Journal of Health, Medicine and Nursing
ISSN 2422-8419 An International Peer-reviewed Journal
Vol.29, 2016

Two Decades of Unmet Need for Family Planning among Currently Married Women in Ghana and Policy Implications: A mini review of GDHS 1993 – 2014

Joseph Kwame Wulifan
School of Business and Law, Department of Administration and Management Studies, University for Development Studies, Box 36, Wa, Ghana

Abstract

Recent data on levels of family planning in Ghana's Demographic and Health Surveys present a high level of unmet need although family planning programmes were introduced around the early 1960s. This review examines unmet need for the past two decades among married women using the GDHS reports. We employed Griffiths (2002) approach to examine GDHS reports published between 1993 to 2014 and complimented with relevant published articles within this period using relevant search engines. We found that, nearly two in five married women used a form of contraceptive and one in three married women still reported unmet need. Younger and older mothers over the entire two decades consistently reported unmet need for spacing and limiting respectively. Rural mothers as well as those from poorest households were more likely to report unmet need for family planning while mothers who attained at least secondary education were less likely to report unmet need.
Keywords: Mini review**,** unmet need, non-contraceptive use, spacers, limiters, Ghana.

1. Background and problem statement

The decision to adopt or not to adopt family planning is an inalienable right of all people as captured in the just ended Millennium Development Goals (MDG 2015, goal 5b) and by extension the space it occupies in the recently adopted Sustainable Development Goals (SDG 2013, goal 3.7; Horayangkura, 2015). Given the choice, many rural people like to consciously space their births and limit the number of children they would have (Bradley, 2012; Westoff, 1988). Unmet need arises where a women who desires to limit or postpone child birth fails to use any family planning (FP) methods (Bongaarts, Bruce, 1995). These women face an unsatisfied demand for contraception, which is commonly referred to as *unmet need for contraception*. Unmet need for contraception is further separated as: *unmet need for limiting*, i.e. women of reproductive age who do not wish to have any more children but are not using contraceptives; and *unmet need for spacing*, i.e. women of reproductive age who wish to delay the next childbirth by at least two years but are not using contraceptives (Nortman, 1982; Westoff, Pebley, 1981; Wulifan et al., 2016). Researchers focusing on demographic and health survey (DHS) data analysis contended that traditional family planning methods were less effective and have higher failure rate and for that matter women using traditional family planning methods should be classified as having unmet need for family planning (Dixon-Mueller, Germain, 1992; Sabrina, 2014).

In many low and middle income countries (LMICs), and Ghana in particular, efforts of family planning programmes in meeting these needs and desires have not been very effective in that, there still exist a gap in family planning knowledge and contraceptive use thereby creating an unmet need for family planning. Available data report a contraceptive prevalence of 25% in 1993, though 99% of women in the reproductive age could identify at least one modern contraceptive method. In 2014, contraceptive prevalence still remained as low as 22% for modern methods and 5% for traditional method users although all women of reproductive age could identify at least one modern method of family planning. Thirty-four percent (34%) of women reported unmet need for family planning in 1993 while in 2014, this unmet need figure reduced slightly to 30% among married women comprising 17% with unmet need for spacing and 13% having unmet need for limiting (GDHS report, 1993; 2014).

Low contraceptive prevalence and the corresponding high unmet need levels have important implications for the woman and the family through unintended pregnancies, unsafe abortions and poor maternal/child health outcomes. While it is still unclear which single or set of factors operate to influence low contraceptive use, the fact that nearly one in three women still experience unmet need for contraception over the last two decades though nearly all women are able to identify at least a family planning method in Ghana remains a concern. Currently, there is no study that has reviewed unmet need for family planning among married women from the inception of the DHS surveys in Ghana till date. The only single study that conducted a retrospective assessment of unmet need for contraception in Ghana is nearly a decade ago (Govindasamy, Boadi, 2000). A review on factors that influence low contraceptive uptake and high unmet need for family planning from the early 1990s when the Ghana Demographic and Health Survey (GDHS) series commenced and expanded across the regions

until 2014 when the very recent data was collected is therefore timely and appropriate given that, contraceptive use and unmet need are two facets of the same issue and are identified as the most effective means of ultimately having desired population sizes and of reducing maternal as well as child morbidities and mortalities (Cates, 2010; Hill, Choi, 2004; WHO, 2007; Wulifan et al, 2016). This review sought to retrospectively examine unmet need for contraception among married woman and identify the specific reasons for non-contraceptive use over the past two decades in Ghana.

2. Method

A mini review highlights or summarizes a particular emerging area of interest in a simple, quick and easy way by showing potential gaps in literature and areas of research development (Hanafin et al, 2004). Our review adopted Griffith's mini review approach (Griffiths, 2002). The main sources of information used for developing this study were the GDHS reports spanning 1993 to 2014. The data were extracted from the Measure DHS web platform after explicit permission sought to use the data was granted by the data originators (http://www.dhsprogram.com/survey). A literature search was executed in web data bases search engines (PubMed, JOSTOR; science direct and Google scholar) using a combination of words such as "unmet need", "family planning", "unmet need for spacing", "unmet need for limiting" and "unmet need in rural Ghana" to retrieve relevant information related to the study for triangulation. Government of Ghana official reports on family planning were manually searched as well as the bibliographies of retrieved reports and articles to ensure relevant articles are captured till saturation. Five (5) selected studies non-specific to Ghana were consulted to ascertain the familial and socio-cultural context of unmet need within other low income settings (Bongaarts, Bruce, 1995; Bradley et al, 2012; Nortman, 1982; Westoff, 1988, 1992). Literature on decision to use or not to use family planning methods were explored to comprehend the contextual dimensions of unmet need so as to make policy recommendations. The relevance of looking at non-contraception use stems from the fact that unmet need for family planning and non-contraception use are two facets of the same issue given that unmet need is a sub-set of non-contraception use (Wulifan et al, 2016).

2.1 Operational definitions which guided our study

*2.1.1 **Unmet need phenomenon**:*

The conventional estimation of unmet need includes only married or women in consensual union who desire to delay or limit childbearing but are not using any using any method of contraception. Unmet need is conservatively referred to as the *discrepancy between a woman's reproductive intentions and contraceptive practice*(Bradley et al, 2012; Nortman, 1982).

*2.1.2 **Women who report unmet need**:*

These include women who are not infertile, have no desire to bear children in her life, desire to delay child birth for at least two years or not sure if they will want a child in future but are not using any modern contraceptive method. It covers pregnant women who report their current pregnancies were mistimed or not wanted. Postpartum amenorrheic women who equally report their last pregnancy or childbirth was unintended / unplanned have a retrospective unmet need (Bongaarts, Bruce, 1995; Nortman, 1982).

*2.1.3 **Women in consensual union**:*

These are women living in the same room as married couple at their desire without formally solemnizing/ratifying the marriage by custom or law for at least six months. Not being in consensual union is also referred to as "concubine-ship" or "free union" (ie a union between two persons that lacks any publicly recognized bond- without any socially or ritually recognized union or legal contract between spouses that establishes rights and obligations between them, between them and their children, and between them and their in-laws or families) (Bradley et al., 2012; Westoff, Pebley, 1981).

*2.1.4 **Infertile women**:*

These are women who report having had a hysterectomy (surgical removal of uterus), bilateral bi-tubal ligation, or bilateral salpingectomy (surgical removal of the fallopian tubes) or have a non-gestational amenorrhea (absence of menstrual cycle not due to pregnancy/lactation) for more than twelve months (Westoff, 1988).

*2.1.5 **Contraceptive prevalence rate (CPR)***

The contraceptive prevalence rate (CPR), also called the level of contraceptive use is defined as the percentage of married women using a contraception method. This is an important indicator that is used in assessing the success of family planning interventions (Ross, Winfrey, 2001).

3. Results

The overall information extracted from the GDHS data is presented in a summarized form in tables 1 and 2. Table 1 provides a summary of important background characteristics of quantitative findings of the GDHS reports on unmet need for family planning for the past two decades from 1993 – 2014. Table 2 also reports

reasons for not using contraception by the two age cohorts (15-29 and 30-49 years). In the text, we present the results in line and consistent with prior studies (Adebowale, Palamuleni, 2014; Cleland et al., 2014; Hailemariam, Haddis, 2011; Shaikh, 2010; Wulifan et al, 2016) to reflect the following headings: age of the woman, residence, region, level of education and household wealth. The reasons for not using contraception are also presented along fertility, method, opposition to use and lack of information related reasons.

3.1 Family planning methods awareness, contraceptive prevalence and unmet need

Awareness of a family planning method is an important step towards gaining access to contraceptive services and eventually use of contraceptive. The ability to identify a family planning method when it is described is a fundamental step in assessing respondent's knowledge of the method which should not be interpreted as the extend of respondent's knowledge of the method. In the GDHS reports, respondents were asked if they had heard of any method of family planning (modern or traditional). Information in table 1 shows married women who heard or had knowledge of at least a contraception method was almost universal. The reports showed that in 1993, 91.0% of married women could identify a contraception method in Ghana. The percentage increased to 93.0% in 1998, 98% in 2003 and 99.0% in 2014. In 1993, 10.0% of married women were modern contraception method users. In 1998, modern contraceptive users increased slightly to 13.0% and in 2014, modern contraceptive prevalence among married women was 22.0%. Unmet need for contraception decreased sharply from 39.0% in 1993 to 23.0% in 1998 thereafter increased to 34.0% in 2008 and 30.0% in 2014.

3.2 Age of the woman

Information from the table 1 shows that, unmet need for spacing in the five consecutive years within the past two decades (1993 – 2014) declined as women grew older from 15 to 49 years while unmet need for limiting rather increased as women grew older until their early 40s (40-44 years) and declines thereafter in their last age cohort (45-49 years). Total unmet need was highest among younger mothers (15-24 years). Overall unmet need was lowest among older mothers (45-49 years). On average, more than one in three women (34.0%) had unmet need for contraception within the past two decades while one in five married women (23.0%) among the older age cohort reported unmet need for family planning.

3.3 Place of Residence

The information shows that while unmet need for contraception in the past two decades among rural married women decreased from 40.1% in 1993 to 31.1% in 2014, unmet need among urban married women decreased from 35.4% in 1993 to 28.5% in 2014. Also, the unmet need gap between rural and urban married women in 1993 was about 5.3% which became narrower in 1998 (2.0%) and again widened to 10.0% in 2003. By end of the second decade in 2014, the unmet need gap between the rural and urban married women were 2.4%.

3.4 Region

Over the two decades, unmet need for contraception among married women increased from 36.8% in 1993 to 39.4% in 2008 in western region. In Central region, unmet need increased by about 4.5% between 1993 and 2008. Unmet need in Northern, Upper East and Upper West regions recorded the least values of less than 21.0% in 2008. Brong Ahafo and Upper East regions recorded 26.5% each in 2014 representing the lowest among other regions while Volta region with an unmet need of 36.3% represented the region with highest level of unmet need.

3.5 Education

Married women with primary education had nearly double the unmet need of women with secondary education and beyond. The difference in unmet need between women with primary education and those with no education was narrower (less than 3.0%) for the period. Within the twenty years, unmet need reduced by 9.0% among women with no education and increased 6.0% among women with secondary education and beyond. A 10.0% reduction in unmet need among women with middle/JHS education was observed between 1993 and 2014.

3.6 Reasons for not using a contraceptive method

The reasons for not using a contraceptive method among married women were classified into four groups comprising fertility related, method, opposition to use and lack of information/ knowledge related reasons. Fertility related reasons are not addressed by family planning interventions because they are related to non-use due to desire for children, infrequent sexual encounters, having difficulty in getting pregnant/ subfecund, being infecund, attaining menopause, or having had a hysterectomy or salpingectomy (Casterline et al, 1997). Method related reasons are more associated to family planning interventions and include high cost of contraceptive methods, health concerns or fear of side effects related to a contraceptive method use, inconvenience due to use of a contraceptive method, and perceived beliefs that contraceptive method interferes with the normal body functioning processes. Under opposition to use, the reasons were women themselves being against using a

contraceptive method, religious and partner opposition to contraceptive use and fatalism (belief that, what will happen has already been predetermined and cannot be changed). Lack of knowledge included not having information on a method or source of contraceptive supplies.

Following information in table 2, a considerable percentage of women were not using a method of contraception because of fertility related reasons. Most married women perceived they were currently not at risk of becoming pregnant because they were infertile (subfecund/infecund or menopausal). These two category of women altogether accounted for less than 5.0% among young mothers aged 15-29 but nearly one in three women among older mothers (30-49 years) were not using a method of contraceptive for the two decades. Non-use due to desire for children substantially reduced over the two decades from 55.0% in 1993 to 7.0% among younger mothers in 2008. Non-contraception use due to infrequent sex among young mothers increased over the entire period but was less than 3.0%. Non-use due to infrequent sex among older mother was highest in 2003 and 2008 respectively.

Non-contraceptive use due to method related reasons were highest among women who cited fear of side effect and health concerns. There was consistent increase in the percentage of women who cited non-use due to fear of side effect for the two decades. In 2003 and 2008 for instance, 34.0% of young mothers indicated they were not using any contraceptive method for fear of side effect associated with use. The least identified reason was perceived cost of contraceptives which attracted less than 1.0% for the entire two decades.

Under opposition to use, religious doctrines and respondent opposition were among the frequently identified reasons for non-use. In 1998, 19.0% older women and 31.0% young mothers associated non-contraceptive use to opposition. The percentage was consistently higher and peaked at 30.8% in 2008. Women who associated non-use to fatalism was only assessed in 1993. Partner opposition was identified among women but was relatively higher among younger mothers compared to older mothers.

A substantial percentage of women were not using a contraceptive method identified lack of knowledge o method and reason for non-use. The percentage of women who attributed non-use to lack of knowledge was higher among younger mothers in 1993 and systematically reduced for the entire two decades reflecting a consistent improvement in access to information on contraception over the period. The percentage of mothers who were not using a contraceptive because they did not know a method and the source of supply reduced considerably from three in ten women in the last decade (1993-2003) to nearly one in ten women in 2008.

4. Conclusions and Recommendations

We reviewed GDHS data/reports from 1993 to 2014 on factors that influence unmet need and reasons for non-contraception use among married women in Ghana (http://www.dhsprogram.com/survey). The increasing desire for smaller families and for better control of the timing for childbirth coupled with population growth resulted in substantial increase in the number of married women preference to delay or limit childbirth. This increased desire was partly witnessed by the slight increase in the percentage of women using modern contraceptive methods. Over the two decades in Ghana, nearly one in three married women used a form of family planning method. In LMICs more than two in five married women were using a modern method of family planning as at 2012 (Darroch, Singh, 2013, 2013; Wulifan, Bagah, 2015). The percentage of women with unmet need dropped significantly below the sub-regions average in 1998, nonetheless with nearly over one in three women still having unmet need throughout the entire two decades, the need to improve contraception services remain substantial in reducing unmet need in the country.

Our study detected that, as a woman increases in age, they were more likely to report unmet need for limiting compared to their younger counterparts who were more likely to report unmet need for spacing. These findings are consistent with a review conducted in LMICs, a study in Ethiopia, Malawi and Zambia (Hailemariam, Haddis, 2011; Ikamari, Lwanga, 2000; Palamuleni et al, 2014; Wulifan et al, 2016). The results further suggest that, total unmet need reduced as women grew older. Family planning interventions should therefore target young women with unmet need for spacing and their older counterparts' unmet need for limiting. Further qualitative studies to explore the reasons for these variations in unmet need between these categories of mothers will be beneficial.

Within the twenty years period nearly two in five rural and one in three urban married women reported unmet need for family planning in Ghana. These findings confirm the low level of contraception use in rural settings (Eliason et al, 2014; Govindasamy, Boadi, 2000). Other studies detected significant rural-urban disparities in unmet need and consistently report the likelihood of lower unmet need among urban dwellers relative to their

counterparts in rural communities (Hailemariam, Haddis, 2011; Imasiku et al, 2014; Korra, 2002). Researchers in prior studies equally identified rural-urban disparities in unmet need to be associated with limited education and lack of access to family planning information. Family planning Interventions focusing on rural-urban disparities are significant in reducing unmet need (Omane-Adjepong et al, 2012; Ross, Winfrey, 2001).

Unmet need among married women varied by region. Women residing in Northern, Upper East and West regions were less likely to report unmet need for contraception compared to their colleagues from Central, Western, Volta and Ashanti regions. These regional variations are consistent with studies which attributed such differences to socio-economic characteristics of the regions (Darroch, Singh, 2013; Eliason et al, 2014; Palamuleni et al, 2014).

Our results for the entire two decades equally showed that, unmet need was lower among married women who had at least secondary education. This is probably because most studies reported that, women with higher education had access to information and were more likely to use contraception (Casterline et al, 1997; Korra, 2002). This result confirms other studies which reported higher correlates of unmet need among women with lower levels of education (Imasiku et al, 2014). In Ghana very few women are educated beyond secondary level and the majority of women who have no education prefer to delay or limit family sizes but do not use any form of contraception (Machiyama, Cleland, 2013). It is therefore important to note that level of education significantly relates to unmet need for family planning and can therefore not be ignored in policy design for better lives of women.

Women from wealthier households were less likely to report unmet need for family planning. Unmet need was primarily lower among women from wealthier households compared to women from the poorer quintiles. This result is concordant with prior studies (Omane-Adjepong et al, 2012). Studies from SSA and other LMICs consistently suggested that, women from low socioeconomic backgrounds were less exposed to opportunities of self support and less control of their own reproduction. Given that married women from poorer households were more likely to report unmet need, programmes targeting women with different socioeconomic backgrounds should be incorporated in policy design.

Going by the reasons outlined for non-contraception use, family planning interventions should be more specific and target women demand for contraceptive services. From the review, the most popular reason for not using family planning was fertility related and specifically the desire for many children. The least reason for non-contraceptive use was associated with infrequent sex which was frequent among older mothers. Other reasons for non-contraceptive use which emerged in our review included lack of knowledge on modern methods, fear of side effects, opposition to use and issues related to cost of contraceptives. Other reasons pointed to potential information barrier to contraceptive use. Women should be given information on the type of contraceptive methods, where to obtain supplies, cost of contraceptive supplies and how to appropriately apply the selected method (Adebowale, Palamuleni, 2014). In most low income countries, women who desire to delay or stop child birth altogether are hardly aware of family planning method and their cost (Westoff, Bankole, 1995). In most cases, these women have incomplete knowledge or misinformation on how to use a particular method and where to get supplies (Bradley et al, 2012). Social opposition to contraceptive use differs greatly depending on the setting. In Pakistan and Afghanistan, most women held the view that their partners were opposed to contraceptive practice (Huber et al, 2010; Raheelah, 2012). In northern Ghana, married women are uncertain if the partners and relatives approve contraceptive use and for this reason women are hesitant to adopt family planning methods (Bawah et al, 1999). In SSA, women's fear of side effects for contraceptive use was a major barrier (Bongaarts, Johansson, 2002; Casterline et al, 1997). These health concerns are multidimensional and often overlooked by research. In a qualitative study in Pakistan and Zambia, the health concerns do not only limit contraceptive use due to the discomfort women experience but also the expected financial cost due to lost time for work through managing the side effects (Casterline et al, 1997). Two studies held the view that, men are often hesitant to approve contraceptive use for spacing and limiting for fear of losing their role as heads of the family or indirectly encouraging their spouses to be promiscuous (Bawah et al, 1999; Hall et al, 2008; Kaida et al, 2005; Mosha et al, 2013; Wulifan et al, 2016).

5. Methodological considerations

In our mini review unlike systematic, narrative or scoping reviews, it was not our aim to assess the methodological quality and condense evidence in a quantitative manner through meta-analysis as in systematic reviews or to collate, map, chart and summarize primary evidence to describe the state of knowledge on the topic as in scoping reviews. Our main focus was to simplify and provide concise information on unmet need for family planning which has recently gained prominence in policy and academia. We sought to highlight and summarize unmet need among married women in Ghana using published GDHS reports and other relevant articles we extracted.

6. Way forward

Within the past two decades, there was an insignificant change in unmet need for contraception among married women in Ghana. Given that less than one in three women were using modern contraceptive methods to delay or limit childbirth and the more than one in three married women having unmet need, there is nagging need to understand drivers of modern contraceptive methods seeking behavior. There is the need for research to understand the geophysical and socio-eco-cultural dynamics that influence unmet need. Also, family planning service delivery and other related factors should be addressed through a more responsive and gender sensitive health care system. Health concerns, fear of side effects and women themselves opposition to contraceptive use which emerged in our review points to the need to incorporate counselling and follow-up services to monitor the discomfort associated to some contraceptive methods. Consistent information to counteract misconceptions and misinformation on modern contraceptive methods should be given top priority by service providers through media. Family planning services should target women with unmet need according to their need categories so as to experience the demographic impact of acceptable fertility rates and population growth which is the *sine qua non* for poverty reduction as well as social and economic development of the republic of Ghana.

7. Data sharing

The data/reports used from the manuscript are available online in the Measure DHS web platform. Referenced articles are also available online.

8. Declaration

8.1 Competing interest

The author declares no competing interest.

8.2 Acknowledgement

The author wishes to express his great debt of gratitude to the ICF Macro Calverton, Maryland, USA, for releasing the data and reports from 1988 to 2014 and also granting the author access to their DHS web platform for this study. I also appreciate the efforts of the Ghana statistical service and the Government of Ghana for coordinating and conducting these surveys.

8.3 Abbreviations

GDHS- Ghana demographic health survey, SSA- Sub-Saharan Africa. LMICs- Low and middle income countries, FP- family planning.

9. Reference

Adebowale, Stephen A.; Palamuleni, Martin E. (2014): „Determinants of unmet need for modern contraception and reasons for non-use among married women in rural areas of Burkina Faso“. In: *African Population Studies*. 28 (1), S. 499–514.

Bawah, Ayaga Agula; Akweongo, Patricia; Simmons, Ruth; et al (1999): „Women's Fears and Men's Anxieties. The Impact of Family Planning on Gender Relations in Northern Ghana“. In: *Studies in Family Planning*. 30 (1), S. 54–66, DOI: 10.1111/j.1728-4465.1999.00054.x.

Bongaarts, John; Bruce, Judith (1995): „The Causes of Unmet Need for Contraception and the Social Content of Services“. In: *Studies in Family Planning*. 26 (2), S. 57–75, DOI: 10.2307/2137932.

Bongaarts, John; Johansson, Elof (2002): „Future Trends in Contraceptive Prevalence and Method Mix in the Developing World“. In: *Studies in Family Planning*. 33 (1), S. 24–36, DOI: 10.1111/j.1728-4465.2002.00024.x.

Bradley, Sarahh E.K; Croft, Trevor N.; Fishel, Joy D.; et al (2012): „Revising unmet need for family planning-DHS Analytical Studies 25“. In: *ICF International Calverton, Maryland, USA*.

Casterline, John B.; Perez, Aurora E.; Biddlecom, Ann E. (1997): „Factors Underlying Unmet Need for Family Planning in the Philippines“. In: *Studies in Family Planning*. 28 (3), S. 173–191, DOI: 10.2307/2137886.

Cates, Willard Jr. (2010): „Family Planning. The Essential Link to Achieving all Eight Millennium Development Goals“. In: *Contraception*. 81 (6), S. 460–461, DOI: 10.1016/j.contraception.2010.01.002.

Cleland, John; Harbison, Sarah; Shah, Iqbal H. (2014): „Unmet Need for Contraception: Issues and Challenges“. In: *Studies in Family Planning*. 45 (2), S. 105–122, DOI: 10.1111/j.1728-4465.2014.00380.x.

Darroch, Jacqueline E; Singh, Susheela (2013): „Trends in contraceptive need and use in developing countries in 2003, 2008, and 2012: an analysis of national surveys“. In: *The Lancet*. 381 (9879), S. 1756–1762, DOI: 10.1016/S0140-6736(13)60597-8.

Dixon-Mueller, Ruth; Germain, Adrienne (1992): „Stalking the Elusive „Unmet Need“ for Family Planning“. In: *Studies in Family Planning*. 23 (5), S. 330–335.

Eliason, Sebastian; Baiden, Frank; Yankey, Barbara A.; et al (2014): „Determinants of unintended pregnancies in rural Ghana“. In: *BMC Pregnancy and Childbirth*. 14 (1), S. 261, DOI: 10.1186/1471-2393-14-261.

Govindasamy, Pavalavalli; Boadi, Emmanuel (2000): *A decade of unmet need for contraception in Ghana: Programmatic and policy implications*. Calverton, Maryland, USA: Macro International.

Griffiths, Peter (2002): „Evidence informing practice: introducing the mini-review“. In: *British Journal of Community Nursing*. 7, S. 36–46.

Hailemariam, Assefa; Haddis, Fikrewold (2011): „Factors Affecting Unmet Need for Family planning in Southern Nations, Nationalities and Peoples Region, Ethiopia“. In: *Ethiopian Journal of Health Sciences*. 21 (2), S. 77–89.

Hall, Mary Ann Kirkconnell; Stephenson, Rob B.; Juvekar, Sanjay (2008): „Social and Logistical Barriers to the Use of Reversible Contraception Among Women in a Rural Indian Village“. In: *Journal of Health, Population and Nutrition*. 26 (2), S. 241–250.

Hanafin, Sinéad; Cowley, Sarah; Griffiths, Peter (2004): „An application of the mini review to a complex methodological question: how best to research public health nursing and service quality?“. In: *International Journal of Nursing Studies*. 41 (7), S. 799–811, DOI: 10.1016/j.ijnurstu.2004.03.007.

Hill, Ken; Choi, Yoonjoung (2004): *Maternal Mortality in 2000. Estimates Developed by WHO, UNICEF and UNFPA*. World Health Organization.

Horayangkura, Phijaisakdi (2015): „Open Working Group proposal for Sustainable Development Goals“. In: *AU Law Journal*. 5 (2).

Huber, Douglas; Saeedi, Nika; Samadi, Abdul Khalil (2010): „Achieving success with family planning in rural Afghanistan“. In: *Bulletin of the World Health Organization*. 88 (3), S. 227–231, DOI: 10.2471/BLT.08.059410.

Ikamari, L D; Lwanga, C K (2000): „Correlates of Unmet Need for Contraception in Zambia“. In: *African journal of health sciences*. 7 (3–4), S. 12–24.

Imasiku, Eunice N. S.; Odimegwu, Clifford O.; Adedini, Sunday A.; et al (2014): „VARIATIONS IN UNMET NEED FOR CONTRACEPTION IN ZAMBIA: DOES ETHNICITY PLAY A ROLE?“. In: *Journal of Biosocial Science*. 46 (3), S. 294–315, DOI: 10.1017/S0021932013000357.

Kaida, Angela; Kippi, Walter; Hessel, Patrick; et al (2005): „Male Participation in Family Planning. Results From a Qualitative Study in Mpigi District,Uganda“. In: *Journal of Biosocial Science*. 37, S. 18.

Korra, Antenane (2002): *Attitudes toward family planning and reasons for nonuse among women with unmet need for family planning in Ethiopia*. ORC Macro Calverton.

Machiyama, Kazuyo; Cleland, John (2013): „Insights into Unmet Need in Ghana“.

Mosha, Idda; Ruben, Ruerd; Kakoko, Deodatus (2013): „Family Planning Decisions, Perceptions and Gender Dynamics Among Couples in Mwanza, Tanzania. A Qualitative Study“. In: *BMC Public Health*. 13, S. 523, DOI: 10.1186/1471-2458-13-523.

Nortman, Dorothy L. (1982): „Measuring the Unmet Need for Contraception to Space and Limit Births“. In: *International Family Planning Perspectives*. 8 (4), S. 125–134, DOI: 10.2307/2948132.

Omane-Adjepong, Maurice; Oduro, Francis T.; Annin, Kwame (2012): „A multinomial regression analysis of unplanned pregnancies in Ahafo Ano South District, Ghana“. In: *Am Int J Contemp Res*. 2, S. 12.

Palamuleni, Martin E.; Adebowale, Ayo; others (2014): „Prevalence and Determinants of Unintended Pregnancies in Malawi“. In: *African Population Studies*. 28 (1), S. 551–563.

Raheelah, Amin (2012): „Choice of contraceptive method among females attending family planning center in Hayat Abad Medical Complex, Peshawar“.

Ross, John A.; Winfrey, William L. (2001): „Contraceptive Use, Intention to Use and Unmet Need during the Extended Postpartum Period“. In: *International Family Planning Perspectives*. 27 (1), S. 20–27, DOI: 10.2307/2673801.

Sabrina, Nieves (2014): „The History of Birth Control“. *prezi.com*. Abgerufen am 18.03.2015 von https://prezi.com/oy0a55y_trp1/the-history-of-birth-control/.

Shaikh, Babar (2010): „Unmet need for family planning in Pakistan- PDHS 2006-2007: It’s time to re-examine déjà vu“. In: *Open Access Journal of Contraception*., S. 113, DOI: 10.2147/OAJC.S13715.

Westoff, Charles F. (1992): „Measuring the Unmet Need for Contraception. Comment on Bongaarts“. In: *Population and Development Review*. 18 (1), S. 123–125, DOI: 10.2307/1971862.

Westoff, Charles F. (1988): „The Potential Demand for Family Planning: A New Measure of Unmet Need and Estimates For Five Latin American Countries“. In: *International Family Planning Perspectives*. 14 (2), S. 45–53, DOI: 10.2307/2947679.

Westoff, Charles F.; Pebley, Anne R. (1981): *Alternative Measures of Unmet Need for Family Planning in Developing Countries*. o.V.

Westoff, Charles Francis; Bankole, Akinrinola (1995): „Unmet need: 1990-1994. Demographic and Surveys Comparative Studies No. 16. Calverton, MD: micro International Inc.“.

WHO (2007): *Maternal Mortality in 2005. Estimates Developed by WHO, UNICEF, UNFPA, and the World Bank*. Geneva: The World Health Organization.

Wulifan, Joseph K.; Bagah, Daniel A. (2015): „Male Involvement in Family Planning in Muslem Communities in Wa Municipality, Ghana“. In: *Research on Humanities and Social Sciences*. 5 (7), S. 86–97.

Wulifan, Joseph K.; Brenner, Stephan; Jahn, Albrecht; et al (2016): „A scoping review on determinants of unmet need for family planning among women of reproductive age in low and middle income countries“. In: *BMC Women's Health*. 16, S. 2, DOI: 10.1186/s12905-015-0281-3.

Tables

Table 1: Percentage of married women with unmet need for contraceptive by woman characteristics from GDHS 1993 - 2014

	1993			**1998**			**2003**			**2008**			**2014**		
Background Characteristics	Unmet need			Unmet need			Unmet need			Unmet need			Unmet need		
	spacing	limiting	Total	spacing	limiting	Total	spacing	limiting	Total	spacing	limiting	Total	spacing	limiting	Total
Age															
15-19	42.9	5.0	47.8	24.3	2.4	26.7	52.9	3.9	56.8	58.8	2.9	61.7	49.6	1.1	50.7
20-24	37.3	4.0	47.3	19.7	2.3	22.0	39.2	2.0	41.1	36.9	5.2	42.2	32.0	2.0	34.0
25-29	31.4	6.3	37.7	16.7	5.8	22.5	28.9	7.0	36.0	34.1	5.9	40.0	25.9	5.0	30.8
30-34	24.7	14.3	39.0	9.4	12.3	21.7	20.3	10.4	30.7	22.1	11.1	33.2	17.5	12.0	29.5
35-39	19.1	18.5	37.6	6.0	17.6	23.6	14.7	18.1	32.8	14.5	20.5	35.0	15.1	20.2	35.3
40-44	12.3	28.3	40.6	3.8	24.8	28.6	7.3	22.1	29.5	7.5	23.4	30.9	6.2	22.3	28.5
45-49	5.0	23.2	28.2	0.8	17.8	18.6	3.9	21.6	25.5	3.5	16.7	20.1	1.2	13.0	14.2
Residence															
Urban	21.1	14.3	35.4	10.1	11.5	21.6	17.3	10.7	28.0	19.4	12.9	32.3	16.2	12.5	28.7
Rural	27.3	23.2	40.1	11.8	11.9	23.7	24.7	13.4	38.1	24.7	12.8	37.6	18.5	12.6	31.1
Region															
Western	24.4	12.4	36.8	12.9	12.9	25.8	22.6	10.1	32.7	22.3	17.0	39.4	16.6	10.8	27.4
Central	31.9	13.3	45.2	8.0	16.8	24.8	31.2	18.6	49.9	33.8	15.9	49.7	19.4	10.0	29.4
Greater Accra	17.1	12.9	30.1	8.8	10.6	19.5	14.6	16.7	31.2	13.0	13.4	26.5	14.3	14.0	28.3
Volta	22.9	20.1	43.0	11.1	17.3	28.4	21.1	19.4	40.5	21.4	12.8	34.2	18.0	18.3	36.3
Eastern	26.2	14.7	40.9	12.1	11.4	23.6	17.5	16.3	33.9	22.5	17.1	39.6	17.7	17.5	35.1
Ashanti	29.3	18.8	48.1	11.2	11.6	22.8	17.6	11.0	28.5	22.7	13.8	36.5	16.6	15.2	31.8
Brong Ahafo	28.7	12.7	41.4	10.3	11.3	21.6	22.5	8.9	31.4	24.8	10.5	35.3	16.8	9.8	26.5
Northern	23.7	5.6	29.3	14.5	5.0	19.5	28.8	5.0	33.8	25.2	6.7	31.9	21.7	6.1	27.8
Upper East	20.6	9.6	30.1	12.7	5.6	18.3	29.1	10.0	39.1	22.7	9.4	32.1	18.6	7.8	26.5
Upper West	23.7	5.1	28.8	14.9	6.0	20.9	19.7	4.8	24.5	19.4	8.6	28.1	19.7	7.8	27.5
Education															
No Education	25.4	13.3	38.8	12.1	11.7	23.7	24.1	11.1	35.1	22.3	12.8	35.1	17.6	11.7	29.3
Primary	26.0	16.3	42.2	12.3	14.2	26.5	24.3	15.3	39.6	25.1	15.9	41.0	17.1	14.8	31.9
Middle/JSS/JHS	27.7	13.3	41.0	10.5	11.3	21.8	19.3	12.5	31.8	21.9	12.5	34.4	17.7	14.0	31.7
Secondary+	11.7	6.7	18.3	8.4	8.8	17.2	14.2	9.9	24.1	20.0	8.3	28.3	16.4	7.6	24.1
Wealth quintile															
Lowest	na	na	na	na	na	na	29.6	11.1	40.7	25.6	10.6	36.2	19.5	11.6	31.2
Second	na	na	na	na	na	na	23.7	14.1	37.7	26.6	16.2	42.8	18.4	13.9	32.3
Middle	na	na	na	na	na	na	21.9	12.6	34.5	25.3	14.1	39.4	17.5	14.5	32.0
Fourth	na	na	na	na	na	na	20.3	12.8	33.0	20.9	14.0	34.9	17.8	12.1	29.9
Highest	na	na	na	na	na	na	12.8	11.0	23.9	14.6	9.5	24.2	14.3	11.0	25.3
Total	**25.3**	**13.3**	**38.6**	**11.2**	**11.8**	**23.0**	**21.7**	**12.3**	**34.0**	**22.5**	**12.9**	**35.3**	**17.4**	**12.5**	**29.9**
Overall															
Aware- FP method	91.0%			93.0%			98.0%			98:0%			99.0%		
Contraceptive use	M=10; T= 10 (20.0%)			M=13; T= 9 (22.0%)			M=19; T= 6 (25.0%)			M=17; T= 7 (24.0%)			M=22; T= 5 (27.0%)		
Unmet need	39.0%			23.0%			34.0%			35.0%			30.0%		

M= Modern method of contraceptive
T= Traditional method
na= Not available

Table 2: Percentage distribution of married women not using a contraceptive method by reason for not using, GDHS 1993-2014

Reasons for not using contraception	1993		1998		2003		2008		2014	
	Age									
	15-29	30-49	15-29	30-49	15-29	30-49	15-29	30-49	15-29	30-49
Fertility related reasons	**61.6**	**64.0**	**26.1**	**47.6**	**20.3**	**47.7**	**11.1**	**37.4**		
Want many children	54.9	25.9	21.2	18.1	17.4	12.5	6.8	8.7		
Infrequent sex	0.8	4.5	1.9	2.6	1.4	7.0	2.5	5.3		
Difficult to be pregnant/subfecund/infecund	5.4	16.3	3.0	10.3	1.4	19.7	1.8	13.3		
Menopausal/Hysterectomy	0.5	16.3	0.0	16.6	0.0	8.5	0.0	10.1		
Method related reasons	**11.4**	**11.0**	**30.3**	**25.6**	**47.5**	**33.8**	**48.8**	**38.5**	na	na
Cost too much	0.0	0.4	0.8	0.8	1.5	1.1	0.0	1.0		
Fear of side effect	7.1	6.2	23.7	15.7	34.2	22.5	34.1	22.9		
Other health concern	2.4	2.7	3.1	4.7	9.1	7.0	8.1	8.2		
Lack of access to modern methods /too far	0.5	0.4	0.0	0.2	0.8	0.5	0.4	0.3		
Inconvenient to use	1.4	1.3	1.7	1.5	1.0	1.0	3.6	2.0		
Interfere with body's normal processes	na	na	1.0	2.7	0.9	1.6	2.6	4.1		
Opposition to use	**13.9**	**7.6**	**31.1**	**18.6**	**16.9**	**10.7**	**30.8**	**19.2**	na	na
Religious opposition/Prohibition	3.3	1.7	9.8	5.4	4.7	3.1	3.4	2.5		
Respondent opposed to family planning	6.0	2.4	16.2	11.9	8.9	4.7	22.1	14.2		
partner opposed	na	na	4.8	1.3	3.3	2.9	4.1	2.0		
Fatalistic	3.8	2.9	na	na	na	na	na	na		
Others opposed	0.8	0.6	0.3	0.0	na	na	1.2	0.5		
Lack of information	**20.2**	**16.2**	**12.6**	**8.2**	**8.5**	**4.7**	**6.4**	**2.3**	na	na
Lack of knowledge on method	15.8	11.5	6.5	3.8	5.9	3.9	3.7	1.3		
Know no source	na	na	1.6	1.5	2.6	0.8	2.7	1.0		
Others	0.3	1.2	1.4	0.7	2.1	1.2	0.5	1.1		
Don't know	4.1	3.5	2.6	2.2	3.0	1.6	2.3	1.5		
Missing	na	na	0.5	0.0	1.8	0.4	na	na	na	na
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**		
Number	**368**	**695**	**338**	**772**	**288**	**815**	**282**	**724**		

na= Not available