider the crowding ratio of the household as a proxy for measuring poverty, our findings revealed a significant inverse relationship between crowding ratio and the desired family size, but only at higher parity levels: women with a high number of living children and a crowding ratio of above three persons per room showed a substantial decline in their stated ideal family size. At lower parities, women living in more crowded houses expressed a higher preference towards larger families. This is understandable as women with poorer status, who already have a higher number of children than well off ones might desire to have more children as they perceive children as a source of economic support especially in old age.⁹¹

⁹⁰. Tabbarah R.. "Completing the fertility transition: Jordan, Lebanon and Syria"
<http://www.un.org/esa/population/publications/completingfertility/RevisedTABBARAHpaper.PDF> (accessed December, 8, 2005).

⁹¹ Tabbarah R. "Completing the fertility transition: Jordan, Lebanon and Syria".
<http://www.un.org/esa/population/publications/completingfertility/RevisedTABBARAHpaper.PDF> (accessed December, 8, 2005).

Region (West Bank/Gaza) was also significantly associated with the ideal family size of women. In line with the findings regarding the current number of children, women living in the Gaza Strip reported desiring larger families than did West Bank women. When looking at fertility trends worldwide, Gaza along with Oman and Yemen have recorded one of the highest fertility rates in the world,⁹² inspite of the higher levels of educational attainments for women in Gaza. This may be due to the lower percentage of women participating in the labor force in the Gaza Strip compared to those in the West Bank (5.9% of Gaza women versus 7.9% of those in the West Bank, $P= 0.008$). It also may have to do with the fact that relatively, there are more refugees in the Gaza Strip than there are in the West Bank: 66.5% of the population of the Gaza strip reported themselves as registered refugees compared to 26.5% of women living in the West Bank ($P\leq 0.001$). Although our statistical analysis resulted in an insignificant relationship between ideal family size and women's refugee status or locale, our focus-group discussions revealed a slight preference among refugee women in Qalandiya camp towards having higher numbers of children relative to women in the other groups. A research by Khawaja M. of the American University of Beirut, further revealed that fertility preferences of women in refugee camps were higher than those for women living in the corresponding countries where they lived.⁹³ Registered refugees are eligible

⁹² Donati, S., Hamam, R., Medda, E. Family planning KAP survey in Gaza. *Social science and medicine*; 50(2000): 841-849.

⁹³ Khawaja M. Fertility of Palestinian women in the Wet Bank, Gaza, Jordan, and Lebanon. American university of Beirut, faculty of health sciences, Lebanon. (http://64.233.183.104/search?q=cache:Ey_myifvtb4J:www.iussp.org/Brazil2001/s60/S62_02_khawaja.pdf+fertility+of+palestinian+wo men+in+the+west+bank+gaza+jordan+and+lebanon&hl=en) : (accessed December, 5, 2005).

to benefit from free schooling, clothes and food supplies and healthcare, that are provided to them free of charge by the United Nations Relief and Work Agency (UNRWA) ever since its establishment and start of operations in the year 1950, following the Arab Israeli war of 1948.⁹⁴ It may be possible that refugee women would desire larger families as the basic cost of child-rearing becomes minimal, compared to other groups with no financial support. We need not forget the issue of displacement that drove Palestinian refugees out of their homelands following the Arab Israeli war. Refugees may think that it is important for them to have big families to replace their lost land and scattered families all around refugee camps located in the Arab countries. The role of children in social support and the importance of large and extended families was emphasized among women in the focus-group in Qalandiya refugee camp as well, raising the issue of social support as perhaps an important component of survival among a displaced population.

The desired family size was also strongly associated with the current number of children. While around 50% of women at all parity levels stated that four children would be their ideal number, this percentage declined with increasing number of living children to around 40% for women having more than four children ($P \leq 0.001$). The same trend was documented in other country reports where women with higher numbers of children tended to adjust their stated preferences in line with what they actually had.⁹⁵

⁹⁴ <http://www.un.org/unrwa/overview/index.html> : (accessed November, 23, 2005).

⁹⁵ El-Zanaty F., Way A. *Egypt demographic and health survey 2000*. Egypt: Ministry of health and population, National population council, measure dhs+, ORC macro, January, 2001.

Moreover, it is logical to think that women who desire larger families, actually do have higher numbers of children.⁹⁶ It is also reasonable that women who have higher numbers of children are practically older women, and as mentioned earlier, older women have and actually prefer larger families probably due to values they acquired 20-30 years ago, and indicating a lifestyle difference among different generations of women.⁹⁷ International literature reports indicate that women also found it difficult to admit that any of their children was unwanted or that they had desired to have a smaller family.⁹⁸ Some consider children as a gift from God and wishing that they could have a smaller number would be like opposing God's will. This was observed among women in Qalandiya camp, where many did not feel comfortable saying that they have exceeded their desired family size, explaining that this is God's will. In our sample, a total of 354 women gave non-numeric answers to their ideal family size, of those, 75% stated that their desired number depended on God's will.

Women who experienced the death of one or more children were more likely to desire larger families. This is expected as women would aim to make up for the loss of one or more children and would regard any additional child as a blessing from God. This was

⁹⁶ *Turkish demographic and health survey 1998*. Hacettepe university, institute of population studies, Ankara, Turkey. Macro international inc. USA. October, 1999.

⁹⁷ *Phillipines national demographic and health survey-2003*. National statistics office, ORC macro: October, 2004.

⁹⁸ Magadi, M. Unplanned childbearing in Kenya: the socio-demographic correlates and the extent of repeatability among women. *Social science and medicine*; 56 (2003): 167-178.

emphasized in worldwide research⁹⁹, in addition to the focus-group discussions that were completed to help in analyzing the statistical results of this study.

3. Ideal versus actual family size

When comparing the stated ideal number of children for women in the age group of thirty five years or older with the number of children they actually had at the time of the survey, (assuming that those women have completed their family size or were approaching the end of their reproductive years), a marked deviation between the actual and the ideal numbers of children was observed, especially at parity levels lower or higher than four. Although 41.7% of women with six or more children stated that this did not happen by chance and if they go back in time they would actually prefer to have as high as six or more children ($P \leq 0.001$), more than half of women with more than four children stated that they had actually preferred to have any number smaller than that. Moreover, more than 70.0% of women with two or fewer children stated that if they go back in time, they would wish to have a greater number ($P \leq 0.001$), thus emphasizing the strong preference for four children as an ideal family size.

4. Determinants of the deviation between the stated ideal family size and the current number of children

Regression analysis showed that women who were practicing some kind of contraception were significantly more likely to have children above their stated ideal

⁹⁹ Khraif R. "Fertility in Saudi Arabia: levels and determinants." Paper presented in the xxiv general population conference, Salvador, Brazil, August, 2001.

family size, even after controlling for all other possible determinants (OR= 1.56; C.I.95%: 1.24-1.97, $P \leq 0.001$). This indicates that women actually start using contraception only when they exceed their desired family size and not to achieve their predetermined preferences. However, exceeding one's fertility preferences is not only determined by variables found in the data, but also by possible factors that were not included in the PCBS survey. Those include issues such as social and family pressures, male sex preference, economic and emotional value of children and other influences that limit women's ability to make a rational and independent choice regarding their reproduction, that are not possible to identify in the quantitative analysis. In this regards, the focus-group discussions highlighted the issue of social pressure as a possible determinant particularly among less educated, unemployed and low-parity women. The economic and emotional value of children and male preference were also important factors that can contribute to explaining the deviation between ideal family size as expressed by women and their current number of children.

5.a. Use of contraceptive methods among women who do not want to have more children

Findings from the focus-group discussions reveal that, notably in Birzeit town and Qalandiya camp, women stated that a number of their pregnancies were unwanted or unplanned. Most of those women referred to this as due to the failure of traditional

contraceptive methods. Despite this fact, many women still considered such methods, like periodic abstinence, withdrawal or lactation amenorrhea as the best and safest methods for controlling pregnancy. A generally strong rejection for modern contraceptives was noted, as women considered them as invasive, altered woman's natural hormonal balance and were associated with a wide range of reversible and irreversible side effects. Women based their information on medical consultancy, books they bought, their personal experience, and experience of other women such as their friends, mothers or mothers-in-law and rumors. The findings of this study correspond to studies elsewhere in the world. A study in Jamaica revealed that women who had heard rumors about a particular family planning method or contraception in general were twice more likely to discontinue the use of their method than were women who had not.¹⁰⁰ Almost all women in all focus-group discussions regarded the use of any modern contraceptive method before having the first baby as unacceptable and women strongly believed that this would lead to infertility.

The rejection of the use of modern contraceptives was mostly seen in the town of Birzeit and in Qalandiya refugee camp. In Birzeit, this was probably due to the absence of adequate health care services in the town (as reported by women in the focus-group) and women even complained of the poor quality of its schools, and it was apparent that women in this group lacked adequate scientific information on modern contraception and on family planning methods. The situation was however different in Qalandiya

¹⁰⁰ Women's reasons for discontinuing contraceptive use within 12 months: Jamaica. *Reproductive health matters*; 9 (17): 213-20; May, 2001.

where it was reported that there was adequate health and educational services so it was surprising that women were reluctant to use modern contraceptives. On the other hand, women in Ramallah city were women working in the health field and women that we met in Sinjel village were women invited by the health worker in the village and who said that it was the same group that used to attend most of the health education sessions held in the health center, thus the two groups may have been better informed about the different benefits and risks of modern methods of birth control. A study in Mansoura, Egypt demonstrated that family planning counseling, especially during the antenatal period for both the mother and the father had a positive effect on the use of suitable contraceptive methods.¹⁰¹ So, it was not surprising that women in Birzeit for example were less likely to accept the idea of using appropriate contraceptive methods to control their pregnancies, given the absence of a family planning program in the town that could assure the necessary counseling for women in need.

In the quantitative part of this study, when currently married women desiring to stop having more children were asked whether they were doing or using anything to control any potential pregnancy, 75.3% stated that they were using some kind of contraception (including traditional and/or modern methods), while 24.7% said that they were not doing or using anything.

¹⁰¹ Soliman, M. Impact of antenatal counseling on couples' knowledge and practice of contraception in Mansoura, Egypt. *Eastern Mediterranean health journal*. 5 (5): 1002-13; 1999.

5.b. Determinants of contraceptive use among women who do not want any more children

Multivariate analysis was performed to identify the most important factors determining the use of contraception when desiring to stop childbearing. As expected, age was an important determinant and women in the age group between 25 and 34 years old were the most likely to use contraception compared to other age groups. This goes in line with results found in a study in Bureij camp in Gaza ¹⁰² and is expected, as women in this age group were in the middle of their reproductive years and have already started childbearing (mean age at first birth was 20.4 years old) and were still sexually active and capable of having more children. In the focus-group discussions, younger women were afraid of practicing contraception especially modern methods because they believed that they could lead to infertility, especially before the birth of the first child as married women are expected to get pregnant immediately after marriage and any delay can expose the woman to enormous family and social pressures. Women with an infertility problem are subject to serious psychological and social suffering in the Palestinian society and infertile women are always worried that their husbands would divorce them or would marry another woman who can bring them children, very similar to what is noted in other parts of the Arab world¹⁰³. Women beyond the age of thirty five years are likely to believe that they are less prone to having more children and that their fertility will decline after this age and thus they no longer need to use any

¹⁰² Donati, S., Hamam, R., Medda, E. Family planning KAP survey in Gaza. *Social science and medicine*; 50(2000): 841-849.

¹⁰³ Piotrow P., Rimon J. In their own words, a qualitative study of family planning in Jordan. The John Hopkins school of public health, center for communication programs. IEC field report, 6: October 1996.

contraception to achieve their desire of not having more children. This analysis is supported by a study among Kuwaiti women which revealed the same inverse relationship linking age and the practice of contraception, as older women justified this downward trend as due to the decline in the frequency of their sexual activity.¹⁰⁴ Moreover, it may also be that women in the older age groups normally have more traditional views regarding the practice of contraception.¹⁰⁵ The decline in the use of contraception at older ages and when women are still sexually active and fecund may have serious implications, as it may lead to unplanned pregnancies at older ages which could predispose the mother and the baby to negative health consequences.

In line with findings in other studies, better educated women were more likely to use contraception than were those less educated or those who never attended school. It is assumed that education leads to autonomy where women are more in control of their fertility and are more likely to take decisions related to their reproductive behavior.¹⁰⁶ In our focus-group discussions, it was also apparent that highly educated women were more likely to use contraceptives.

Together with women who reported having an unemployed head of household, those who were living in more crowded houses, were less likely to practice contraception

¹⁰⁴ Shah M. et al. Unmet need for contraception in Kuwait: issues for health care providers. *Social science and medicine*; 59: 1573-80; 2004.

¹⁰⁵ Donati, S., Hamam, R., Medda, E. Family planning KAP survey in Gaza. *Social science and medicine*; 50(2000): 841-849.

¹⁰⁶ Al-Riyami et al. Women's autonomy, education and employment in Oman and their influence on contraceptive use. *Reproductive health matters*; 12 (23): 144-54; 2004.

when desiring to stop childbearing. If we consider unemployment of head of household and the high crowding ratio as proxies for poverty, then it may be reasonable to think that women coming from lower socioeconomic status find in large families the only source of economic support. So women may be discouraged from practically limiting childbearing although they had stated before that, that they did not want to have more children¹⁰⁷. Also, it may be that more crowded houses may include several other family members than the woman's nuclear family, and thus one could expect that the pressure generated against the use of family planning methods is higher relative to other households, especially pressure from elderly family members.

With increasing current number of children, women were more likely to use contraception when wanting to stop childbearing. Women reported starting to use a contraceptive method after having their third child, on average. The percentage of women using contraceptives increased until it reached its peak at parity level four, with 82.5% of women desiring to stop childbearing saying that they were currently using or doing something to control pregnancy, and thus confirming our findings regarding ideal number of children, where after attaining the ideal, women would seriously consider acting towards limiting childbearing. This percentage however, declined slightly at parity levels of five or higher. Finally, women with one or more children who died were less likely to use contraception despite their desires to stop childbearing. This is understandable as women who pass through such a traumatizing experience may have

¹⁰⁷ Beydoun M. Marital fertility in Lebanon: a study based on the population and housing survey. *Social science and medicine*; 53: 759-71; 2001.

an attitude that favors childbearing even though they may logically or theoretically say that they do not want to have more children.

CHAPTER SIX: CONCLUSION

The analysis contained in this thesis was based on secondary data provided by the Palestinian Central Bureau of Statistics (PCBS), and supported by analysis of focus-group discussion results among married women 15-49 years old. There are several limitations to this study: firstly, the fact that the data used was secondary data implies that it was not totally tailored to suit and complete analysis of the research questions of this thesis. In this regards, various subgroups contained in the sample data set were of a very small size, making it impossible to confirm the link between these subgroups and desired and ideal family size and contraceptive use. Secondly, although the data set appeared to be of reasonably good quality, it is important to note that in the case of working on secondary data sets, it is not possible to ascertain high quality, and absolute reliability. However, in their final report of the health survey-2000, PCBS have listed the important steps that were performed to ensure the validity and reliability of data collection and entry, an aspect that gives a good level of confidence in the data set at hand. The third limitation pertains to the abstract nature of one of the main research questions (*what is your ideal family size?*), as some women may have found it difficult to idealize their desires. A rationalization effect inherent in the nature of the question also has to be taken into consideration, where women may have adjusted their stated ideal family size to match the number of children they actually had at the time of the survey.

Fourthly, the political situation in the country and mainly the military closure of the West Bank and Gaza Strip restricted our qualitative research from a desired coverage of both the West Bank and Gaza Strip to the Ramallah district only. This made it impossible to arrive at definitive generalizations, or to reveal important inter-regional differences between the West Bank and the Gaza Strip.

This study is a contribution, no matter how small, to the available literature on fertility and fertility preferences in the OPT, especially as it made the link between fertility preferences, actual family size and contraceptive use. Our main research questions aimed at identifying the ideal family size, as a reflection of women's fertility preferences and its relation with the actual practice (their current number of children), in addition to investigating contraceptive use as a determinant of whether women would achieve their fertility desires or not. Our findings revealed that the mean ideal number for all women in our sample was 4.5 children, and a relatively smaller proportion of women desired a number of fewer than four while around one fourth said that they actually preferred to have families of six children or more. The ideal family size was influenced by factors such as women's education to secondary or post secondary level, crowding ratio of the household (proxy measure for family poverty), region, women's current number of children and whether they had any children who died. A significant difference between the ideal number of children as expressed by women and their actual family size was noted. This difference was shown to be determined by several factors, among which was the practice of contraception. Women using any kind of

contraceptive methods were more likely to have exceeded their ideal family size, even after controlling for other potential determinants as age, age at first marriage, education, crowding ratio of the household and having one or more children who died. This means that women were only using contraception after they had exceeded their ideal family size, and not before, i.e., not preventatively. Social and family pressures were described in the focus-group discussions as important factors leading women to exceed their ideal family size, especially among younger, less educated, unemployed women and women with fewer numbers of children. Male preference was also considered important and many women in the focus-group discussions reported having had more children than their stated ideals in order to have at least one or two sons. The economic and emotional value of children were also viewed as reasons why women may have more children than their ideal family size, particularly the need for old age support in the absence of adequate national security system that serves the elderly.

Women's age, their educational attainment, their current number of children, having children who died, region, in addition to employment status of head of household and crowding ratio of the household (as proxies of socioeconomic status), were factors that determined whether women would use contraception when they did not want to have more children.

It can thus be concluded that women's fertility desires are relatively higher in the OPT than in neighboring countries, and that a significant number of women have actually

exceeded their desired family size. Women thus seem to start practicing contraception only after exceeding their ideal number of children, with the influence of family and social pressure possibly.

It is therefore important to inform health policy makers and planners in Palestine of the findings of this study, and of the need for the development of a population policy that is rational and relevant to the individual and collective needs of women. There is also an urgent need to widen the scope of family planning services that can guide and help women in achieving their desired family size in real life, by focusing on the role of counseling and targeting the individual needs of women rather than just providing contraceptive methods. It is equally important to inform policymakers of the empowering effect of education in allowing women to make more rational and independent choices and decisions concerning fertility. However, one should not overlook one of the major roots of increased fertility desires in the OPT, that is, the role of children for old age support. This should highlight the importance of including elderly people in a decent national insurance system that assists them in supporting themselves in old age with full dignity, as one of the pre-conditions for declining fertility in the area.

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