International Journal of Medical and Health Research
ISSN: 2454-9142
www.medicalsjournals.com
Volume 1; Issue 3; October 2015; Page No. 68-73

Maternal Health in Nepal Progress, Challenges and Opportunities

[1] Chetkant Bhusal, [2] Sigma Bhattarai, [3] Ravi Kumar Bhaskar

[1] Department of Community Medicine, National Medical College Teaching Hospital, Birgunj, Nepal

[2] Nursing Department, National Medical College Teaching Hospital, Birgunj, Nepal

[3] Department of Community Medicine, National Medical College Teaching Hospital, Birgunj, Nepal

Abstract
Reducing maternal mortality and achieving universal access to reproductive health care are critical components of meeting the Millennium Development Goal (MDG). Nepal had revealed the efforts to achieve the targets of Second Long Term Health Plan, National Health Policy, Millennium Development Goal, and National Health Sector Programme and so on. This paper aims to highlight some of the progress, challenges and possible solutions for better improvements. The results published in different journals across the globe from 1995-2015 were reviewed and discussed in a Nepalese contexts. Although different indicators of maternal health in Nepal had shown the improvements from 1991 to 2015, there are a lot of challenges on maternal health. Some of the challenges are lack of awareness about maternal health services, underutilization of maternal health services, social disparities in maternal health, political instability, and low socio-economic status of women, teenage marriage and early pregnancy, unsafe abortion, mal distribution of human resource for health, unavailability and unaffordability of quality care, superstition and indigenous practice. In spite of these challenges, there are several factors which need to be considered to improve maternal health in Nepal.

Keywords: Maternal Health, Progress, Skilled Birth Attendant, Challenges, Opportunities, Antenatal care, maternal mortality ratio.

Introduction

Maternal health has been of prime concern for the international community and has prioritizes the need for addressing the reproductive health of woman along with the well-being of newborn. WHO defines maternal health as health of women during pregnancy, childbirth and the postpartum period? While motherhood is often a positive and fulfilling experience, for too many women it is associated with suffering, ill-health and even death [1, 2]. Improving maternal health is the fifth of eight Millennium Development Goals (MDGs), as adopted by member States in September of 2000, which aim to reduce the Maternal Mortality Ratio (MMR) by three quarters between 1990 and 2015 [3]. Reducing maternal mortality and achieving universal access to reproductive health care are critical components of meeting this goal. A recent estimate shows that globally, an approximately 800 women die each day from preventable causes related to pregnancy and childbirth. Nearly all of these deaths i.e 99% occur in low-resource settings [4], more than half in sub-Saharan Africa and almost one third in South Asia, of which most could have been prevented [5]. Between 1990 and 2013, maternal mortality worldwide dropped by almost 50% [4]. The maternal mortality ratio in developing countries in 2013 is 230 per 1, 00 000 live births versus 16 per 1, 00 000 live births in developed countries. There are also large disparities within countries, between women with high and low income and between women living in rural and urban areas. The risk of maternal mortality is highest for adolescent girls under 15 years old and complications in pregnancy and childbirth are the leading cause of death among adolescent girls in developing countries [5, 6]. In low-income countries, the coverage of skilled attendant at delivery was only 46%, compared with 64% in lower middle-income countries and 95% in upper middle-income countries [7]. South East Asia Regions faces a great challenge in reducing maternal, newborn and child mortality as targeted in the Millennium Development Goals 4 and 5 [8].

Nepal is least developed country with per capita income $270 human development index 0.534 with rank 142 which are among the lowest in the south Asia region [9]. Maternal mortality accounts for 11 % of deaths among women of reproductive ages 15-49 years in Nepal [10]. Still now 63% of birth occurs in home. These births are more vulnerable to the risk of death and so the mother. ANC provide by skilled Birth Attendant is only 58 [11] which is even less than low-income countries i.e 46% [7]. The percentage of delivery conducted by health worker that may be SBA or other health worker is also low i.e. 40%. More than one in two (54 percent) women does not receive PNC checkup within the recommended time NDHS [11]. Maternal mortality in Nepal is mainly due to three delays: delay in seeking care, delay in reaching care and delay in receiving lifesaving interventions once reaching the health facilities [12].

Methods

The aim of this paper is to review the available literature regarding situation, progress, challenges and opportunity of the maternal health in the context of Nepal. The literature search focused on the findings of the studies which were published in national and international levels. The method adopted for review was literature search from Pub Med, Medline, and Lancet, WHO, Hinari Google Scholar, web pages etc. published from 1991 to 2015.

Progress in Maternal Health in Nepal

Maternal health is a national health priority and improving maternal health is a major focus of the current national development plan in Nepal [13]. The trend of women dying every year in Nepal had been significantly reduced by motivating to achieve the target of Second Long Term Health Plan i.e. MMR 250 per 100,000 live births by 2017 [14] from 830 per 100,000 live births in 1991 [15] and looks set to drop the Millennium Development Goal (MDG 5) target of 134/ 100 thousands live birth by 2015 [16].

This is well known truth that the ladder of progress in maternal health is increasing day by day. The below table signifies that maternal mortality rate, teenage pregnancy as well as adolescent birth rate have been decreased according to NDHS 2011 in comparison to previous data. On top of that, exponential increment is seen in antenatal care coverage at least one, 4+ antenatal visit similarly delivery conducted by skilled birth attendant and institutional delivery, which has been huge achievement in the field of maternal health. On behalf of that, contraceptive prevalence rate has been heightened according to the recent data of NDHS 2011.

Table 1: Maternal Health Related Indicators in Nepal 1991 to 2011. [10, 11, 15, 17-19]

Indicators	**NFHS* 1991**	**NFHS 1996**	**NDHS** 2001**	**(NDHS 2006)**	**(NDHS 2011)**
Maternal Mortality Ratio per 100 thousands live births	830	539	415	281	229#
Antenatal care coverage at least one%	NA	24	48.5	73.7	85
4+ Antenatal care Visit			14	29.4	50.1
Delivery conducted by Skill Birth Attendants%	7	9	11	19	36
Institutional Delivery %				17.7	35.3
Teenage pregnancy per thousand	NA	NA	84	106.3	81
Contraceptive Prevalence Rate%		26	35.4	44.2	43.2
Adolescent Birth Rate(births per thousand woman aged 15 to 19years)	NA	NA	110	98	81

*Nepal Family Health Survey, **Nepal Demographic and Health Survey, # Maternal Mortality Morbidity survey 2008/09

Challenges of Maternal Health

Definitely the progress had been made in the area of Maternal Health; the trends showed different indicators are in progress. Beyond these huge achievements, Antenatal care coverage at least one, 4+ antenatal visit, delivery conducted by skilled birth attendant as well as institutional delivery should be upsurge to meet the target of MDG 2015, NHSP II 2015 similarly SLTHP 2017. Furthermore it seems to be great concerned topic to down turn through prevalence of iron deficiency anemia in pregnancy, adolescent birth rate similarly unmet need of family planning to meet the set target of MDG 2015 and SLTHP 2017. This signifies that loads of effort will be needed to cut down the challenges of maternal health.

Table 2: Comparison of Maternal Health Related Indicators with target of Millennium Development Goal 5 and Second Long term Plan. [11, 14, 16]

Indicators	NDHS *2011	MDGs **Target 2015	SLTHP*** Target 2017
Antenatal care coverage at least one%	85	100	NA
4+ Antenatal care Visit	50.1	80	80
Delivery conducted by Skill Birth Attendants%	36	60	60
Institutional Delivery %	35.3	40	40
Prevalence of Iron Deficiency Anemia in Pregnancy	48	43	15
Contraceptive Prevalence Rate%	43.2	67	58.2
Adolescent Birth Rate(births per thousand woman aged 15 to 19 years)	81	70	NA
Unmet Need of family Planning	27	15	NA

***** Nepal Demographic and Health Survey, **Millennium Development Goal, ***Second Long Term Health Plan

These challenges may be due to the various reasons. Some of them are summarized as below:

Lack of Awareness about maternal Health Services

Lack of awareness about maternal health especially in the rural areas of Nepal has been seen as one of the leading cause for maternal death in Nepal. Illiteracy and lack of awareness were perceived as barriers for not utilizing the maternal health care services. Evidence shows that most women from remote areas are illiterate and do not know the advantages of utilizing health care. One of the participants in the Qualitative study done by Lama and Krishna among pregnant women, postnatal mothers, mothers-in-law and service providers mentioned, “They do not visit health center because they are not aware of the services and its benefits for our health. Those women should be encouraged to visit health posts” [20].

Under Utilization of maternal Health Services

Underutilization of health services are big challenges for Nepal. Different factors such as lack of awareness, cost involved in availability of health facilities, prohibition by head of family, less education and low family income are reasons of not delivering children in health institutions [21, 22]. Deliveries at home by unskilled birth attendants are still common, even in a rural area relatively close to capital city of Nepal. Key factors associated with the uptake of skilled delivery care included: age, ethnicity, occupation and education of women as well as their husbands, number of pregnancies and children, use of ANC, and experience of problems during pregnancy. The main

barriers to accessing skilled delivery were distance to hospital and costs associated with a delivery at hospital [23].

Social Disparities in Maternal Health

The further analysis of the 2006 NDHS revealed that 28 percent of the country's population consist Dalits, Muslims, Terai/Madhesi and other groups who had consistently low levels of most indicators regarding health. In terms of maternal health, there was a consistent pattern of disparities among the different groups in the use of ANC, delivery by an SBA, and delivery in a health facility. Less than 35 percent of Muslims, Terai Janajati, and Hill Janajati women received ANC from an SBA; an even lesser percentage delivered in a health facility supported by an SBA. Likewise Terai/Madhesi Dalits had lowest percentages delivering in a health facility as well as poorest nutritional status [24]. The study by Suvedi and colleagues found much higher maternal mortality ratio (MMR) among Muslims, Terai/Madhesi and Dalits compared with the Brahman/Chhetri and Newar [25].

Political Instability

Political instability and the deteriorating situation arising from political conflict remain a threat to health care delivery in Nepal. Armed conflicts, which primarily occur in low- and middle-income countries, have profound consequences for the health of affected populations, which leads to the decrement in the utilization of maternal health care services [26]. Attacks have damaged many health facilities, and staff is often reluctant or unable to travel in rural areas. Many women are reported to have died during childbirth because they could not reach emergency obstetric care due to strike, due to restricted movement of vehicles [27]. Due to lack of security and political instability, many women had decreased concerned on utilizing health care services, in spite of that turnover rate of health care professionals is increased from that particular affected areas.

Low socio economic status of Women

As Nepal is a developing country, Nepalese women have low status in society. A woman in developing countries are either under collective decision making with their partners or completely depends on male partner's decision on issues of reproductive live [28]. The majority of women in Nepal have to ask the head of house (husband or father in law) to spend money, even for health care services. Women's lack of decision-making power within the family and community, their lack of education and economic power, restrict their ability to seek and receive care during pregnancy and childbirth [29]. On the top of these, Nepalese women also have poor knowledge about diet and nutrition. Therefore, nutritional anaemia is one of the major contributors to the high maternal mortality rate in Nepal. Frequent pregnancies and inadequate nourishment of women during pregnancy place them at high risk during delivery [30].

Teenage Marriage and Early Pregnancy

Teenage pregnancy today, still represent one of the most important public health problems [31]. NDHS (2011) reported that 17% of teenage girls aged 10-19 had already given birth or were pregnant with their first child [11]. Teenage pregnancies are considered problematic because complications from pregnancy and childbirth are the leading causes of death in teenage girls in developing countries. It is estimated that 70,000 female teenagers die each year because they are pregnant before they are physically mature enough for successful motherhood [32]. Therefore, teenage pregnancies and births are considered as great challenges.

Unsafe Abortion

Unsafe abortion is one of the easiest preventable causes of maternal mortality as well as it has been leading causes of maternal mortality in the developing Nation which is big challenges [33]. The main causes of death from unsafe abortion are hemorrhage, infection, sepsis, genital trauma, and necrotic bowel [34]. With unsafe abortion, the additional risks of maternal morbidity and mortality depend on what method of abortion is used, as well as women's readiness to seek post abortion care, the quality of the facility they reach, and the qualifications of the health provider [34, 35].

Mal distribution of Human Resources for Health (HRH)

The HRH situation in Nepal has several key challenges particularly related to the shortage and uneven distribution of the health workforce [36]. Despite the need for an appropriate number and distribution of different cadres of health personnel, who are socially responsible, technically competent and are available at the right time and place [37]. Shortages are especially severe in rural areas, since health professionals are often concentrated in cities [38].

Unavailability and affordability of Quality Care

About 25.20% of the populations live below the national poverty line in Nepal [39]. Unemployment was regarded as important barrier resulting in lack of money due to which decision is taken late, and the time taken to accumulate the assets delays care further which was the reason for the women from low economic status for not availing the services. One of the participants in the Qualitative study done by Lama and Krishna among pregnant women, postnatal mothers, mothers-in-law and service providers mentioned, "Even though the services provided in health centers are free, the cost of transportation and other expenses are high, so people cannot afford to bear the extra costs. Therefore I think most of the women from remote villages are deprived of services because of lack of money. People with less money cannot afford so they prefer to deliver at home. Although hospitals provide some money for checkup and delivery, it is not enough. People cannot afford to pay the persons accompanying in hospital and other transportation expenses so the amount given by government is also not adequate at all to save poor people from the economic burden [20].

Superstition and Indigenous practice

Superstition and indigenous practice is one of the barriers for not utilizing the services. In different areas of Nepal, still there is the tradition that the first baby should be delivered at home. A large amount of straw an ideal insulation material is brought into the house to form the birth bed. In some villages, women are still forced to give birth in cow shed. Besides these certain fruits are not given during pregnancy like papaya, pineapple, mango that leads early labour sometimes leading to abortion. Vitamins are also not given because they believe that vitamins are 'strengthening' so it will make the fetus grow big resulting in difficult delivery [20].

Opportunities

There are several factors which need to be considered to improve maternal health in developing countries like Nepal. Some are summarized.

Improving health service utilization

Low utilization of maternity services has been noted in those areas where there are no or poor road and transportation links to the health facility. Thus government should prioritize the establishment of new health facilities in remote and less developed areas together with developing road links to major urban areas of Nepal. Higher status women (e.g. measured by education level, wealth and urban dwelling) make better use of health services including for maternity care. Previous study revealed that Increase women's socio-economic status in society, Access: rural roads and transportation, Establishment of medical facilities in less developed region, Increase of Skilled Birth Attendance, Address inequalities that exist in utilization of maternal health services during pregnancy should be focused to improve maternal health service utilization in Nepal [40]. Maternal health services, such as ANC, skilled assistance during delivery and postnatal care, along with adequately equipped health institutions play a major role in the reduction of maternal mortality and morbidity [30].

Empowering Women in society

Empowering women by providing educational status is the best way to improve the maternal health as well as women's status in the society. Maternal mortality tends to be inversely proportional to women's status, with better-educated women more likely to seek antenatal and postnatal care and have institutional deliveries [41]. Several studies from Nepal have shown that Educated women are more likely to realize the benefits of using maternal health services, women who have better socio-economic and demographic situations (that is, related to level of education, employment and income, urban and region of living, easy availability of services, age of the mother, number of live births and women's household position) are more likely to utilize maternal health care services than other women [42, 30].

Involving Male in maternal Health

Male involvement enables men to support their spouses to utilize obstetric services and couple would adequately prepare for birth complications. This would lead to a reduction in all three phases of delay: delay in decision to seek care; delay in reaching care; and delay in receiving care. The male partner can play a crucial role especially in the first and second phases of delay in developing countries and thereby positively impact birth outcomes [43]. A woman in developing countries are either under collective decision making with their partners or completely depends on male partner's decision on issues of reproductive live [28]. As male are decision maker, male should be aware about the need of care during pregnancy, delivery and after childbirth. Husbands not only support their partners by accompanying and providing financial resources during medical checkup but also play important role in decision making in various stages of pregnancy health care delivery which can make the difference between life and death for women [44].

Political stability

Politics affects formation, execution and modifications of health policy, strategies and plans which influence the health of the people. Political will and strong leadership make innovative, cost-efficient interventions possible. Because women are often marginalized economically, politically and socially, sustained leadership on gender equality is required to advance maternal health. Strong leadership at the highest levels promotes accountability within ministries and enables them to find reliable partners to drive and champion progress in maternal health [45]. Political commitment is one of the most essential components for the success of all health programs as it plays vital role for making the legislation, which directly affect the improvement of health behaviour.

Making Service affordable

Financial incentives are increasingly being advocated as an effective means to influence health-related behavior. Financial incentives provide an immediate reward to individuals for behavior that leads to health gains, and have been used to target a range of health-related behaviors [46]. It is suggested that the government should give priority to women from lower socio-economic groups in different community interventions that may be providing schemes for partial funding, community payment or pre-payment schemes, insurance programmes, private or social insurance [40].

Conclusion

In the context of maternal health of Nepal we have seen upgrading ladders, their obstacles as well as some views looking forward for their solution. Interventions aim to improve maternal health should be focused on decision making power of women their education status and family income. Similarly, in order to improve service utilization regarding maternal health, involvement of male partners' of the family should be encouraged. On the top of that Birth Preparedness and complication readiness package likewise emergency obstructive care are equally important. Despite of all these context discussion, the lack of sufficient evidence of the maternal health related indicators suggest further investigation in the upcoming days.

Competing Interest

No any competing interest

Authors Contribution

CKB prepared manuscript; SB assisted in preparing manuscript and provide feedback, RKB provide comments and feedback. All authors read and approved the final manuscript

Acknowledgement

Authors appreciated and acknowledge to all writers, editors and publishers of the reviewed literature. We express our gratitude to Dr. Krishna Aryal Seniror Research Officer Nepal Health Research Council. Similarly Prof. Shatrughan Ojha and Prof. Dr. Manoj Yadav, Assistant Prof. Dr. Kumar Gaurav, Sambhu Sah, Lecturer Rakesh Singh Department of Community Medicine, National Medical College and teaching Hospital. We are very indebted to Ram Bhandari, Senior Public Health Expert and Director MEH Consultants (P) Ltd, Prof. Salaudin Miya Principal Hope International College, Nagendra Prasad Luitel Research manager TPO Nepal for their cooperation.

References

1. WHO Improved access to maternal health services. World Health Organization. Geneva, 1998.

2. A Singh, DV Mavalankar, R Bhat. Providing skilled birth attendants and emergency obstetric care to the poor through partnership with private sector obstetricians in Gujarat, India, Bulletin of the World Health Organization, View at Publisher View at Google Scholar View at Scopus 2009; 87(12):960-964.
3. UN. The Millennium Development Goals Report United Nations Department of Economic and Social Affairs. New York, 2008.
4. WHO maternal mortality Fact sheet no. 348. World Health Organization, Geneva. [Cited 25/06/2015]. Available at http://www.who.int/mediacentre/factsheets/fs348/en/ 2014.
5. Conde-Agudelo A, Belizan JM, Lammers C. Maternal-perinatal morbidity and mortality associated with adolescent pregnancy in Latin America: Cross-sectional study, American Journal of Obstetrics and Gynecology. 2004; 192:342-349.
6. Patton GC, Coffey C, Sawyer SM, Viner RM, Haller DM, Bose K *et al.* Global patterns of mortality in young people: a systematic analysis of population health data. *Lancet*, 2009; 374:881-892.
7. WHO Global Health Observatory (GHO) data [available at Globalwww.who.int/gho/maternal_health/skilled_care/skilled_birth.../en/][Cited on 09/08/2015], 2013.
8. Elizabeth Lule, Ramana GNV, Nandini Ooman, Joanne Epp, Dale Huntington, James E *et al.* Achieving the Millennium Development Goal of Improving Maternal Health: Determinants, Interventions and Challenges. HNP Discussion Paper, Health Nutrition and Population, World Bank, 2008.
9. Human Development Report 2007/2008.
10. Nepal-Maternal Mortality and Morbidity Study [available at http://www.newera.com.np/research/TA/ta_18.htm] 2008/2009.
11. Ministry of Health and Population (MOHP) [Nepal], New ERA, and ICF International Inc. Nepal Demographic and Health Survey 2011. Kathmandu, Nepal: Ministry of Health and Population, New ERA, and ICF International, Calverton, Maryland, 2012.
12. Nandan D, Kushwah SS, Dubey DK, Singh G, JP Shivdasani, Vivek Adhish. A study for assessing birth preparedness and complication readiness intervention in REWA district of Madhya Pradesh, National Institute of Health and family Welfare http://www.nihfw.org/pdf/RAHIII%20Reports/REWA.pdf, 2008-09.
13. HMGN (2002) The Tenth Plan 2002-2007. National Planning Commission, His Majesty's Government of Nepal, Kathmandu. Available atttp://www.npc.gov.np/tenthplan/docs_in_english.htm.
14. Ministry of Health and Population. Second long term health plan [Online]. Available from URL:http://www.mohp.gov.np/english/publication/second_long_term_health_ plan_1997_2017.php
15. Nepal Family Health Survey-Google Search [Internet] Available from: http://www.google.co.in, 1991.
16. Malla D, Giri K, Karki C, Chaudhary P. Achieving millennium development goals 4 and 5 in Nepal. BJOG 2011; 18:60-8.
17. Nepal Family Health Survey-Google Search [Internet] Available from: htp://www.google.co.in, 1996.
18. Nepal demographic and health survey key findings, 2001-Google Search [Internet]; Available from htp: //www.google.co.in
19. Inc. Nepal Demographic and Health Survey 2006. Kathmandu, Ministry of Health and Population, New Era, and Macro International Inc, 2007.
20. Lama S, Krishna AKI. Barriers in Utilization of Maternal Health Care Services Perceptions of Rural Women in Eastern Nepal, Kathmandu University of Medical, journal. Oct - dec 2014; 12(4):48.
21. Simkhada B, van Teijlingen E, Porter M, Simkhada P. Major problems and key issues in maternal health in Nepal (Review article). Kathmandu Univ Med, J. 2006; 4:258-63.
22. BR Pokhrel, P Sharma, B Bhatta, B Bhandari, N Jha. Health seeking behavior during pregnancy and child birth among Muslim women of Biratnagar, Nepal Nepal Med Coll J. 2012; 14(2):125-128.
23. Dhakal S, van Teijlingen E, Rajal EA, Dhakal KB. Skilled Care at Birth among Rural Women in Nepal Practice and Challenges, J HEALTH POPUL NUTR. Aug 2011; 29(4):371-378.
24. Bennett L, DR Dahal, P Govindasamy. Caste, Ethnic and Regional Identity in Nepal: Further Analysis of the 2006 Nepal Demographic and Health Survey. Calverton, MD, USA Macro International, 2008.
25. Suvedi BK, A Pradhan, S Barnett, M Puri, S RaiChitrakar, P Poudel *et al.* Nepal Maternal Mortality and Morbidity Study 2008/2009 Summary of Preliminary Findings. Kathmandu, Nepal Family Health Division, Department of Health Services, Ministry of Health, and Government of Nepal, 2008.
26. Price JI, Bohora AK. Maternal health care amid political unrest the effect of armed conflict on antenatal care utilization in Nepal. Health Policy and Planning PubMed 0007/ 2012; 28(3).
27. UNFPA, Nepal Conflict Aggravates Women's Reproductive Health Risks. *Press release*, 2005 30 November, Available at *http://www.unfpa.org/news/news.cfm?ID=7 21*, United Nations Population Fund.
28. Girma E, Bogale B, Wondafrash M, Tilahun T. Married Women's decision making power on modern contraceptive use in urban and rural southern Ethiopia. *BMC Public* Health 11:342 [Available at http://www.biomedcentral.com/1471-2458/11/342] 2011.
29. Safe motherhood Skilled cares during childbirth policy brief: Saving Women's Lives, Improving Newborn. Health. Family care International, 2002.
30. Matsumura M, Gubhaju B. Women's Status, Household Structure and the Utilization of Maternal Health Services in Nepal, Asia-Pac Pop J. 2001; 16(1):23-44.
31. Yasmin G, Kumar A, Parihar B. Teenage Pregnancy – Its Impact on Maternal and Fetal Outcome International Journal of Scientific Study March. 2014; 1:6.
32. Mayor S. Pregnancy and childbirth are leading causes of death in teenage girls in developing countries BMJ 2004; 328:1152.
33. Lisa B Haddad, Nawal M. Nour. Unsafe Abortion: Unnecessary Maternal Mortality MedReviews®, LLC, Reviews in Obstetrics & Gynecology 2009; 2(2).
34. World Health Organization. Unsafe abortion: Global and Regional Estimates of the Incidence of Unsafe Abortion

and Associated Mortality in 2003. 5th ed. Geneva World Health Organization 2007. http://www.who.int/reproductivehealth/ publications/unsafeabortion_2003/ua_ estimates03.pdf.
35. Grimes DA, Benson J, Singh S. Unsafe abortion: the preventable pandemic. Lancet 2006; 368:1908-1919.
36. WHO Country Office for Nepal. Human Resources for Health (HRH). [Electronic] 2008 [updated March 14, 2008 cited 2011 June 3]; Available from http://www.nep.searo.who.int/en/Section4/Section40.htm.
37. Government of Nepal. National Health Policy. Ministry of Health, Government of Nepal, 1991.
38. Safe motherhood Skill care during child birth. Available at http://www.safemotherhood.org/smpriorities index.html. 1998.
39. World Bank Fact sheet 2011, Central Intelligence agency [Cited 20/09/2015] [Available at https://www.cia.gov/library/publications/the-worldfactbook/fields/2046.html], 2015.
40. Baral YR, Lyons K, Skinner J, van Teijlingen E. Maternal health services utilization in Nepal: Progress in the new millennium. E-ISSN 1791-809X Health Science Journal October – December 2012; 6:4.
41. Engel J, Glennie G, Adhikari SR, Bhattarai SW, Prasai DP, Samuels F. Nepal's Story Understanding improvements in maternal health. Development Progress Case Study Summary March 2013.
42. Furuta M, Salway S. Women's Position within the Household as a Determinant of Maternal Health Care Use in Nepal. Int Fam Plan Persp 2006; 32(1):17-27.
43. Odimegwu C, Adewuyi A, Odebiyi T, Aina B, Adesina Y, Olatubara O *et al*. Men's role in emergency obstetric care in Osun state of Nigeria. Afr J Reprod Health 2005; 9(3)**:**59-71. PubMed Abstract | Publisher Full Text.
44. Nepal Demographic Health Survey Husband's Participation in Pregnancy Care: the Voices of Nepalese Men available at iussp2009.*princeton.edu/papers/90706* (accessed on 03/15/2011), 2006.
45. Africa Progress Panel Policy Brief September Maternal Health-Investing in the Lifeline in the healthy societies and economic [Available at http://www.who.int/pmnch/topics/maternal/app_maternal _health_english.pdf] Cited on 20/09/2015, 2010.
46. Jackson TP, Hanson K. Financial incentives for maternal health Impact of a national programme in Nepal, Journal of Health Economics. 2012; 31:271-284.