

GLOBAL AND NATIONAL TRENDS AND CHALLENGERS OF UNMET NEED FOR FAMILY PLANNING

Indrani Malwenna*

Sri Lanka.

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*Corresponding author: Indrani Malwenna

Deputy Director (Training), National Institute of Health Sciences, Kalutara, Sri Lanka.

ABSTRACT

Unmet need for family planning refers to the percentage of all fecund women who are married or living in union and thus presumed to be sexually active but are not using any method of contraception, either do not want to have any more children or want to postpone their next birth at least for next two years or do not know when or if they want another child. Use of appropriate contraceptive method helps the user to avoid unplanned pregnancies, thus reducing the risk of induced abortion; the number one killer of women in the reproductive age in developing countries. Due to its clandestine nature, most abortions in the developing world are unsafe, thus resulting a series of complications, the most disastrous being a maternal death. Even though abortion is criminalized in Sri Lanka except to save the mother's life, average of 700 abortions are carried out daily, which accounts for 75% of live births per day being the second leading cause of maternal deaths in 2006, 2008 and 2010. It has been estimated in Sri Lanka Demographic and Health Survey 2006/07 that 17.2% of births in the previous 5 years were unplanned or unwanted. It has been revealed that, 73% among 365 abortion seekers were found to have unmet need for family planning. Economic burden of induced abortion is unbearable, because the total cost for management of complications of an abortion has been estimated to be 462 US \$, of which 79% is spent by government health expenditure in Sri Lanka.

KEYWORDS: Family Planning, Unmet, Need, Global, National.

Text

Family Planning (FP) refers to the ability of individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births.^[1] Unmet need for Family Planning is defined as the percentage of all fecund women who are married or living in union and thus presumed to be sexually active but are not using any method of contraception, either do not want to have any more children or want to postpone their next birth for at least two more years or do not know when or if they want another child.^[2] Unmet Need for Modern Methods of family planning includes all in the unmet need group and those who are using natural and traditional methods at the time of survey.^[3]

This unmet need is a disconnection between woman's fertility preferences and what she does about them, which indicates the failure to take necessary action to prevent conception. The concept of unmet need for FP is usually applied to married women but can also be applied to sexually active unmarried females and to men as well. It can also be applied to those whose current method is inappropriate or inadequate. It also applied to pregnant women whose current pregnancy is mistimed or

unwanted and post partum women whose last pregnancy was mistimed or unwanted and not used any form of family planning prior to particular pregnancy.^[4,5]

Evolution of the concept of unmet need for family planning

The term came into popular use to describe the group of women who were having a discrepancy between their fertility desires and practice of FP. It was first described as "KAP-gap" reflecting the source of data because it was first identified from surveys on Knowledge, Attitudes and Practices. This has been recognized as a preeminent rationale for investments in FP programmes because of its casual link to unwanted childbearing and its consequences.^[6] The term "unmet need" was first used by Stokes in 1977.^[7]

Standard definition of unmet need for FP

This includes three categories of women

- Women who are not pregnant and not in post partum period, not expecting a child at least for next two years and not using any form of contraception

- All pregnant women whose pregnancies are unwanted or mistimed and who became pregnant because they were not using contraception at that time.
- Women within first 6 weeks of delivery whose recent births were unintended (unwanted or mistimed) and were not using any family planning method before the conception.^[8]

According to the standard definition of unmet need, a woman is considered to have unmet need if she

1. Is married or in a consensual union and is in reproductive age (15-49 years).
2. Is capable of becoming pregnant (infecund women are identified based on such factors as their childbearing and contraceptive history and what they say about their ability to become pregnant).
3. Wants to have no more children or to postpone child bearing by at least two years.
4. Does not know when or if she wants another child.
5. Is using neither a traditional nor a modern method of contraception.
6. Is pregnant or in post partum period (first six weeks of delivery) and her latest pregnancy is mistimed or unwanted and not used any form of contraception before the conception.^[8]

Classification of unmet need

Mainly of two types depending on its nature of need either to limit births or to maintain a space between

births; unmet need for limiting and unmet need for spacing.

Unmet need for spacing

The definition of unmet need for spacing includes women who are not using any FP method either because

1. They want more children but not for at least two or more years
2. Who are not certain whether they want to have another child
3. Who want to have another child but not certain when
4. Pregnant females whose pregnancies were mistimed and had not used any form of contraception before the conception
5. Post partum women whose last births were mistimed and not used any form of contraception before the conception.

Unmet need for limiting

The definition of unmet need for limiting includes women who are not using a FP method because

1. They do not want children at all but not using any form of contraception
2. Pregnant females whose pregnancies were unwanted and not used any form of contraception before the conception
3. Non menstruating women in post partum period whose last births were unwanted and not used any form of contraception before the conception.^[7,8]

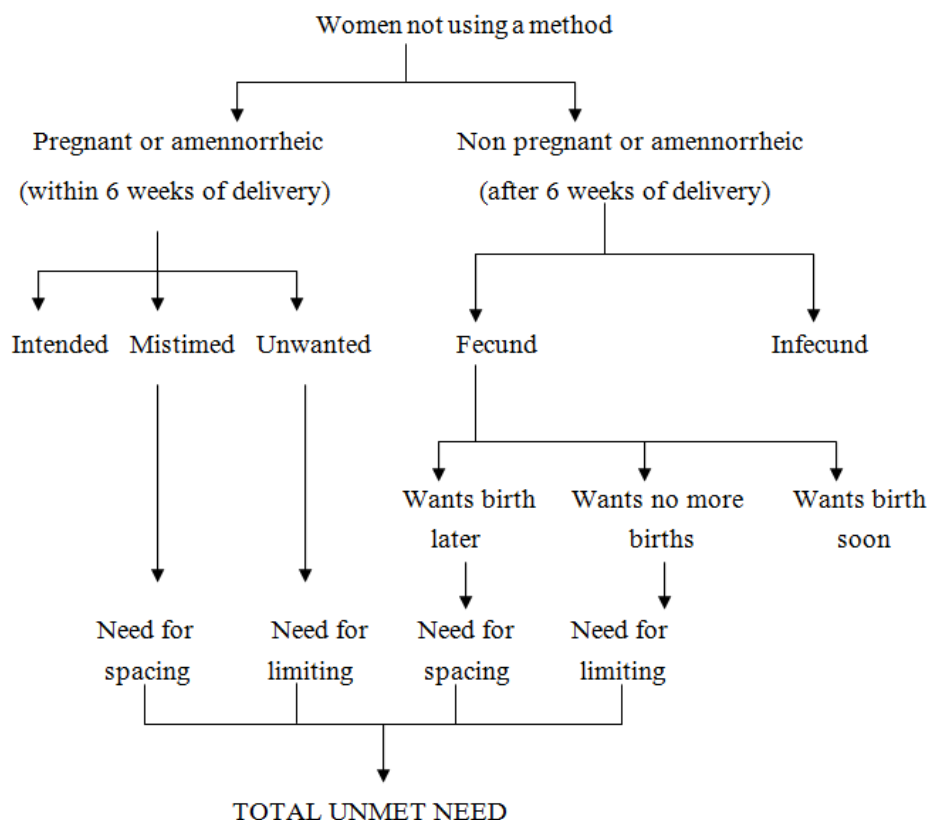


Figure 1: Arrangement of currently married women of reproductive age in various categories of pregnancy, fecundity and fertility intention, and total unmet need for family planning.^[9]

Unmet need for modern methods

This consists of women with unmet need for any method and those who are using natural and traditional methods at the time of survey.^[10]

Unmet need for appropriate contraception

This is the group which includes women with unmet need for any method and those who are using an ineffective method, using a method incorrectly, or using a method that is unsafe or unsuitable for them. This facilitates the identification of the full extent of need for family planning.^[11]

Worldwide estimations of unmet need

Estimations of unmet need face many issues that unmet need has not been calculated consistently. Further, the calculation procedure is different from each other because the definition is not unique always. Thus, levels of unmet need in different situations and in different countries are not possible to be compared.

From the beginning, unmet need has been estimated using different definitions. The starting point of assessing the extent of the demand for controlling fertility was KAP surveys conducted in 1960s in many developing countries. It was followed by World Fertility Survey conducted from 1972 to 1984 in 41 developing countries which the assessment was secondary to its primary goal of assessing fertility and mortality pattern. There, only unmet need has been estimated but without for spacing or limiting and not including pregnant /post partum women. Later, the Contraceptive Prevalence Surveys (CPS) conducted from 1978 to 1984 refining the definition further and to calculate unmet need for spacing births as well as for limiting births, helping to distinguish potential interest in temporary methods from that for permanent and long term methods. The forth was Demographic and Health Surveys (DHS) demarcating the starting point in using the definition of unmet need for FP for pregnant and post partum amenorrhoeic women.

Further, there are other ongoing, cross-national and harmonized survey data collection programmes named Multiple Indicator Cluster Surveys and more recent initiatives such as the Performance Measuring and Accountability (PMA) 2020 surveys.

Globally, unmet need has been estimated on five occasions using DHS data. The first review was published in 1991 using data in 25 countries surveyed between 1985 and 1989.^[12] The second was in 1995,^[13] and the third was in 2001.^[14] In these two, more countries were added. Further, they analyzed the time trend for countries where the DHS surveys have been conducted more than once. The forth one was published in 2006 in which data from 58 countries collected after 1995 were included.^[15]

However, the definition used to calculate unmet need is not uniform. Thus, it is not possible to do direct comparison of levels among countries or time trends within countries. Initially in the assessment; the prevalence for unmet need in the developing world varied from 11% to 24%, the overall prevalence being 17%. The prevalence was 24% in Sub Sahara Africa, 16% in North Africa, Middle East and Asia, 14% in Latin America and 11% in Central Asian Republics. The surveyed countries covered 85% in Asian, 90% in central Asian Republics, 67% Latin American, 52% North African and the Middle East, and 83% Sub Saharan African populations. Overall, 80% of estimated global unmet need came from countries being surveyed. When the contribution from unmarried are concerned, it accounted for 7% of the total, ranging from 4% in Asia to 16% in Sub Saharan Africa. The low proportions were either due to restricted sexual activity out of wed lock as in India and Pakistan or due to high use of contraceptives among unmarried sexually active adolescents as 15% in Botswana, 23% in Togo and 27% in Cameroon.^[16]

The prevalence and the proportion for limiting and spacing were similar and equal across Asian region except in Pakistan where the majority was for limiting. However, in Sub Saharan Africa, 65% of unmet need was for spacing where as in Latin America it was only 42%. However in spite of extensive family planning programmes, unmet need in Nepal remains as high as 25% with 9.5% for spacing and 15.5% for limiting.^[17]

In 2006, Westoff analyzed the trend of unmet need and the demand for family planning in 58 developing countries included in the DHS program, conducted since 1995. It reveals that unmet need for family planning is declining in many developing countries, but remains significant, especially in the least developed countries where it reaches levels above 20% of married women in 31 of the 58 countries examined. Moreover, even in those countries experiencing declines in unmet need, numerical increases in population growth can overcome the gains of reduced unmet need.

Regionally, the greatest need remains in sub-Saharan Africa with an average of 26%. In other regions, this average is 16%, ranging from a low of 5% in Vietnam to 40% in Haiti. With the exception of Pakistan in which unmet need has increased from 31% to 33%, there is consistent evidence of a decline in total unmet need in the 19 Asian, Near Eastern, and North African countries reviewed there. Similar declines are evident in the eight Latin American/ Caribbean countries, except in Haiti and Nicaragua, which show no change. In West Africa, there is hardly any decline apparent in contrast to East and Southern Africa where declines are evident in about half of the countries. In West Africa, unmet need ranges from 16 to 34%. Unlike other regions of the world, the unmet need for spacing births, as well as the use of contraception for this purpose is the main pattern in sub-Saharan Africa. The primary exceptions are South

Africa, Namibia, Malawi, Lesotho, and Kenya, where smaller family norms are more developed.

According to the estimates by Westoff in 2006, the unmet need for modern methods averages 26% in the Asian countries, 32% in the Near East and North Africa, and 27% in Latin America and the Caribbean. In West Africa, the average unmet need for modern methods is 34% and in East and Southern Africa it is 31%. In the Philippines, where traditional methods comprise nearly one-third of all use, unmet need rises from 17 to 33 % when confined to modern methods. Another example is Moldova where withdrawal is common; when confined to modern methods, unmet need increases from 7 to 31%.^[15]

The latest published evidence of assessment of unmet need using DHS data was done in 2012. In that, the definition was revised to minimize the discrepancies due to complicated definition of unmet need as follows.^[18]

- Two subjective questions on whether she is happy or unhappy on getting pregnant and the question of that pregnancy being a problem have been omitted from the calculation procedure.
- Do not assume an unmet need status for women missing key data.
- Simplify classification of unmet need for spacing versus unmet need for limiting by considering pregnant and post partum women whose the last

pregnant and post partum women whose the last pregnancies/births were due to contraceptive failure have also been included as having unmet need. The decision on current pregnancy/last birth wanted later was considered as unmet need for spacing (even if pregnancy/birth was due to contraceptive failure). Current pregnancy/last birth unwanted was considered unmet need for limiting (even if pregnancy/birth was due to contraceptive failure).

- Shorten the duration for only two years for which women are considered to be postpartum amenorrhoeic (Women can be considered postpartum amenorrhoeic while previously it was considered as five years)
- Standardize the calculation of infecundity. (infecundity has been revised as if a woman was first married five or more years ago, never used contraception, and has not had a birth in the past 5 years, that woman is considered infecund)

In that analysis, 169 DHS surveys from 70 countries conducted over the last 20 years have been included¹⁸. There, the total unmet need was 23.1% while that of modern methods was 32.3%. In those countries the average use of contraception was 38.5%, thus making the total demand as 61.6%. The percentage of demand satisfied was 57.6% and satisfied with modern methods was 43%.^[18]

Table 01: Levels of met and unmet need for family planning and the satisfaction of the demand.

Region	UMN	Current use	Total demand	Proportion of total demand satisfied	Unmet need for modern methods	Using modern methods	Proportion of total demand satisfied by modern methods
West and Central Africa	26.4	15.7	42.1	35.3	33.9	8.2	18.7
East and Southern Africa	27.7	29.5	57.2	48.7	33.0	24.1	38.9
Middle East/North Africa	16.7	53.8	70.5	76.1	24.7	45.8	64.7
Eastern Europe/NIS	13.8	62.1	75.9	81.7	39.4	36.5	48.3
Asia	21.9	46.4	68.3	66.4	30.4	38.0	54.5
Latin America and Caribbean	19.6	58.3	77.9	73.4	31.1	46.9	58.9
Total	23.1	38.5	61.6	57.6	32.3	29.3	43.0

Source: Bradley, Sarah E.K., Trevor N. Croft, Joy D. Fishel, and Charles F. Westoff. Revising Unmet Need for Family Planning. DHS Analytical Studies No. 25. Calverton, Maryland, USA: ICF International, 2012.

The new definition has increased unmet need slightly higher than previous estimates, but made it more comparable as subjective information and calendar data have been removed. Table 02 illustrates the levels of unmet need for limiting assessed previous and revised definitions in different regions. Thus, it is essential for the programmers to know the absolute sizes of unmet need subgroups and the percentage of all reproductive-age women that they represent, the reasons for unmet

need and the characteristics of such women to have successful outcomes.^[18]

Table 02: comparison of unmet need for limiting based on original and revised definitions.

Region	Original UMN for limiting	Revised UMN for limiting	Number of countries
West and Central Africa	8.0	8.6	17
East and Southern Africa	10.8	11.9	14
Middle East/North Africa, Eastern Europe/NIS	7.2	9.0	9
Asia	12.0	12.9	11
Latin America and Caribbean	10.4	10.6	8

Source: Bradley, Sarah E.K., Trevor N. Croft, Joy D. Fishel, and Charles F. Westoff. Revising Unmet Need for Family Planning. DHS Analytical Studies No. 25. Calverton, Maryland, USA: ICF International, 2012.

Unmet Need Levels by Women's Characteristics

According to the DHS, main characteristics of women have been assessed in relation to time since previous birth; age; number of children; education; and place of residence, whether rural or urban.

Considered the characteristics of women with unmet need, it differs from region to region and from country to country in relation to the place of residence whether urban or rural. In most countries in West Africa and Central Africa, no clear relationship was identified. But many countries outside West and Central Africa unmet need is higher and getting increased in rural areas than urban areas. In relation to education, inverse relationship between education and unmet need is seen in all of the Middle East/North African countries and most of the Latin American and Caribbean countries. However, inverted V-shaped relationship was seen in countries in West and Central Africa. In relation to wealth index, usually unmet need decreases with increasing the wealth. In some countries an inverted relationship could be observed (Chad, the Democratic Republic of the Congo, Mali and Niger). Considered the age of the women, relationship between age and unmet need for spacing or for limiting is remarkably consistent across countries. Considered the parity, women have more children have decreasing unmet need for spacing while that of for limiting increases.

In Sri Lanka, there had been increased association of unmet need with low level of education until 1993 which has disappeared thereafter in DHS 2000 and 2006/7. It could not elicit any statistical relationship with sector of residence or age of the participants at any of the DHSS. Although the rural areas had lowest unmet need (6.8%)

in compared to urban (9.5%) and estate (11.1%) in DHS 2006/7, it was not statistically significant.^[20]

The study conducted in Gampaha district in Sri Lanka, has found an increased risk of unmet need in relation to educational status of below primary education, reduced level of sexual contact, high intention to attempt for an induced abortion if conceived, poor awareness of the existence of a low on induced abortion and poor awareness on risk to health by induced abortion.^[21]

In the study conducted in the Kalutara district, Sri Lanka, significantly increased risk of unmet need was found to be associated with women being older than 35 years, having education less than primary level, being unemployed, having sex less frequent than once a week, desire of not having any more children and not expecting to use a modern FP method in future and not having counseling in FP.^[22]

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Unmet need among unmarried sexually active women

In studies where participants are only currently married women, this indicator cannot be assessed. However, countries in which unmet need among unmarried women have a different experience. Table 03 illustrates the demand and supply of FP services among sexually active unmarried women.^[18]

Table 03: Met and Unmet demand for family planning among unmarried sexually active women.

Region	Current use	Unmet need total	Unmet need for spacing	Unmet need for limiting	Total demand	Proportion of demand satisfied
West and Central Africa	52.8	32.6	29.0	3.6	85.3	61.5
East and Southern Africa	54.5	30.4	19.3	11.1	84.9	63.9
Eastern Europe/NIS	77.1	14.9	10.2	4.7	92.0	83.7
Latin America and Caribbean	68.7	20.9	15.3	5.6	89.6	76.6
Total	58.9	27.8	21.1	6.7	86.7	67.5

Source: Bradley, Sarah E.K., Trevor N. Croft, Joy D. Fishel, and Charles F. Westoff. Revising Unmet Need for Family Planning. DHS Analytical Studies No. 25. Calverton, Maryland, USA: ICF International, 2012.

Unmet need in Europe

Since the concept of unmet need has generally focused on developing countries, only a little effort has been made to measure the level of unmet need for family planning in more developed countries, probably may be due to the belief that the contraceptive practice is nearly perfect. However, analysis of data from Fertility and Family Surveys (FFS) conducted in recent years in selected ten states has revealed that individuals with an unmet need for family planning is as low as 3% in two European countries (Belgium and Spain) and below 10% in most. A cardinal feature which differs that of the

developing countries was that the contribution for the unmet need by pregnant individuals is relatively small probably due to less number of pregnancies are continued in developed countries in which abortions are legalized and rates are high.^[19]

Trends of unmet need in Sri Lanka

In Sri Lanka, WFS was conducted in 1975, CPS in 1982 and four DHSs in 1987, 1993, 2000, 2006/7 and 2016 by the Department of Census and Statistics (DCS) for the Health Sector Development Project (HSDP) of the Ministry of Healthcare and Nutrition.^[20,24]

Table 04: Levels of unmet need in relation to Contraceptive Prevalence Rate (CPR), Total Fertility Rate (TFR) and Wanted Fertility Rate (WFR) in Sri Lanka.

Year	Unmet need for any method	Unmet need for modern methods	TFR	WFR	CPR
1975 (WFS)	*	*	3.4	**	34.4%
1982 (CPS)	*	*	3.7	**	57.6%
1987 (DHS)	22.7%	56.9%	2.8	2.4	61.7%
1993 (DHS)	24.7%	47.1%	2.3	1.8	63%
2000 (DHS)	18.2%	38.7%	1.9	1.8	71%
2006/7 (DHS)	7.3%	23.2%	2.3	2.1	68%
2016 (DHS)	7.5%	18.5%	2.2	1.9	64.6%

*Unmet need was not measured in these surveys

** WFR was not measured in these surveys

Source: Family Health Bureau (FHB), Colombo, Sri Lanka 'Fertility Changes and its Implications on Maternal and Child health'.

Apart from that, in 2007, a cross sectional study had been conducted in MOH area Gampaha on 550 ever married women of 15-49 years age, using the 'Westoff model' definition, in which the prevalence of unmet need for family planning among married women was found to be 12.6%.^[21]

However Liyanarachchi (2003) assessed the unmet need for modern methods on a sample of 400 sexually active eligible females in the Colombo Municipal Council area and found to have unmet need for modern methods of 24%.^[23]

In a study conducted using the 'Westoff model' definition in the Kalutara District in 2010, unmet need for FP was found to be 9.4% with 1.5 % for spacing and 7.9% for limiting, while that of modern methods was 18.7%.^[22]

Reasons for unmet need for family planning

According to findings from comparable surveys and in-depth studies, the reasons were;

- Difficulties with access to and quality of family planning supplies and services
- Health concerns about contraceptives and side effects
- Lack of information
- Opposition from husbands, families, and communities

- Little perceived risk of pregnancy.^[21,23,25,26]

Contributing factors

- Low mean age at marriage
- Low female education
- Gender discrimination.^[26]

Reasons identified in Sri Lanka

In Sri Lanka, the main source of information in relation to FP is DHS surveys conducted from 1987 to 2016. Table 4 illustrates the main reasons identified for not using modern FP methods. It has been assessed in all DHSS except that of in 2016. The health concerns and infrequent sex is continuously high and becoming further increased. Husband's disapproval is getting less prominent mainly due to increased socio economic status of women resulted from high literacy rate and involvement of women in earning and decision making.

Table 5: Reasons for not using modern family planning methods among sexually active married women in 15-49 years in Sri Lanka.

Reason	2016	2006/7	2000	1993	1987
Health concerns& Fear of side effects	na	20.5	13.6	20.2	18.4
infrequent sex	na	21.0	18.7	10.7	7.9
Oppose to FP	na	1.7	3.8	2.9	1.9
husband disapprove	na	3.7	5.1	10.7	13.7
No Access/ availability	na	0.2	1.3	2.5	2.6
Lack of knowledge	na	1.3	3.0	3.7	9.6
Post partum Breast feeding	na	na	5.1	12.8	10.6
Menopause , subficand & inficund	na	37.5	18.3(with subficund)	9.9 (with subficund)	5.6
Against religion	na	2.6	5.1	2.1	4.1

Same trend has been revealed by few individual studies as well. In 1995 Bongaarts & Bruce gives evidence that the principal reasons cited by women with unmet need for non-use of contraception included health concerns (19.3%), husband's disapproval (14.6%), infrequent sex (13.3%), lack of knowledge (10.4%), religious influence (3.6%); and lack of access (3.2%).^[25]

In the study conducted in Gampaha MOH area, reasons for non use were fear of side effects (45.8%), infrequent intercourse (31.9%) and perceived low risk of pregnancy (23.6%) with multiple responses have been allowed. In that group 65.3% has never used any FP method. Out of all, 29.2% intended to have a FP method in future and 25% had not decided.^[21]

In District 1 of Colombo Municipal Council, study revealed that among factors for non use of modern FP, 71% were community factors including lack of awareness, fear of side effects and husband's disapproval. Twenty nine percent were service factors including low post partum coverage, side effects due to DMPA and IUD and fear of IUD insertion procedure.^[23]

In another study, conducted in Kalurata district which is one of mostly populated districts reasons identified for unmet need for FP were low perceived risk of pregnancy (36.2%), fear of side effects (30.5%) and less frequent sexual intercourse (19%).^[22]

Consequences of unmet need for FP

The one and only sequel of unmet need is unintended and thus unwanted pregnancy with its disastrous consequences to the individual woman, the unborn fetus, the rest of the children in the family and the spouse. These sequelae may be broadly classified as health, social and economic; the extremes being resorting to induced abortions of the unborn child or infanticide and neglect or abandonment of the child after the birth.

Since abortions are not legalized unless for therapeutic reasons in Sri Lanka, most are likely to undergo illegal abortions subjecting them to unsafe procedures with high risk of morbidity like chronic pelvic inflammatory disease and infertility and mortality.^[27] The mothers are also likely end up in psychological distress, constantly

traumatized by guilt that ensues, as a result of the strongly interwoven religious and cultural beliefs. With the subsequent pregnancies, they are likely to be at a greater risk of ectopic pregnancies, premature deliveries and other adverse pregnancy outcomes. On the other hand, the women who decide to go ahead with the pregnancy may end up having infants with adverse pregnancy outcomes. By virtue of these being unwanted, there is a high risk of inadequate or no prenatal care leading to adverse pregnancy outcomes (low birth weight, small for gestational age and preterm birth) which in turn would result in significant postnatal morbidity and high rates of infant deaths. All above means, loss of life and disability which are easily preventable and utilization of valuable health care resources which could otherwise be put into better use.^[28]

In addition to health sequels, economic hardships are likely to creep in with an addition of another mouth to feed, thus affecting the rest of the siblings with all the untoward consequences. The burden of looking after too closely born children resulting from inadequate spacing will add to the social problems. The mother herself will suffer health consequences, both of physical and psychological nature. Total average cost of an induced abortion admitted to hospital with complications was 462 US \$ which comprised of expenses of the woman for obtaining the abortion (21%), and expenses to the health system for providing care for complications (79%).^[29] In 1998, it has been revealed that abortion rate was more prevalent in married women in 25-39 age groups with two or more children in urban and semi urban settings. It was low in unmarried where the total abortion rate was 1.6 for women of 15-49 years of age, with 1.9 for currently married women.^[30]

All of the above signifies the consequences of unmet need. Although abortion is a method of preventing a birth, all service providers should know the essential difference between preventing a birth by the use of a contraceptive method and, preventing it by resorting to an induced abortion.

Relationship between Unmet Need for FP and Fertility

The level of unmet need in a country is always changing, depending on the interplay of two factors, fertility desires and contraceptive use. Westoff and Bankole have observed it as a “moving target”. It rises as more women want to control their fertility without contraceptive use, and it falls as more use contraception or changes their preferences to have more children. Thus a high level of unmet need does not necessarily indicate program failure, nor does a low level necessarily indicate success. Moreover, even where the proportion of women with unmet need is declining, the absolute number with unmet need may be growing because the population in child bearing age is growing. Most countries follow a similar pattern as they move through the demographic transition from high to low fertility. In general, a population passes through four stages, during which the level of unmet need first rises and then falls.^[13,31]

Initially the fertility is high and unmet need is low with low CPR and less desire to control fertility, since most couples do not want to use contraceptives or are unaware about the possibility to limit or space births. Subsequently due to changes in attitudes, the desire to control the fertility exceeds the contraceptive use leading to an increase in unmet need. In the third phase the reproductive attitudes continue to be changed and, as information and services respond to people's changing attitudes, contraceptive use rises rapidly, leading to a decline in the unmet need and fertility. During the last phase due to widespread of contraceptive use, fertility stabilizes at a lower level than before with low level of unmet need.

In developing countries where replacement level of fertility has been achieved, the decline was uninterrupted until the replacement is reached. However, according to the latest review by Bongaarts in 2005, using 20 developing countries where the fertility transition is in mid transition phase (TFR between 5 and 2.5) and in which 3 consecutive DHS studies have been conducted, stalling of fertility has been observed in 7 countries by 1990s. It has been coincided with sharp reduction of the use of contraceptives without obvious change in the socioeconomic status and availability and access to family planning services. It was decided to address this issue in relation to the circumstances of the individual country and in particular to its level of wanted and unwanted fertility or unmet need for contraception. This reduction in decline in TFR will have adverse effects on the future prospects for social and economical development, food security and the sustainability of natural resources. The policy makers may need to either strengthen the FP programmes or encourage economic and social development.^[32]

This phenomenon can be applicable to Sri Lanka even though it has passed mid transition phase of fertility few decades before and achieved below the replacement level

of fertility by 2000. The TFR has increased from 1.9 to 2.3 within the period of 7 years from 2000 to 2007 with reduction of unmet need from 18.2% to 7.3% and contraceptive prevalence from 71% to 68% indicating the change in the attitudes of the country. The wanted fertility rate also has increased from 1.9 to 2.1. However by 2016 all indicators have got changed that, unmet need has increased to 7.5, total fertility rate reduced to 2.2, wanted fertility rate to 1.9 and contraceptive prevalence to 64.6%.^[21,22]

Impact of Meeting Unmet Need

Meeting unmet need means women with unmet need starting to practice family planning. Bongaarts and Westoff have revealed that the total abortion rate is inversely related to the prevalence and effectiveness of contraception and fertility preferences of the population, thereby acceptance of effective FP would invariably reduce the rate of induced abortions.^[33]

Use of modern contraceptive methods has greatly reduced abortions in the developing world, and it could reduce it even further. Worldwide the ongoing FP services and supplies are currently meeting the needs of more than 500 million women. These thereby prevent 187 million unintended pregnancies each year, including 60 million unplanned births and 105 million induced abortions. This has measurable health benefits, including 2.7 million fewer infant deaths and 215,000 fewer pregnancy related deaths annually. To put that in perspective, FP services are preventing three-quarters of the abortions that would otherwise occur in the developing world each year. Beyond their medical impact, FP programs also have far-reaching social, economic and psychological benefits for women, families and nations as well.^[34]

If every woman in the developing world with an unmet need for a modern method began using one, an additional 52 million unintended pregnancies each year could be avoided. That would avert, for example, 22 million abortions; of which six in ten of those occur now in the developing world. Providing these services and supplies would cost an additional \$3.9 billion per year, but the savings would ultimately dwarf that figure. As seen in a typical low-fertility Latin American country, every dollar spent on family planning saves \$12 in health and education costs from averted pregnancies, abortions, births and complications.^[34]

Reducing unmet need by accepting FP would eventually increase the birth intervals of siblings. In a study using the DHS data from 18 countries in four regions, a comparison of children born with spacing of more three years with that of less three years was carried out. It included outcomes of more than 430,000 pregnancies, and the results indicated that children born with spacing of more than two years with that of less than two years indicated that children born more than two years of spacing were, 1.5 times more likely to survive the first

week of life, 2.2 times more likely to survive the first 30 days of life, 2.3 times more likely to survive the first year of life and 2.4 times more likely to survive up to age five. It also provides some of the best evidence yet that spacing births further apart improves the mother's health. Among the findings compared with women who give birth of 9-11 months interval, women who have their babies 27-32 months interval are 1.3 times more likely to avoid anemia, 1.7 times more likely to avoid third trimester bleeding and 2.5 times more likely to survive child birth.^[35]

In Sri Lanka by 2000, contraceptive prevalence has increased with reduced TFR leading to changes in the population structure from pyramid to barrel shape which was rapid comparative to the other countries in the region leading to rapid change in the socio economic development in the country including reduction of child dependency ratio in the country.^[36,37]

REFERENCES

- Burnett EM, Gartner C. Review of the HHS family planning program: Mission, management, and measurement of results. *Journal of Health Care for the Poor and Underserved*, 2011; 22(4): 1436-7.
- United Nations 2009, Department of Economic and Social Affairs, Population Division *World Contraceptive Use 2009*, Viewed on 13th February 2010, POP/DB/CP/Rev, 2009.
- Westoff, CF, 'New Estimates of Unmet Need and the Demand for Family planning', *DHS Comparative Reports* No. 14, Macro International Inc, Calverton, Maryland, USA, 2006; 1-8.
- Becker, S, 'Measuring Unmet Need, Wives, Husbands or Couples', *International Family Planning Perspectives*, 1999; 25(4): 172-180.
- Ngom, P, 'Men's Unmet Need for Family Planning: Implications for African Fertility Transitions', *Studies in Family Planning*, 1997; 28(3): 192-202.
- Casterline, JB, Sinding, A, 'Unmet need for family planning in developing countries and implications for population policy', *Population Developing Review*, 2000; 26(4): 691-723.
- Stokes, B, 'Filling family planning gaps', *Population Reports*, Series J, No.20, John Hopkins School of Public Health, Population Information Programme, Baltimore, 1977; 10-21.
- Westoff CF, 'The potential demand for family planning: A new measure of unmet need and estimates for five Latin American countries', *International Family Planning Perspectives*, 1988; 14(2): 45-53.
- Klijzing, E, 'Are there unmet family planning need in Europe', *Family Planning Perspectives*, 2000; 32(2). viewed 20 December 2007, <http://www.familyplanning.org/are-there-unmet-family-planning-need-in-europe.htm>.
- Degraff, DS & De Silva, V, 'A new perspective on the definition and measure of unmet need for contraception', *International Family Planning Perspectives*, 1996; 22(4): 140-147.
- Foreit, K, Mostajo, P, Gamarra, E, Padilla, A, 'Unmet demand for contraception vs unmet demand for appropriate contraception', *Presented at the 120th Annual Meeting of the American Public Health Association, Washington, D.C*, 1992; 16.
- Westoff CF & Ochoea LH, *Unmet need and the demand for family planning, Demographic and Health Survey comparative studies No 5*, Institute for Resource development, Colombia, Maryland, viewed on 20.10.2007, <http://www.measuredhs.com/pubs/pdf/CS/C S5.pdf>, 1991.
- Westoff C. F, Bankole A. Unmet need, *DHS Comparative Studies: 1990-1994*, Calverton, Macro International, Maryland, viewed on 10.11.2007, <http://www.jhuccp.org/popline/popbid/j43.shtml#237>, 1995.
- Westoff, Charles F. *Unmet Need at the End of the Century*, 2001.
- Westoff, CF, 'New Estimates of Unmet Need and the Demand for Family planning', *DHS Comparative Reports* No. 14, Macro International Inc, Calverton, Maryland, USA, 2006; 1-8.
- Ross, J & Winfery, WL, 'Unmet need in the developing world and former Soviet Union. An updated estimate', *International family planning perspectives*, 2002; 28(3): 138-143.
- Bhandari, P, Premarajan, KC, Jha, N, Yadev, BK, Paudel, IS, Nagesh, S, 'Prevalence and determinants of unmet need for family planning in a district in eastern region of Nepal', *Kathmandu University Medical Journal*, 2006; 4(2): 203-210
- Bradley, Sarah E.K., Trevor N. Croft, Joy D. Fishel, and Charles F. Westoff. *Revising Unmet Need for Family Planning*. DHS Analytical Studies No. 25. Calverton, Maryland, USA: ICF International, 2012.
- Henshaw, SK 1990, 'Induced Abortion: A World Review', *International Family Planning Perspectives*, 1990; 22(13): 276-89
- Family Health Bureau, 'Fertility Changes and its Implications on Maternal and Child health', Colombo, Sri Lanka, 2009.
- Liyanapathirana, A. 'Unmet need for family planning: Extent and factors associated among married women of reproductive age in MOH area Gampaha', Community Medicine Msc Dissertation, PGIM, University of Colombo, Sri Lanka Ministry of Plan Implementation, 2018.
- Malwenna, LI Prevalence and correlations of unmet need for family planning and effectiveness of community based intervention in reducing unmet need for modern methods among women ever married in reproductive age in the Kalutara District. Community Medicine MD Dissertation, PGIM, University of Colombo, Sri Lanka, 2010; 57-60.
- Lianarachchi, KD, 'Surveillance and factors associated with non use of modern family planning methods among married women of reproductive age group in District 1 of Colombo CMC', Community Medicine Msc Dissertation, PGIM, University of Colombo, Sri Lanka, 2003; 57-60.

24. *Demographic and Health Survey*: Department of Census and Statistics, Ministry of Plan Implementation, Colombo, Sri Lanka, 2016.
25. Bongaarts, J & Bruce, J, 'The causes of unmet need for contraception and the social content of services', *Studies in Family Planning*, 1995; 26(2): 57-75.
26. Sedgh G, Singh S, Henshaw SK, Bankole A. Induced abortion: incidence and trends worldwide from 1995 to 2008. *The Lancet*, 2012; 379: 625-632.
27. Ministry of Plan Implementation, 'Abortion law in Sri Lanka' *Perspectives on abortions in Sri Lanka*: Department of Census and Statistics, Colombo, Sri Lanka, 1983; 19.
28. Brown, SS & Eisenberg, L, 'The Best Intentions: Unintended pregnancy and the well-being of children and families', *The New England Journal of Medicine*, 1995; 333(20): 1363-1365, viewed on 16 March 2010, <http://content.nejm.org/cgi/content/full/333/20/1363-a>.
29. Thalaga NI *Process, determinants and impact of abortions in Sri Lanka*, Family Planning Association Sri Lanka. /IPPF (SEARO), 2010; 1-10.
30. Rajapaksha LC, 'Estimates of induced abortion in Urban and Rural Sri Lanka', *Journal of the College of Community Physicians of Sri Lanka*, 2002; 7: 10-16.
31. Westoff, CF & Bankole, A, 'Trends in the demand for family limitation in developing countries', *International Family Planning Perspectives*; 2000; 26(2): 56-62.
32. Bongaarts, J, 'The Causes of Stalling Fertility Transitions', *Studies in Family Planning*, 2005; 37(1): 1-16.
33. Bongaarts, J & Westoff, C, 'The potential role of contraception in reducing abortion', *Studies in Family Planning*, 2000; 31(3): 193-202.
34. Sonfield, A 2006, 'Working to eliminate the World's Unmet Need for Contraception', *Guttmacher Policy Review*, viewed 10 December, 2007. <http://www.guttmacher.org/policy/working-to-eliminate-the-worlds-unmet-need-for-contraception.htm>.
35. Westoff CF & Ochoa LH, *The demand for family planning*. Institute for Resource development, /Macro International: Colombia, Maryland, 1995.
36. Siddhisena, KAP, 'Determinants and Implications of fertility trends in Sri Lanka: Retrospect and Prospect', *Sri Lanka Journal of Population Studies*, 2000; 3: 35-58.
37. Abeykoon, ATPL, 'Population and Socio-economic change in 20th century Sri Lanka', *Sri Lanka Journal of Population Studies*, 2000; 3: 15-34.