From Reservation to Public Service Provision:
Impact of Reservations for Women in Government on Maternal Health Services

A Research Paper presented by:

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India

in partial fulfilment of the requirements for obtaining the degree of

MASTER OF ARTS IN DEVELOPMENT STUDIES

Major:

Governance and Development Policy

GDP

Specialization:

Public Policy and Management

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The Hague, The Netherlands
December 2017

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This document represents part of the author's study programme while at the Institute of Social Studies. The views stated therein are those of the author and not necessarily those of the Institute.

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Abstract

Political reservation for women has been seen to improve different policy outcomes. This paper examines the impact of political reservation for women for the seat of village head and woman's descriptive representation in the local government on improving provision of and accessing maternal health services. The paper uses the Indian Human development survey collected in 2011 to analyse the research objectives. The paper also make use of qualitative interviews conducted in Assam, India to understand the challenges that female village leaders might face in effectively participating in the decision-making process. This paper is going to depart from the existing literature on three accounts, firstly the paper will focus on actual policy outcomes namely maternal health outcomes, secondly, apart from focussing just on the impact of reservations for the village head position the paper will also be looking at the impact of an increase in women village council members and finally the paper used the Indian Human Development Survey data collected on 2011 to analyse this research topic. The paper finds that women in reserved villages are more likely to get better maternal health care as compared women residing in villages with a male head. Another interesting finding is that villages with a female head who has not been elected on a seat reserved for women outperform villages reserved for women. The paper also observes that an increase in the number of women in the village council either do not impact or negatively impact the provision of or access to maternal health services. The paper concludes that reservation alone cannot impact policy outcomes, it is only when the female policy makers are empowered both by structural and social changes can there be an actual change in maternal health outcomes.

Relevance for Development Studies

This paper is import to the field of development as it analyses whether political reservation can have an impact on policy outcomes rather than just being a tool for descriptive representation and in some cases for tokenism.

Keywords: Political Reservation, Woman Empowerment, Substantive Representation.

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List of Acronyms

WHO	World Health Organisation
MMR	Maternal Mortality Ratio
MoHA	Ministry of Home Affairs
MoPR	Ministry of Panchayati Raj
VHSNC	Village Health, Sanitation and Nutrition Committee
GP	Gram Panchayats
SC	Scheduled Class
ST	Scheduled Tribe
OBC	Other Backward Classes

Acknowledgements

I would like to express my immense gratitude to my supervisor, Dr. Rachel Kurian for her constant support and encouragement at each and every step of my research paper.

I would also like to thank Prof. Arjun Bedi for his inputs and support throughout the process.

I am extremely grateful to the district offices in Assam which helped me in getting an access to the village leaders. I would also like to thank the village leaders, ASHA workers and villagers of Sonitpur and Jorhat district for their enthusiastic participation and insights.

I finally would like to thank my friends and family who have encouraged and supported me throughout this process.

Chapter-1

Political Reservation and Impact on Maternal Health Services

The World Health Organisation (2015) estimated roughly 303,000 women dying during and following pregnancy and childbirth in 2015. Developing regions account for approximately 99 % of the global maternal deaths, with Sub-Saharan Africa alone accounting for roughly 66 %, followed by South Asia 22 % (WHO 2015: 32). Maternal mortality is a crucial indicator for maternal health and cannot just be explained by biological factors. According to UNDP (2011:2) socio-economic characteristics like women's age, education and previous pregnancy experiences determine seeking appropriate services, apart from women-specific characteristics household characteristics, wider cultural norms, policy environment and governance structures also play an important role in determining maternal health outcomes.

As of June 2016, only 22.8 percent of total national parliamentarians were women, a slight increase from 11.3 percent in 1995.[1] According to World Bank (2001:12) an increase in woman's rights and equal participation by men and women in public spaces can result in better governance. Thus it is important to understand how increasing the number of women in decision making roles, specifically in politics through reservation can improve maternal health outcome.

In India about five women die every hour due to complications related to pregnancy and childbirth (Kaul 2017). Thus in the Indian case it is pertinent to ask how women in politics can affect maternal health services. To analyse this question this research paper will be taking advantage of the 73rd amendment to the Indian Constitution, passed in 1992, that mandated at least 33% seats to be reserved for women in village government (henceforth panchayats) and at least 33% of the positon of village government president (Sarpanch) to be reserved for women (Chattopadhyay and Duflo 2004: 1413). Since this amendment has been passed, about 16 Indian states have increased the reservation from 33% to 50% and there is a constitution amendment bill pending to impose this increase in reservation in local bodies to the remaining state (Nair 2016)[2]. Thus it seems an opportune moment to evaluate whether

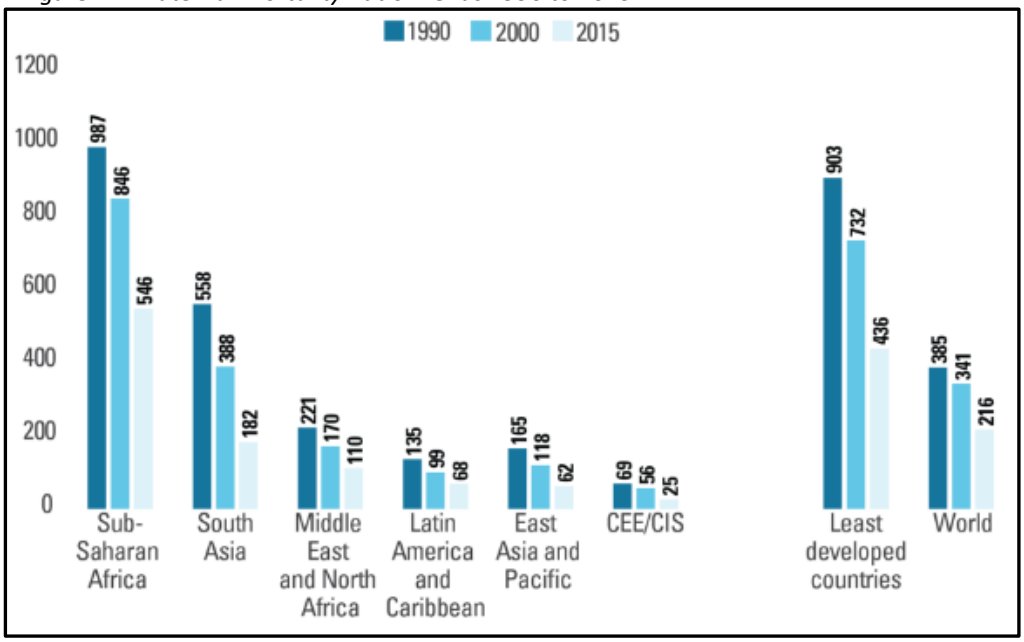
[1] http://www.unwomen.org/en/what-we-do/leadership-and-political-participation/facts-and-figures

[2] Nair 2016 (http://indianexpress.com/article/india/india-news-india/soon-law-for-50-woman-quota-in-local-bodies-2811593/)

an increase in the descriptive representation of women can lead to substantive representation as well.

1.1 Understanding Maternal Mortality: Trends and Issues.

Figure 1.1 Maternal Mortality Ratio Trends 1990 to 2015



Source: World Health Organization, UNICEF, United Nations Population Fund and The World Bank, *Trends in Maternal Mortality: 1990 to 2015,* WHO, Geneva, 2015.

In the developing regions, the annual rate of maternal mortality ratio (MMR) reduction was 1.3% between 1990 and 2000, and progress accelerated to an annual rate of 3.1% between 2000 and 2015 (WHO 2015:20). While there has been a decrease in the MMR across the globe, most of the developing countries haven't been able to achieve the Millennium Development Goal of reducing the MMR by 75% (WHO 2015).

According to WHO factsheet (2016)[3], the main complications that cause 75% of the maternal deaths globally are: heavy bleeding, infections, high blood pressure during pregnancy, complications from pregnancy and unsafe abortions. However, all the above are preventable causes given that women have access to quality antenatal care before delivery, skilled support during child birth and are given proper care and support in the coming weeks after child birth.

In India about 45000 women lose their lives every year due to poor health incurred due to pregnancy. This accounts for 17% of the total deaths related to childbirth, globally (Kaul

[3] http://www.who.int/mediacentre/factsheets/fs348/en/

2017)[4]. There also exist vast inter-regional differences, with Assam having the worst MMR at 328 and Kerala having the best at 66 much below the national average in 2015 (MoHA 2015:5). However, the country has been able to make vast improvements as it is has been able to decrease the maternal mortality ratio (MMR) from 215 in 2010 to 174 in 2015[5] (WHO 2015:72). This downward trend has been attributed to many initiatives taken by the Indian government under the Reproductive and Child Health programme and the National Rural Health Mission. Even after these recent efforts, however, the MMR is being reduced at a decelerating rate (4.5 percent as opposed to 5.5 percent) and the country was still lagging behind the UN mandated Millenium development Goal (MDG) target of 103 in 2015 (Jain and Desai 2016).

It has long been understood that health outcomes are profoundly shaped not just by biological factors but also by the social, economic and cultural environment, including people's positions in various social hierarchies. Increasing evidence suggests that it is possible to improve health outcomes through action on these social determinants of health (UNDP 2011: 2).

1.2 Women's political reservation and Maternal Health services :Indian Context

1.2.1 Provision of Maternal Health Services in India

India post-independence, formed a decentralized three-tier public health system to reach the most remote areas. (Vora et.al. 2009: 188). According to Annual Report published in 2015-16 by the Ministry of Health and Family Welfare new state of the art Maternal and Child Health wings have been sanctioned at high case load facilities and district hospitals for providing quality obstetric and neonatal care across 486 health facilities. The government has engaged about 9.15 lakh Accredited Social Health Activists (ASHAs) who have been an integral part of the National Rural Health Mission (NRHM) and play an important role in implementing the policies at the grass root level. There is a shortage of specialists in emergency obstetric care especially in rural areas. To overcome this problem many capacity building centres are

[4] http://www.hindustantimes.com/health/india-s-maternal-mortality-rate-on-a-decline/story-ZcnBG0kidtvPEkRnKNI0II.html

[5] http://www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2015/en/

opened to train Auxiliary Nurse Midwifes (ANM) to provide proper care to women in emergency. A new web-based Mother and Child Tracking System has been initiated that has details of pregnant women and children up to 5 years and aims at monitoring whether women are receiving proper antenatal and postnatal care. Maternal Death Review is also being implemented across the country to get a deep understanding of maternal mortality. Most of the women during their pregnancy suffer from anaemia, to cater to this issue the National Iron+ Initiative was started in 2013 which mandates health facilities and ASHA workers to provide iron folic acid supplementation to pregnant and lactating women (MoHFW 2016:28). Poverty, lack of awareness and high cost of health care leading to an increase in high out-of-pocket expenditure can deter women from seeking institutional care. Gender inequality at the household level can also decrease investment in maternal health care. The presence of these inequalities encouraged the government to initiate the Janani Suraksha Yojna as part of the NRHM in April 2005 (Jain and Desai 2016). According to the guidelines,

"The initiative entitles all pregnant women delivering in public health institutions to free and no expense delivery, including Caesarean Section (C-Section). The entitlements include free drugs and consumables, free diet during stay at normal delivery and C-section, free diagnostics and free blood wherever required. This initiative also provides for free transport from home to institution, between facilities in case of a referral and drop back home" (MoHFW 2016:27). In low performing state all women delivering in government health facilities or accredited private institutions are eligible to get 1400 rupees in rural areas while only SC/ST and BPL women are eligible to get 700 rupees in high performing state.

1.2.2 Panchayati Raj Institutions and Maternal Health Services

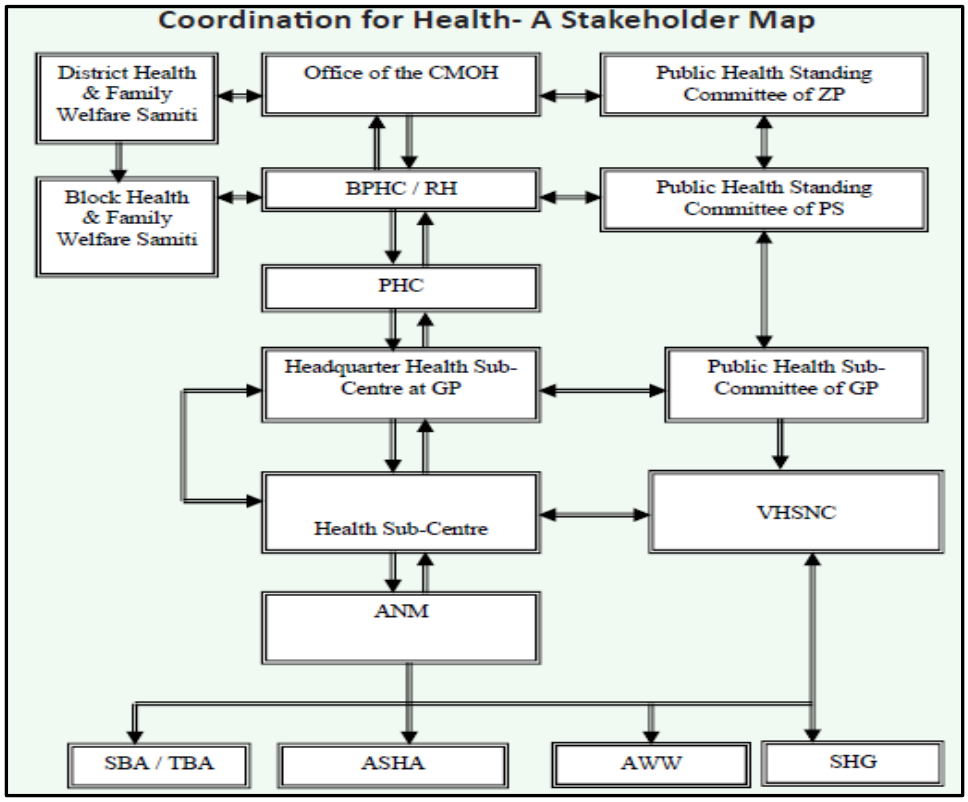
According to Pathak and Mancours (2013: 6)

"The Panchayat is a system of village-level (Gram Panchayat), Mandal-level (Panchayat Samiti), and district level (Zilla Parishad) councils, with membership determined through local elections. Their main responsibility is the administration of local public goods. Each Mandal consist of various GPs and each GP encompasses between 1,000 and 10,000 individuals in a group of villages (between 1 and 15). In 1992, the 73rd Amendment of the Constitution of India gave new powers to the Panchayats and provided that one third of the

seats in all Panchayat councils, as well as one third of the leadership positions, must be reserved for women."

Health and Family Welfare is one of the key roles of Gram Panchayats assigned to them under the Constitution of India i.e. 73rd Amendment. For promoting good health practices amongst people, and for ensuring good service delivery from the health facilities and functionaries at the village level, the Standing Committees or Sub-Committees are formed in the Gram Panchayat. According to a manual published by the Ministry of Panchayati Raj and Rural Development in collaboration with the UNDP (2017: 22) the construction and management of health facilities at the village level has to be undertaken by the panchayat by allocating funds from the state, national or other sources of funds generated by the GP itself. In all the gram panchayats a Village Health Sanitation and Nutrition Committee (VHSNC) has to be set up under the leadership of the village head (sarpanch/Pradhan).

Figure 1.2 Coordination for Health- Stakeholder Map



Source: Health Developments in Gram Panchayats, Ministry of Panchayati Raj 2017: 33)

The roles of the VHSNC include monitoring of health services and ensuring access to all, organizing collective action at local level for promotion of health, facilitating service delivery at the village level, village health planning, facilitating community monitoring of health facilities, organising monthly meetings, management and accounting of untied village health fund and maintaining records (MoPR 2017:26). The panchayat members with the support of ANMs, AWWs and ASHAs are also responsible to generate awareness and take initiatives to ensure 100% registration within 12 weeks of pregnancy. The village head plays an important role in the implementation of the Janani Suraksha Yojna as the state government transfers money to a joint account of the village head and the ANM, while ANM is responsible for disbursing the money, the village head is responsible for monitoring and facilitating the flow of money to the intended beneficiary.

1.2.3 Reservation Policy

The Seventy-Third and Seventy-Fourth Amendments to the Indian constitution were passed, in December 1992 and came into effect in April 1994. These brought in a 33% reservation of seats to women, as well as reservations for scheduled castes and tribes. This amendment has attempted to strengthen and legitimise the *Panchayat Raj* institutions through constitutional recognition and as a process of decentralisation. The reservation has provided not only a 33% quota of seats for members of the *panchayats* but also a 33% reservation for the chairpersons.

According to this amendment, in the directly elected seats of members in all panchayats, there will be reservation of seats for Scheduled Castes (SC) and Scheduled Tribes (ST), in proportion to their total population in a panchayat area, and one-third of these seats will be reserved for women belonging to these groups. Of the seats to be filled by direct election in every panchayat, there will be not less than one-third reservation of seats in panchayats for women, including the seats reserved for SC/ST women. Reservation of seats for women village head takes place according to the rule of first and then every third i.e. villages are listed

out according to their census id and then every third village is reserved for women. This process helps in attributing any changes in the outcomes to the reservation policy.[6]

1.3 Relevance

Maternal Mortality Ratio is an important development outcome. Pregnant women in developing countries are at a high risk of dying if they do not access proper maternal health care. Given that maternal health outcomes, are also determined by health policy and governance structures, it is relevant to conduct research on how women in government can improve provision of maternal health service.

1.4 Research objective and Questions:

The main research objective of this paper is to analyses the impact of the reservation policy for women in local governments (village panchayats) on improvements experienced by women in the provision of and access to maternal health services.

To what extent has the reservation for women in local government been able to improve maternal health outcomes?

Sub- research questions:

- To what extent does women's reservation in local government for the position of village head effect access and provision of maternal health services, specifically: antenatal care, promoting institutional delivery and post-natal care?
- To what extent does an increase in number of women panchayat members (descriptive representation) have an effect on access and provision of maternal health services (substantive representation)?
- To what extent does women's participation in the community, specifically the gram sabhas or SHG encourages them to take up maternal health services?
- What are the challenges faced by women policy makers in discharging their duties so as to improve maternal health outcomes?

[6] Taken from Rajasthan Panchayati Raj Act. http://www.rajsec.rajasthan.gov.in/secraj/panchayat/PART4.4.htm

CHAPTER 2

THEORETICAL FRAMEWORK

This chapter will discuss the theoretical underpinnings of the mechanism that translates political reservation into policy outcomes. The first section discusses the possible mechanism through which political reservation can impact policy outcomes. This section also reflects three important assumptions that need to be fulfilled for women policymakers to effectively represent other women. The second section derives from the first section and proposes possible mechanisms for political reservation in local governments to improve maternal health services. The third and final section gives a review of literature and situates this paper in the literature.

2.1 Political Reservation and its Impact on Policy outcomes

According to old political economy models, if the candidates can fully commit to implement specific policies prior to the election i.e. full policy commitment is possible then all the political decisions should only reflect the electorate's preferences (Down 1957:140). If this were true then both male and female policymakers will have similar policies as both of them are serving the median voter. However more recent models argue that it is difficult to enforce full policy commitment prior to elections (Osborne and Slivinski 1996:84-86; Besley and Coate 1997:86). Policymakers might find it difficult to choose policies and to make promises regarding public service delivery in a society with higher degree of social fragmentation among the voters. In such circumstances voters will tend to have faith in those candidates who belong to the social group that the voter identifies with (Ahmad et.al 2006:256). Thus in circumstances where the electorate cannot impose full policy commitment on the political candidates, group identity of the candidate might influence their chances of winning and in turn their policy preferences (Pande 2003:1134). These models suggests that gender identity would play an important role in framing a candidate's policy preferences.

There is evidence that suggests that women have different experiences and expertise and this leads them to follow a redistributive policy that is biased towards women and children (Halim et.al. 2016:816). In the Indian context, apart from the difference in policies, women face social barriers that prevent them from participating in politics and thus for effective representation

of women in politics it was important to encourage an increase in the number of women in local governments (Rai 1999: 92).

Evidence shows that women and men have different policy preferences. Women policymakers have been found to be more inclined than men to spend on provision of public childcare and child-related issues in U.S. , Norway and Western Europe (Edlund and Pande 2001:946; Bratton and Ray 2002:429). In India, Chattopadhyay and Duflo (2004:1430) observe that in the state of West Bengal women's participation in village meeting had increased and that women invested more in concerns attached to women than those attached to men. Recognizing these difference between the policies preferred by women and men, many governments have resorted to gender quotas as a tool to increase the political representation of women in national and local governments so as to promote women-friendly policies.

Political Reservation for women, a specific type of gender quota is a political tool adopted by 42 countries to tackle the issue of gender bias in candidate selection process, so as to increase women's descriptive representation and improve the substantive representation of women's interests (Franceschet and Piscopo 2008:394). Different kinds of gender quotas, for example: separate electoral rolls for women, reserving different constituencies for women or having a proportion of seats reserved for women in political parties, can be established through reforms in the constitution or by changing electoral laws (Krook 2009:6). There has been some evidence that suggests that gender quotas can increase women's descriptive representation (Chattopadhyay and Duflo 2004), however there remains some ambiguity on whether descriptive representation can lead to effective representation of women i.e. elected women representatives (EWR) by the virtue of their positions are actively pursuing policies preferred by women.

Thus it is important to see if gender quotas create a mechanism wherein women choose women friendly policies and empower the elected women representatives to implement these policies on ground as well as empower women that they are governing thus changing the formal and informal norms regarding gender.

2.1.1 Gender Quotas and Substantive Representation

"Descriptive representation by gender improves substantive outcomes for women in every polity for which we have a measure." (Jane Mansbridge 2005: 622)

The notion that descriptive representation can lead to substantive representation came from Dahlerup's 1988 (275-276) paper 'From a Small to Large minority: Women in Scandinavian Politics'. In the paper she uses the concept of critical mass theory[7] to explain the importance of a certain proportion of politicians to be women. She argues that, in an organisation a minimum of 30 percent positions should be occupied by women to bring about a qualitative shift. She, however does accept the limitations of using the critical mass theory in social sciences where all the entities to interact with their surroundings (as opposed to the critical mass theory working in vacuum in physics).

According to Franceshet and Piscopo (2008: 394) descriptive representation might not automatically imply substantive representation in all cases. Women policymakers can substantively represent women either in the process (i.e. through legislation) or by influencing the outcomes directly. According to Franceschet and Piscopo (2008:398), there are two effects at play than can either encourage or discourage women to pursue their preferred policies. Gender quotas can create 'mandate effects' that can pressurize women to form women friendly policies as they have been elected through a gender quota and thus have to fulfil expectations attached with such a position. On the other hand, it might also be possible that there is a 'label effect' attached with the so called quota women. This happens when women might face some prejudice at the hands of their colleagues as they might believe that women coming through quotas might be less experienced and less autonomous (Franceshet and Piscopo 2008:395). According to the authors, women's interaction with these two effects determine substantive representation. While this research, theorizes the impact of reservation policy on outcomes at national level, it can also be used to understand the barriers women might face in local governments.

There is qualitative research that supports the above argument. Evidence from countries like France and Spain suggest that a main concern is that the quality of the female policy makers

[7] Dahlerup (1998: 275) borrowed the concept of critical mass theory from nuclear physics which refers to the smallest quantity of fissile material to sustain a chain reaction.

selected through gender quotas might not be relevant, if they can be easily manipulated to pursue to the political party's political agendas. Franceshet and Piscopo (2008:416) found that in Argentina parties often choose to place women in relatively uncompetitive jurisdictions and that even though women are successful in transforming the legislative agenda, they have failed to transform the legislative outcomes as the latter depend on institutional reasons that the women weren't able to influence.

Apart from the mandate and label effect, another reason for descriptive representation not translating into substantive representation can be that women politicians may not be a homogenous group. Women might have different experiences and ideologies depending on the varied positions they might hold in social hierarchies (Crenshaw 1991:1249). This argument might hold true specifically for India which is socially fragmented on the basis of caste, class and religion. Thus women's social identity apart from their gender identity might influence their policy preferences as well as the support they get from the community to do their work. There has been some disturbing evidence which suggests that the backword caste (dalit) women faced violence and obstruction in their work at the hands of influential people in the villages (Hindu 2011; Everett 2009: 204)[8]. All women panchayats were seen as a good indicator in the early 1990s, however this was because the upper caste men refused to be outranked by lower caste women, when the seat of the village head was reserved for a SC/ST women (Niranjana 2002:372). Women will also be less likely to support woman's interests as compared to their male colleagues, in cases where they act as mere proxies for their husbands or for politically established families.(Everett 2009: 201)

2.1.2. Gender Quotas and Women Empowerment

Rowlands (1995:102) define empowerment as,

"Empowerment must be about bringing people who are outside the decision-making process into it. This puts a strong emphasis on access to political structures and formal decision-making and, in the economic sphere, on access to markets and incomes that enable people to participate in economic decision-making."

[8] http://www.thehindu.com/todays-paper/tp-national/tp-newdelhi/lsquoDalit-women-sarpanches-a-harassed-lot/article14666232.ece

According to her, when a person becomes aware of the existing power dynamics and cultivates the skill set and capacities to gain control of their lives then the person is said to be empowered (ibid). In this context, woman policy makers will be empowered if they are given an access to political position. This is because they will be able to attain a sense of self confidence by overcoming internalised oppression and gain bargaining power and influence in the decision making process.

Research (Chattopadyay and Duflo 2004: 1410) indicates that mandated reservations increase the number of women in politics. However, it isn't clear whether an access to politics empowers female policy makers. Mackay and Krook (2011:3) argue that since gender is a social construction, improving the status of women in politics without any simultaneous institutional change can only describe gendered patterns of access .It "cannot explain the persistence of inequality and permutations of exclusionary practices that operate within political institutions", nor capture the informal norms and underlying institutional dynamics (Mackay 2004: 111). Bryld (2001: 169), observe that in the state of Karnataka, India women might face many hurdles in actively participating in decision making as they might lack capacity due to illiteracy, language barriers, inexperience or because they aren't respected by their fellow villagers.

Sekhon (2006:103) supports the above point and argues that,

"A formal right to stand for elections, however, is no guarantee that an individual, in this case a woman, can participate effectively. Not only do women need to be prepared for participation in formal electoral politics, they also need to be enabled to act independently and be confident in setting and implementing policies. This usually requires challenging traditional patriarchal institutions that limit political participation and activism." Assuming a separation between public and private life might lead to a wrong notion of empowerment, as for women policymakers patriarchal rules influencing their domestic lives might explain the unequal position of men and women in public life (Sekhon 2001: 884).

Women policy makers who are empowered because of the gender quotas can in turn empower women they are governing. Women leaders can inspire other women to politically participate in the community and create a safe environment for women to raise their issues, this can lead to a more bottom-up approach to improve public service provision. Across a set of European nations, Wolbrecht and Campbell (2007:936) add to the representation literature

by suggesting that, female politicians who exemplify women's political participation and female political activism can function as true role models, inspiring women and girls to be politically involved themselves. They found that when there are more women in the parliament women of all ages are more likely to discuss politics and younger women are more politically active. Reservations' impact can also be felt in other spheres: the phased introduction of reservations at state level is used to argue that female reservations gave women a voice, resulting in the increased reporting of crimes against women and resistance to violence (Iyer et.al, 2012:172). Chattopadhyay and Duflo (2004: 1428) found that female citizens in India were twice as likely to communicate with local elected officials if there was a female elected official occupying a seat reserved for women through gender quotas. Beaman et al. (2012: 582), observe an important link between the role model effect of female leaders on an increase in parent's and girl's aspirations. This in turn leads to an increase in girl's career aspirations and educational attainments which might have an impact on their fertility choices. Duflo (2012:1057) argue that women who are given better economic opportunities as a result of, parents investing more on a girl's education, can lead to better treatment of women.

If the gender quotas enable women to overcome the institutional and societal barriers to effectively participate in policy making then it is possible for them to have an impact on policy outcomes

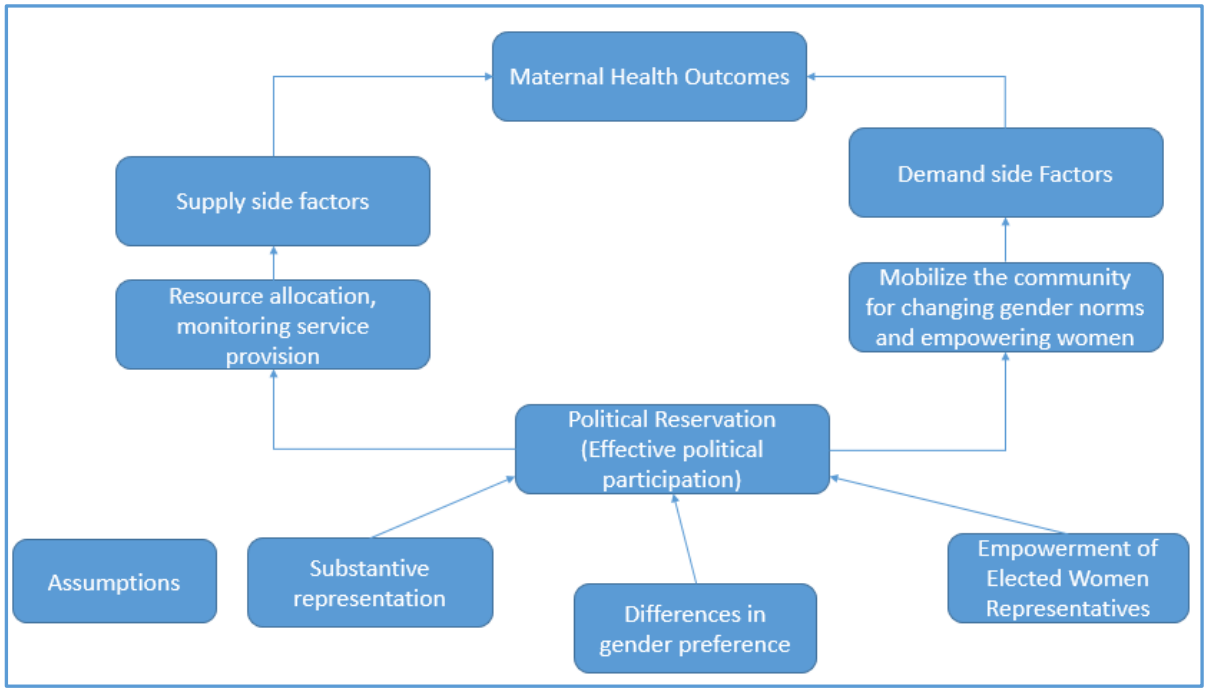
2.2 Reservation for women in local government and maternal health services.

"Many gender equality activists believe that local government is a more accessible arena for women than is national government and that women might be able to have a greater impact on resource allocation and public decision making at the local level" (Everett 2009 :196)

Figure 1, depicts the possible mechanisms through which political reservation in local governments might have an impact on maternal health outcomes. The main purpose of reservation in local government can be to distribute power and economic resources to women at the lowest level of government. However, for women to work effectively in the system it is important to recognize that they might face some societal and institutional restrictions in fulfilling their obligations as part of the local government. For women to effectively participate in democratic governance it is important that the assumptions of

increase in descriptive representation of women leading to substantive representation and empowerment of both women leaders and women they are governing should be fulfilled. Given that these assumptions are fulfilled women leaders can encourage women to take up maternal healthcare services by improving the supply side factors, i.e. by improving the public health institutions or by empowering other women by making them aware of the importance of maternal health care services.

Figure 2.1: Mechanism of Impact of Political Reservation on Maternal Health Outcomes



2.3 Literature review:

The relationship between political reservation in governments and policy outcomes has been widely documented. A large number of papers have taken advantage of the randomised nature of the 73rd amendment in India and have inspected its impact on different developmental outcomes. Chattopadhyay and Duflo (2004) was the one of the first papers to look at the impact of reservation for women using quantitative data. Their definition of policy outcome was investment in certain public goods. They found that women invested more in public goods (water and roads) that are thought to be linked to women's concerns.

In a background paper written for UNICEF Beamen et al. (2006) extend Chattopadhyay and Duflo's analysis by looking at budget allocations on welfare programs related to antenatal,

postnatal care as well as on immunization campaigns. They found that the children in reserved villages had better health as compared to villages headed by men. Beaman et al. (2010) use the all-India Millennial Survey data of the Public Affairs Center to develop a composite index of quality, and employ information on the number of available facilities to construct a measure of service quantity. Beaman et al. (2010: 184) found that female leaders influenced more women to speak up as well address problems faced by women, in village meetings. Beamen et al. (2009) looked at the impact of reservations on voter's perception towards women leaders rather than on public investment. The authors used computer based Implicit Association Tests in Birhum district, West Bengal to see to what extent do male villagers associate domestic and leadership tasks to women. They found that men who were exposed to female leaders (due to reservation) were more likely to associate leadership tasks with women as opposed to domestic activities. Thus their findings indicate that in the long run women might not face barriers due to stereotypes. Similarly, Deininger et al. (2015:46) analysed a nationally representative survey of 233 villages collected in 2007 to see the long term outcomes of the reservation policy. They find that in the short term, effect of the reservation policy on public service provision is negative. However, the long term impacts of the reservation policy on political participation and contribution to public goods more than offsets the initial shortcomings.

Bardhan et al. (2010) examined the impact of political reservation for women and scheduled castes and scheduled trine candidates in local governments in West Bengal, India between 1998-2004 on targeting landless, low caste and female-headed households. It differs from existing literature in terms differences in geographic area, time, and use of self-reported household benefits across a broad range of development programs. The authors observe that the reservation policy was related to significant decrease of within village targeting of SC/ST households and no progress in any other dimension of targeting. This study departs from the study conducted by Chattopadhyay and Duflo (2004) as they observe no significant impact on policy outcomes. The authors claim that election of politically inexperienced to the position of the village head can lead to capture and clientelism.

Ban and Rao (2008: 528) find that institutional factors play an important role in women influencing policy outcomes. Unlike Chattopadhyay and Duflo (2004), they find that women

village heads couldn't influence the policy outcomes nor do they prefer policies related to women's issues. An explanation they give for this deviation is that their study is conducted in South India, as compared to Chattopadhyay and Duflo's (2004) analyses of West Bengal and Rajastham, where there is less gender disparity.

In another interesting paper, Rajaraman and Gupta (2012) examine the impact of reservation for women both for the village head's position and members in the panchayat council on GP expenditures on water, on buildings, and on revenue raised, in a sample of 776 GPs from seventeen districts in four central Indian states. Their survey was carried out in 2005-06. The authors use expenditure on waterworks as a binary variable and used probit specifications to analyse the impact of the reservation policy. The authors claim that citizen candidate framework might not lead to a unique policy preference (as preferred by the median voter) in the case of multi-member local government councils. Further they observe that research that finds a positive impact of gender quota for the village heads position on policy outcomes might be context specific and cannot be generalised, as these papers assumes the domination of the village heads position when the decisions are made collectively by the whole village councils.

Most of the literature mentioned above have examined the impact of female reservation in local governance either on the provision of public goods specifically on public expenditure on public, targeting of anti-poverty public goods and on women policymakers' empowerment or empowerment of women in the society. None of these studies have looked at the impact of female reservation on the actual outcomes such as income, education, health, inequality etc. Bhalotra and Figueras (2014), presented a study which looks at the impact of political representation on health outcomes and health behaviour. They paper is slightly different from previous literature as it looks at women's representation in state legislature rather than local government in India. They use the National Family Health survey. The main outcome is neonatal mortality, and since they use mother-fixed effects as opposed to state effects they get more refined results. They find a 10 percentage point increased lead to a 2.1 percentage point decrease in neo-natal mortality with simultaneous improvements in antenatal care, immunization and breast feeding. They also find that improvements in infrastructure and

information increases health-seeking behaviour (Bhalotra and Figueras 2014:192).The authors conclude that women in state legislature improve public health services provision.

Another paper that looks at the impact of decentralization and gender quotas on health outcomes and behaviour is by Kumar and Prakash (2012). The authors use a difference-in-difference methodology to analyse District Level Health Survey for two states in India (Bihar and Jharkhand). The authors exploit the natural variation in 73rd ammendment in the two states after Jharkhand was carved out from Bihar. The gender quota doesn't seem to have an impact on the overall child mortality however it does have a positive and statistically significant impact on child survival for top two wealth quintiles.

This research paper will be building up on the research done by Bhalotra and Figueras (2014) and Kumar and Prakash (2012). The paper will be adding to this literature by looking at actual policy outcomes, specifically maternal health services i.e. antenatal care, institutional delivery and postnatal care, instead of just looking at resource allocation or change in the personalities of the women village heads. In previous research done on this topic, authors don't take into account that apart from the village head's seat being reserved for women , a minimum of 33% seats in the panchayat are also reserved for women. This research paper will also be looking at the impact of strength of women in village councils (descriptive representation) on the previously mentioned maternal health services. This paper proposes to do so by using Indian Human Development Survey which hasn't been previously used in the literature to analyse this research topic.

CHAPTER-3

METHODOLOGY

In this chapter the research paper will showcase a discussion on the different techniques being used to analyse the research questions. In the first section, the paper talks about the overall research design followed by the paper and situates it in the previous research done on the topic. The second and the third section gives a detailed description of quantitative and qualitative techniques, respectively.

3.1. Research Design

The main research problem that this paper addressed is whether reserving political positions for women in local government can have an impact on the provision or access of maternal health services at the village level. The paper also analysed whether increasing the number of women in politics can in turn have an impact on the maternal health outcomes. The three main assumptions underlying the hypothesis, that women policymakers can influence policy outcomes, are that women prefer different policies as compared to men, given an opportunity female leaders tend to substantively represent women and finally that women elected representatives are empowered to fulfil their responsibilities.

The research done on understanding the impact of reservation for women in local governments on policy outcome has been mostly divided into quantitative and qualitative papers. On the one hand the quantitative research (as shown in literature review) has mostly looked at district, state and national level household surveys and have used techniques like difference-in-difference, instrument variable and simple comparisons of means of outcomes of interest for reserved and unreserved GPs, to analyse the impact of reservations. On the other qualitative research basically focusses on the barriers that women village leaders face in effective participation (Rai 2013, Sekhon 2006).

To analyse this research problem the paper used a mixed method approach, and conducted both quantitative and qualitative enquiry. Since the research paper aimed at analysing the impact of reservation policy on the national level, the researcher chose to conduct a quantitative analysis of national level household survey. However, since the relationship between maternal health and access to and provision of maternal health services is not direct and is based on the critical assumptions mentioned above, it was important to understand

the results by conducting a qualitative enquiry. The mechanism through which the women policy makers can provide and encourage accessing maternal health services is a complex process and the researcher had to interact with the women policy makers to supplement the findings from the quantitative data. The household sample didn't have any information on the workings of women in the panchayati raj institutions, thus conducting the fieldwork helped in doing a wholesome inquiry into the extent to which women policymakers can have an impact on maternal health services.

3.1 Quantitative analysis

3.1.1. Data

To understand the relationship between the gender of the village leader and public service delivery, this research paper will be using IHDS- II sample survey. India Human Development Survey (IHDS) is collaborative project of researchers from the University of Maryland and National Council of Applied Economic Research, New Delhi. The India Human Development Survey-II (IHDS-II), 2011-12 is a nationally representative, multi-topic survey of 42,152 households in 1,503 villages and 971 urban neighbourhoods across India. These data are mostly re-interviews of households interviewed for IHDS-I in 2004-05. Health, education, gender relations, village infrastructure, economic status and panchayat compositions are some of the topics that were covered in two one hour interviews in all the households (IHDS data guide).[9]

To look at how women village heads impact maternal health services provision, the research paper will be analysing questionnaires on women, village and panchayat characteristics. IHDS-II will be used to understand the impact of reservation on the access and delivery of public goods. The advantage of using this data set is that the results produced would be accurate at an aggregated level of the nation and it can be understood whether the policy of reservation is useful at the national level. Using panel data would have given better results for the impact of reservation policy, however as no data was collected on the characteristics of the panchayat in 2005 I wouldn't be able to use the data available on women's maternal health. However, since the reservation policy is designed to exogenously determine whether a village

[9] IHDS data guide http://www.icpsr.umich.edu/icpsrweb/content/DSDR/idhs-II-data-guide.html

is reserved or not, analysing a cross-section can help to attribute the difference in reserved and unreserved villages in accessing maternal health services to the reservation policy.

3.1.2. Dependent Variable

Maternal health care services can be broadly categorized into antenatal care, safe delivery and post-natal care.

a. Full Antenatal Care (ANC)

According to WHO (2016:1), its pertinent for pregnant women to get antenatal care by skill health professionals so as to ensure best health conditions for both mother and baby during pregnancy. The major components of ANC are identifying risk, prevention and management of diseases during pregnancy, health education and health promotion (WHO 2016:1). According to the recommendations of Reproductive and Child Health program in India the three important components of ANC are three or more antenatal check-ups during pregnancy, intake of iron supplements and at least 2 doses of TT injection before child birth (Jain and Desai 2016). When a women receives all the 3 aforementioned services, only then will she have received full antenatal care.

b. Institutional Delivery

This paper follows the World Health Organization (WHO) definition of an institutional delivery, as one that has been conducted either in a medical institution or at home with the assistance of a doctor/nurse/lady health visitor (LHV)/auxiliary nurse midwife (ANM)/other health professional.

c. Postnatal care

Health check-ups and care for lactating women is important for safe motherhood. According to the WHO (2013:3) recommendations a women should receive her first check up within the first 24 hours, which should be followed by 3 check-ups in the next 6 weeks. For the purposes of this paper a women would have received postnatal care if she has received 4 postnatal check-ups in the 6 weeks after delivery.

3.1.3. Explanatory variables

a. Treatment Variable:

The 73rd Amendment divided the villages randomly into reserved and unreserved villages. To understand the impact of the reservation policy, i.e. whether a village leader's position has been reserved for women or not, the paper will be controlling for the reservation variable. Since the reservation policy is exogenously determined, the villages that have been reserved for women can be considered as part of the treatment group whereas the villages that aren't reserved can be considered as the control group.

Till 2011 there have been at the most 3 electoral cycles (5 year term). Due to the rotation policy, the villages that had women heads who were elected for a reserved seat, were never reserved for women before. This helps us in arguing that whatever changes that are seen in the village are due to the reservation policy. However, there is a possibility that a village reserved for woman in the last electoral cycle, might have had a woman head for the previous electoral cycle, elected for a seat without reservation or for a seat reserved for SC/ST. Thus due to the design of this policy, a differentiation can be made between women who were elected for a seat reserved for women and women who were elected for other seats.

b. Controls:

- Women's political participation:

In the last 5 years 16 Indian states have increased their reservation for women in panchayats up to 50%, this was done so as to encourage women to participate in the local governance and also to bring problems faced by women to the forefront Nair (2016)[10]. To understand the impact of descriptive representation of women in political institutions on maternal health services, the paper will also be controlling for the share of women in the village panchayats.

[10] Nair (2016) http://indianexpress.com/article/india/india-news-india/soon-law-for-50-woman-quota-in-local-bodies-2811593/

- Women's community participation:

Woman's active participation in the community can empower them to access the maternal health services and thus this paper controls for the variable for participation in a self-help group. Another way to empower and generate awareness amongst the women in the villages, about the available maternal health services, is through the monthly village meetings (gram sabhas). This can also be used as a platform for women to raise their concerns and grievances.

- Individual Factors:

Women's age plays an important role in defining her attitude towards modern maternal health care. In general, as younger women have more education and are exposed to modern medicine they are likely to accept modern health care (Elo 1992: 50). Older woman's knowledge about pregnancy is based on their previous experience, making them overconfident and less likely to get institutional care (Raghupathy 1996: 461). It is well established that educated and working mothers are more likely than uneducated and non-working mothers to take advantage of modern health care services. It has been observed that women will be more confident and capable of making decisions to use modern health care if they are educated (Navaneetham and Dharmlingam 2002: 1851). However, it is argued that since women's work in developing countries is poverty induced, it is likely to have negative impact on the use of health care services as it involves opportunity and monetary costs (Desai and Jain 1994: 120).

- Household Factors:

Caste and religion have been included as household level characteristics or community factors that could facilitate or hinder health-seeking behaviour of members of a community. In India the SC/ST are generally discriminated against and live in separate area away from the main village area. Since health facilities are closer to the main settlement, it might be the case that members of these communities find it difficult to access health services (as cited in Navaneetham and Dharmlingam 2002: 1853). The use of maternal health care services is also likely to vary between religious groups due to differences in their cultural practices and beliefs (ibid).

As a proxy of the family members' attitude towards modern medicine, husband's education, mother-in-law's education and mother's education will also be controlled for. It is expected that households with higher living standard are more modern and therefore more receptive towards modern health care services (Desai and Jain 2016). As a proxy of income the paper will be using per capita household expenditure. Another important factor that might affect maternal services utilization is position of the woman in the household and the freedom she has to make choices for herself. Women's autonomy can be defined as the capacity and freedom to act independently (Adhikari 2016:2). In the paper I will be controlling for women's mobility by looking at if women has to ask permission to go to the health facility or use the public transport.

- Supply side factors

Apart from the factors discussed above maternal health is also dependent on the supply side factors that comprises of access to and quality of the health institutions. The road's distance from the village, poor quality of road (especially deterioration in the monsoon) and lack of ambulance service or other means of transport can lead to mismanagement of risks associated with emergency obstetric care. Studies have found that the public health system in India is in shambles as fewer than one-third of providers in India adhere to clinical guidelines, less than half of clinical interactions result in correct diagnoses and treatment; and less than 33 percent of rural health sub centers have regular supplies of basic ammenities (Das et al. 2015: 2778). To take into account the quality of the hospital the paper will also be controlling for whether a hospital has water, electricity, pre-natal and post-natal care available as well as medicines and machines required proper obstetric care. The model will also control for whether women are satisfied by the government and private hospital facilities.

Table 3.1 Control Variables.

Individual Variables	**Household Variables**	**Supply-side Variables**	**Political Participation**	**Community Participation**
- Age - Education (in years) - Number of children alive - Was employed	- Spouse's age - Spouse's education - Mother's education - Mother-in-laws education - Religion - Caste - Ask permission to go to the hospital - Ask permission to use the public transport.	- Village accessible by roads - Road usable in the monsoons - Ambulance facility - Distance from health sub centre - Distance from primary health centre - Woman's satisfaction from government health facility - Quality of the hospital	Number of women in the panchayat with respect to total panchayat members	-Attended Village Meetings -Part of Self-Help groups

3.1.4. Empirical Strategy

As the three outcome variables (Antenatal care, institutional delivery and Post-natal care) that are being researched on in this paper are binary in nature I will be analysing odds ratio of the selected covariates using binary logistic regression. The odds ratio can be interpreted as the effect of one unit change in independent variable on the odd ratio with the other variables in the model held constant.

I have run following logistic regressions to understand the impact of reservation and strength of women in panchayat on the outcome variables while controlling for individual, household and supply side characteristics

$Outcome_i = \beta_0 + \beta_1 Individual\ Variables + \beta_2 Reservation_i + \beta_3\ Strength_i + \beta_4\ Community\ Participation + u_{it}$ … (1)

$Outcome_i = \beta_0 + \beta_1 Individual\ Variables + \beta_2\ Household\ Variables + \beta_3 Reservation_i + \beta_4\ Strength_i + \beta_5\ Community\ Participation + u_{it}$ …(2)

$Outcome_i = \beta_0 + \beta_1 Individual\ Variables_i + \beta_2\ Household\ Variables_i + \beta_3\ Supply\ side_i + \beta_4\ Reservation_i + \beta_5\ Strength_i + \beta_6\ Community\ Participation + u_{it}$ ..(3)

Each regression is run for the i^{th} woman. In the above equation the Reservation is a categorical variable that denotes the dummy for when the village is reserved (=2), has a woman village head on an unreserved seat (=1) and is unreserved and has a male head (=0). Strength is a continuous variable which ranges from 0 to 1 and is equal to the ratio of women in panchayat to the total number of panchayat members in the village panchayat.

$$strength = \frac{total\ number\ of\ women\ members}{Total\ members}$$

For the purpose of this research paper we are interested in the coefficients β_4 and β_5 (We cannot directly interpret these coefficients thus it important to find the odd ratios first). These cross section estimates may suffer from omitted variable bias as unobserved district or state specific characteristics may confound the estimates. To prevent this I propose to control for the district dummy so as to control for geographic variation.

3.2. Qualitative Analysis

3.2.1. Technique: Semi-Structured Interviews and Focus Group Discussion

Semi-structured interviews was chosen as a technique as it provides a fine balance between close-ended approaches which narrowly categorize responses and open-ended interviews that would not adequately serve to test a hypothesis (Leech 2002: 665). The advantage of using this technique was that while the interviewer can get all the information according to a pre-designed questionnaire, more information can be can be found as the method allows to have an open discussion with the subject. I also conducted a focus group discussion so as to get an insight into how a group thinks about an issue, about the range of opinion and ideas, and the inconsistencies and variation that exists in a particular community in terms of beliefs

and their experiences and practices. An advantage of using focus group discussion is the data generated by interaction between group participants. It creates additional material, when people respond to what they hear (Finch and Richie 2013:171) It also creates spontaneity,

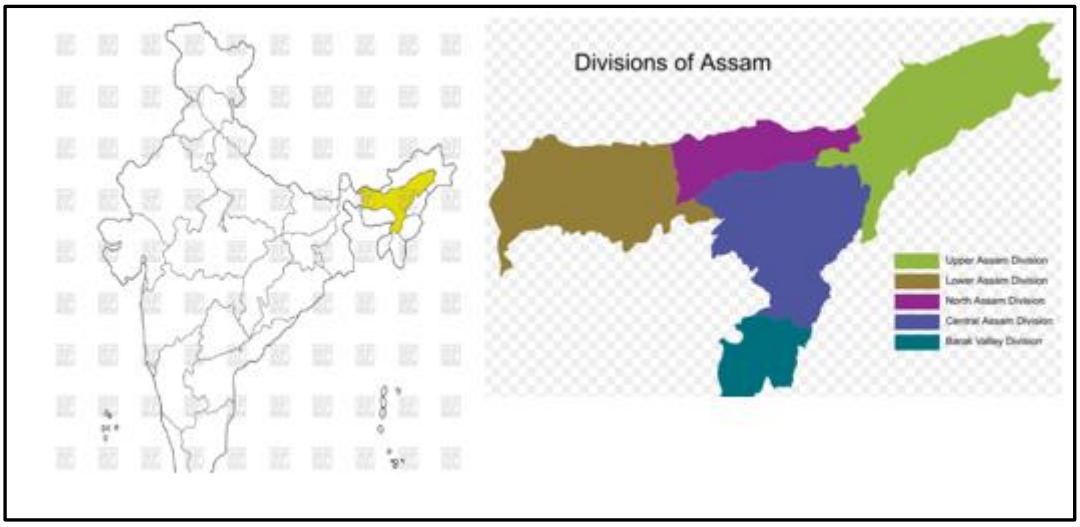
"The focus group presents a more natural environment than that of the individual interview because participants are influencing and influenced by others - just as they are in real life". (as cited in Finch and Ritchie: 171)

I asked questions related to women's socio-economic status, their political career , knowledge about maternal health schemes and services and the challenges they face in fulfilling their roles and responsibilities. In the focus group discussion, I asked questions on the challenges the women face in participating in public spaces and what would they like to change in the system so as to contribute more effectively.

3.2.2 Research Site:

Even though the quantitative data that I have used is nationally representative survey I have conducted interviews in two districts of Assam in the north east region of India. Assam was chosen as the research site as it has the highest mortality rate in India at about 328 per 100000 live births (MoHA 2013:113).

Figure 3.1 Divisions of Assam



Out of the six administrative divisions in Assam the highest mortality is in Upper Assam (404 per 100000 live births) followed by North Assam (367 per 100000 live births) (MoHA 2013:113). Apart from having the highest mortality rate these districts had also been chosen based on their attempt to decrease their maternal mortality rate, while Upper Assam was

only able to bring its MMR by 6%, North Assam was able to decrease its MMR by 31.6% from the period 2011-12 to 2012-13. After I decided which division to focus on, due to practical reasons of easy access to participants, I chose the districts of Jorhat and Sonitpur.

3.2.3. Sampling Method

I interviewed 28 women of which 15 were village heads, 6 were other panchayat members, 3 were ASHA workers and 4 were villagers. This gave me a chance to get different viewpoints on the same topic. The women were in the age group of 26-55. All women were married and had an average of 2 children. The interviews lasted between 20-30 minutes. All village heads were elected for the first time and were elected for a reserved seat for women SC, ST or OBC.

Figure 3.2: Caste and Religion Details: Qualitative Sample

All the women sarpanch in the qualitative sample were married or widowed and had atleast 2 children. 8 out of 15 village heads either identified themselves as a housewife or a social worker, only 4 women claimed that they were public servants and the other 3 were either farmers or tea plantation worker. All women had an education atleast till the 10th grade (12 years of education).

3.2.4 Limitations

The quantitative data that this paper uses is a national household survey, thus the results found from quantitative analysis would be aggregated at the national level. While, this qualitative survey was specific to two districts. The aim to collect this data wasn't to make any generalizations but was to get a broader understanding of how the panchayats work and the possible barriers faced by women. One of the limitations of this paper is that it falls short in showcasing the regional differences in the barriers to women's effective political

participation. One other shortcoming of this qualitative work is that it doesn't document the male sarpanch's experiences, this might skew the results in the favour of women as I don't know the barriers men could face while they execute their responsibility as the sarpanch.

3.2.5 Ethical Concerns

One of the main concern that an individual participating in qualitative research is anonymity, wherein privacy should be guaranteed. Before starting the interview all the participants were given a number and they were told that in case they aren't comfortable with their names being reported, their identities will be kept anonymous. In the case, where they wanted some information to be kept confidential, that information hasn't been used in this research paper. The participants weren't coerced into participating in the survey. When I first contacted them, I told them about why I am conducting this survey and that it is only with their consent that they will be included in the study. I also informed them that they were free to answer or not to answer any of the questions. Since some interviews were taken in the local language, which I am not well versed in, I asked help from a trusted friend who helped me in conducting the interviews as well as in translating the information in English.

In conclusion, this research paper used both quantitative and qualitative research to investigate the relationship between women's participation in local governments and provision of and access to maternal health services. The quantitative analysis will be addressing the first part of the research questions on the extent to which women's political reservation and participation have an impact on maternal health services. While the qualitative survey will be used both to supplement the quantitative findings as well as to understand the challenges women might face in discharging their responsibilities.

Chapter-4

FINDINGS AND DATA ANALYSIS

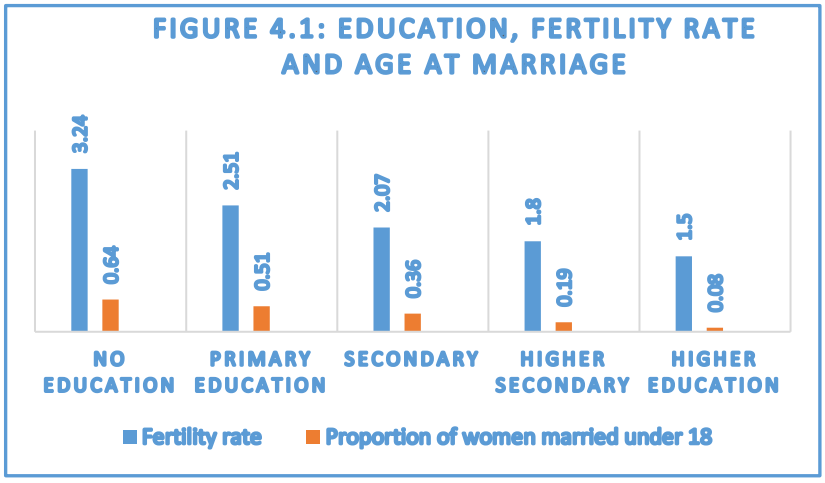
In this chapter analyses the results found from analysing the quantitative and qualitative data. The first section gives a brief overview of the quantative data by discussing the descriptive statistics. In the second section the paper analyses the results from regression analysis of the quantitative data, supplementing it with the insights from the qualitative data.

4.1 Descriptive Statistics

4.1.1 Individual Characteristics

Table 4.1:Individual Characteristics – Quantitative Data

Variable	Obs	Mean	Std. Dev.	Min	Max
Age (in years)	9317	28.39369	5.84533	15	60
Education (in years)	9315	4.979173	4.690347	0	16
Number of children	9317	2.535151	1.51873	0	13
Member of SHG	9310	.1046187	.3060779	0	1
Attended Gram Sabha	9299	.0594688	.2365127	0	1
Worked for pay/wages	9309	.4143302	.4926325	0	1
Currently Working	3837	.5514725	.4974083	0	1
Age at Marriage	9317	17.77	3.247019	1	38



In this paper the analysis is based on a total of 9317 eligible women in the age group 15-60, who have had at least one birth since 2005. At an average a woman has only received 5 years of education i.e. has only received primary education. Chart 5.1 shows the relationship between the woman's level of schooling and

fertility rate and age at marriage. There seems to be a negative relationship between level of schooling and number of children women have and the age that they are married at. Only 6% women have graduated school and about 4.5% women have got higher education. The average fertility rate in the sample is about 2.5 with about 35% women having 2 children. As would have been expected, women with less education have more number of children. More than half of the women who have had no education have had more than 3 children. 88% of women who have graduated school have less than 3 children. The average age of marriage is approximately 18 years, however 38% women were married under the legal age of 18. Amongst the women who got married under the age of 18, 54% women haven't received any education and only 2% have been able to graduate.

To measure if women are active in community participation the paper looks at whether they are part of a SHG or if they have participated in the monthly gram sabha (village meetings). While 10% women are part of SHG groups in their villages, only 6% women participate in the village meetings this could indicate low awareness about government schemes related to health, education, nutrition and can also be representative of why local governments are not aware of women related issues. 41% women were employed at some point in their lives and only 23% women were working at the time the data was collected.

4.1.2 Household Characteristics

Table 4.2: Household Characteristics-Quantitative Data

Variable	Obs	Mean	Std. Dev.	Min	Max
Husband's Age	9145	32.84035	6.681896	13	76
Husband's education (years)	9133	6.81857	4.631308	0	16
Mother-in-law's education (years)	9310	0.76498	2.088641	0	16
Mother's education (years)	9303	1.090186	2.560415	0	16
Per capita household expenditure	9314	16813.49	14756.04	708	655466.7

The average of the husband is 32 years in the sample. At an average the husbands have completed 2 more years of education as compared to their spouse's 5 years. About 21% of men haven't received any education and 57% of these men have more than 3 children. There seems to be a negative relationship between husband's age and number of children. There is some gender disparity at the school level where 8% men have graduated from school, amounting to 2% more than women and almost double the amount of men have completed some form of higher education. The education level of both the mother and mother-in-law is very low where about 81% of the mothers and 85% of the mother-in-law have had no form of formal education. The average per capita household expenditure is about 17000 rupees per month, with about 87% women getting some cash in hand from the husband to spend on the household. In the sample about 83% people practice Hinduism, 13% people are Muslims and the rest 4% comprise of Sikhs (2.48%), Jain (0.05%), tribal (0.36%) and Christians (0.71%).

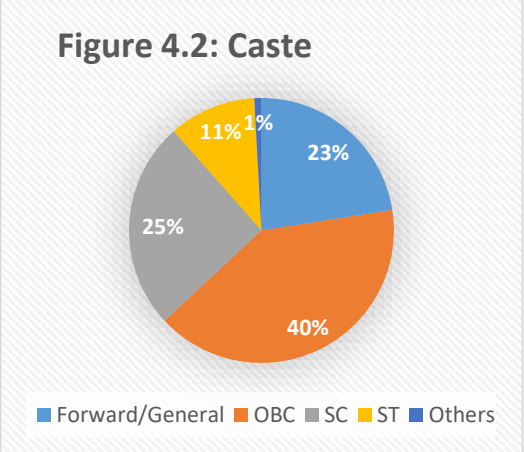


Table 4.3: Woman's Autonomy in the Household.

Woman's autonomy in the household:	Obs	Mean	Std. Dev.	Min	Max
Who has most say on the decision about the woman's work	7743	.3966163	.4892267	0	1
Ask permission to go to Health centers	9203	.8674345	.3391229	0	1
Woman's name on home ownership or rental Papers	8833	.0890977	.2849008	0	1
Ask permission to go to short distances by train/bus	8860	.9068849	.2906101	0	1
Can visit health center alone	9185	.6324442	.4821658	0	1
Allowed to work: if suitable job	6739	.7483306	.4340044	0	1
Most Say in Fertility choice	9141	.2182475	.4130789	0	1

In this sample, husbands have the most say over whether a woman should work or not and about 75% women say that if required and if the job is suitable they will be allowed to work. Thus as far as woman's economic decision making power is concerned only 40% women feel that they can freely take the decision to work. According to the data women are not very mobile as they have to ask for permission from their husband or the elders in the family to go outside. About 91% of the women have to ask permission to go to short distances which require travelling by train or bus. To access a basic necessity like medical care 87% women have to take permission from their family member this can be a reason for hindrance to medical care usage. However almost 40% of the women go alone to the health centers when they fall sick. Woman's autonomy in terms of the assets she owns, is very low, with only 9% of women having their names on the rental or house ownership papers and about 44% women having bank accounts. According to 78% women in the sample, the elders and husband in the household has the most say in the number of children they should have.

4.1.3 Supply Side Variables: Village and Hospital Characteristics

Table 4.4: Village Characteristics and Hospital Characteristics

Village Facilities	**Male**	**Female (Unreserved)**	**Female (reserved)**
Roads	.862	.898	.846
Roads usable in monsoon	.793	.795	.802
Hours of electricity (per day)	12.459	11.698	13.508
Janani Suraksha Yojna	.935	.951	.978
Free Ambulance Services	.238	.288	.237
Mobile medical van	.170	.269	.234
Medical Facilities			
Funds from government	.52	.53	.50
Availability of allopathic medicine	.912	.914	.913

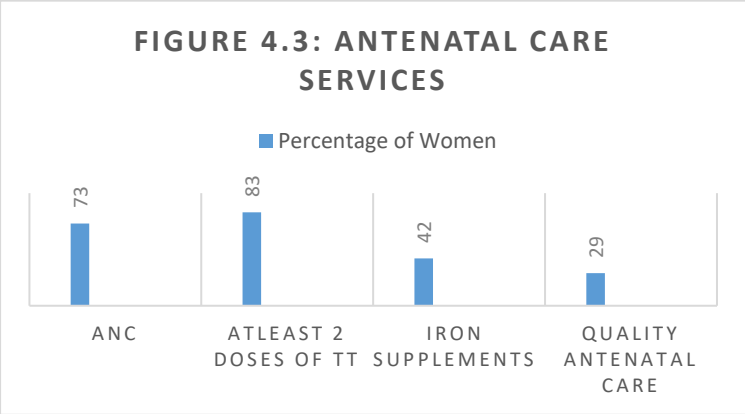
Number of hours open (per week)	48.24	50.73	48.74
Hours of electricity (per day)	11.47	10.91	12.21
Generator	.375	.365	.371
Fee for registration	.493	.439	.485
Facility for childbirth	.373	.423	.381

The table above gives an overview of the available facilities in villages which have a male sarpanch, female sarpanch and the village which was reserved for women, respectively. As can be seen from the table, the three kinds of villages have similar facilities except that villages which are headed by women, who have not been elected on a reserved seat, have better facilities for childbirth and are better funded by the governments as compared to other villages. While almost most of the villages have implemented the Janani Suraksha Yojna, still about have of the villages in each category are charging a fee for registration, even though it is supposed to be free of cost.

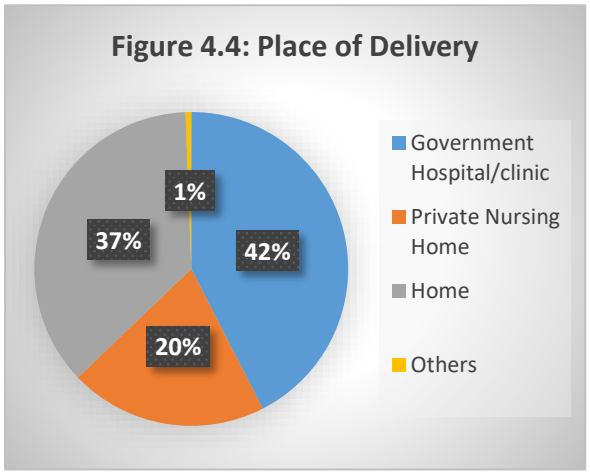
4.1.4 Outcome variables:

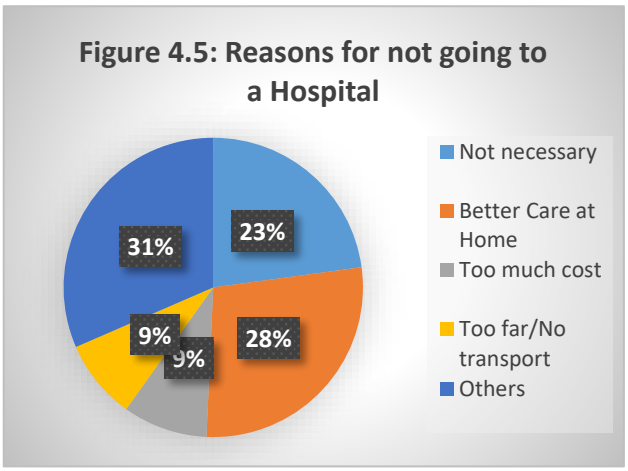
Quality Antenatal Care

For this paper a women receives quality antenatal care if she gets at least three antenatal check-ups (ANC), at least 2 doses of TT injections and iron supplements. As can be seen from the Chart 5.3 while more than half women get at least three check-ups and TT doses, less than half women received iron supplements and this can be indication of pregnant women being anaemic. Only about 30% women receive all the three aforementioned services.



Institutional Delivery





About 62% women had an institutional delivery of which about 77% were assisted by doctors and ANMs and the rest of the deliveries were assisted only by the ANMs. About half of the women who preferred delivering at home though that having an institutional delivery wasn't necessary and that they can get better care at home. Distance and costs were also given as reasons for not going to the hospital however only about 17% women gave these reasons. Unavailability of provider, poor quality services, family not allowing were some and institutional delivery being against customs were some other reasons given for not going to the hospital.

Postnatal Care

Only 31% women received their first postnatal check-up within 48 hours. 43% women reported that she had a health check-up after delivery, while 16% said that the check-up entailed examining only their baby's health. Almost 41% women didn't get a postnatal check-up and more than half of these women had their deliveries at home.

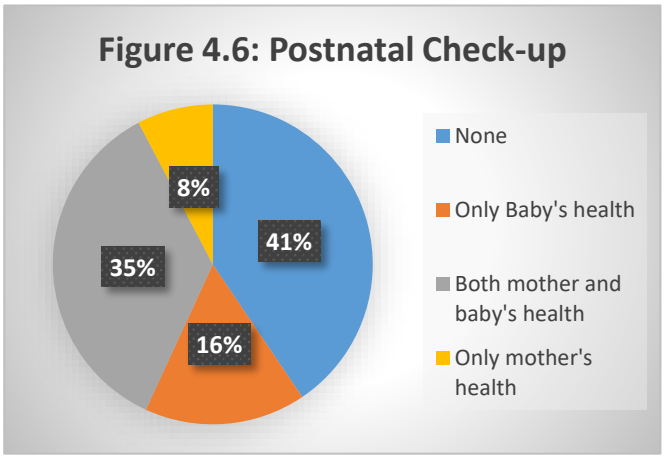


Table 4.5 Maternal Health outcomes for different categories of villages

Variable	Male	Female	Female(reserved)
Quality antenatal Care	0.283	0.356	0.294
Antenatal Check-ups	0.733	0.732	0.730
TT doses	0.830	0.858	0.842
Iron	0.411	0.518	0.422
Institutional Delivery	0.619	0.700	0.625
Post-natal Care	0.419	0.479	0.433

4.2 Results and Analysis

The table 4.6 shows the odds ratio of the three logistic regressions mentioned in the methodology section, where while in the first column the regression only controls for individual characteristics, household (column 2) and village (column 3) characteristics have been controlled for, in the simultaneous columns . It depicts the association between maternal care, measured in terms of antenatal care, institutional delivery and post-natal care, and women in political institutions and women's community participation.

As can be observed from the table, there is a significant and positive relationship between a village being reserved for women and all the three components of maternal health care when individual, household and village characteristics are controlled for at 99% significance level. It is also interesting to see that the magnitude of the coefficient of the unreserved female villages is greater and significant for antenatal care and institutional delivery. The strength variable which denotes the number of women has an ambiguous relationship with all the three maternal health components. While it is insignificantly related with the antenatal and postnatal care, it has a negative relationship with institutional delivery. Participation in a SHG group increases the chances for women to access maternal health services, whereas participating in gram sabhas either have a negative or insignificant relationship with the maternal health outcomes.

Table 4.6 Results: Quantitative Data

Variable	(1)	(2)	(3)
Quality Antenatal Care			
Political Reservation:			
Female (unreserved)	1.302***	1.283***	1.498***
	(0.111)	(0.114)	(0.198)
Female (reserved)	1.072	1.041	1.338***
	(0.067)	(0.068)	(0.135)
Strength	0.977	1.083	0.976
	(0.173)	(0.205)	(0.280)
Community Participation:			
SHG member	1.656***	1.589***	1.554***
	(0.133)	(0.135)	(0.210)
Attended Gram Sabha	0.975	1.001	1.054
	(0.103)	(0.109)	(0.168)
Institutional Delivery			
Political Reservation:			
Female (unreserved)	1.328***	1.310***	1.342**
	(0.117)	(0.121)	(0.189)
Female (reserved)	1.140*	1.213***	1.267**
	(0.069)	(0.078)	(0.125)
Strength	0.553***	0.492***	0.399***
	(0.054)	(0.091)	(0.116)
Community Participation:			
SHG member	1.294***	1.316***	1.310***
	(0.110)	(0.115)	(0.115)
Attended Gram Sabha	0.864	0.864	0.816
	(0.094)	(0.098)	(0.138)

Post Natal Care			
Political Reservation:			
Female (unreserved)	1.030	1.067	0.929
	(0.080)	(0.088)	(0.124)
Female (reserved)	0.988	1.001	1.189**
	(0.056)	(0.059)	(0.110)
Strength	1.774***	1.727***	1.375
	(0.286)	(0.298)	(0.402)
Community Participation:			
SHG member	1.027	1.022	0.949
	(0.079)	(0.115)	(0.124)
Attended Gram Sabha	0.838*	0.840*	0.659**
	(0.085)	(0.088)	(0.103)

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Villages with male head are the base category.

The regressions also controls for district fixed effects.[11]

4.2.1 Women's Political Reservation and Maternal Health services

When we control for individual and household characteristics, the reservation policy seems to have no impact on antenatal care however after controlling for village characteristics it can be seen that women in reserved villages have 34% higher odds of receiving antenatal care as compared to villages headed by men. The odds of women having an institutional delivery and receiving postnatal care are 1.28 times and 1.19 times more, respectively, if they reside in a village reserved for women. It can be observed that the villages headed by women who have not been elected on gender quotas have a higher magnitude as compared to reserved villages. If a women resides in an unreserved female headed village her odds of receiving antenatal care and having an institutional delivery are higher by 50% and 34%, respectively as compared to male headed villages.

[11] For more information on the controls in each specification please refer to table 3.1 and section 3.1.4

According to the data, reservation for village head seat for women increases the chances of women utilizing and receiving maternal health services. All the components of maternal health services i.e. quality antenatal care, institutional delivery and postnatal care are positively and significantly related to the reservation term. This can be understood as women village heads creating opportunities so as to improve maternal health services as well as encourage women in their villages to take up these services. This correspond to the argument that when women are elected on reserved seats they can improve women related outcomes by better public service delivery and can empower other women in the villages to take up the maternal health services.

"In my village, we conduct a health day on every second Wednesday of a month in collaboration with the ASHA workers, and we specially target women and generate awareness about the maternal and child health services provided free of cost by the government hospitals" (Nath 2017, Personal interview)[12]

When the women were asked about what are some of the things that they would want to improve in their villages if they were given one more term to work, most of them wanted to improve the village infrastructure including the school, Angadwadi centers, drainage systems as well as wanted to improve sanitation in their villages. Specifically, with regards to maternal health services, in 11 out of the 15 village panchayats a village health day was conducted monthly to talk about various health issues and generate awareness amongst the villagers. The village panchayats also undertake the responsibility for improving the village health infrastructure and the quality of roads so as to increase access to the nearby hospitals. According to Indira Pradhan (Personal Interview, August 2017), sarpanch of the Bakuri Panchayat, since she has been elected she has been focussing to repair the roads as they become dysfunctional in the monsoon season. She also told me that she took an action against the ANM who hadn't come to the village health center for a month, by sending a complaint to the Panchayat Health committee. According to the ASHA whom I interacted with, villages which are in remote areas, the ANMs are trained to deliver the baby in case of lack of access to health centres. In such cases the village head can monitor whether the ANMs are present to provide the maternal health care services.

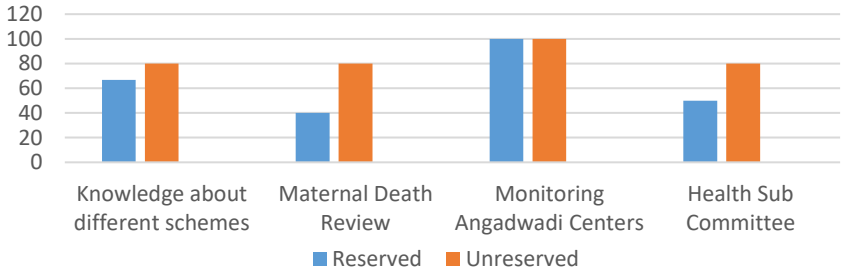
[12] Personal interview with Sumitra Nath on generation of panchayats effort to generate awareness about health programs.

However, as can be seen from the results of the quantitative data (Table 5.6) female heads without quota do better than female heads with quota for antenatal care and institutional delivery. Women who are elected on an unreserved seat might be more confident and empowered than the so called 'quota' women as they have competed with men and won the elections. The coefficient for women in both reserved and unreserved seat is positive and thus can

> *"I have always been an active participant in community activities and had a good rapport with the villagers, I wanted to do something for my village and thus wanted to become a sarpanch, once my term gets over I will still keep working for the betterment of my village." (Pradhan, 2017 Personal Interview)*

Women who were elected through SC/ST, OBC quota or no quotas in Assam, were more educated and were involved in community participation before getting elected to the sarpanch position. Women in the unreserved were more knowledgeable about the maternal and child health government schemes, more importantly women in unreserved villages knew about the maternal death review that the panchayat needs to undertake so as to ascertain the cause of death and to prevent the same in future. All the women claimed that they monitored the Angadwadi centers regularly for quality check. The most important role of the PRIs is to form a Village Health and Sanitation Committee (VHNSC) which is responsible to monitor the public health issues in the villages. On the on hand, 80% of the women sarpanch who was elected on a unreserved sear knew about the roles and responsibilities of the VHSNC, on the other

Figure 4.7 Differences between reserved and unreserved female village head



hand only half of the sarpanch elected on a seat reserved for a woman knew about these roles and responsibilities.

Women who claimed that they themselves took the decision for being a member of the panchayat were more likely to know about a sarpanch's duty and responsibilities as compared to women who made the decision on someone else's suggestion. Another factor that might influence women's participation in the *Panchayati Raj* Institutions can be that of the motivation behind them standing for the public office. When I asked the women who encouraged them to go into politics, 10 out of 15 women said it was their husband, families or other villagers.

> *Barnali Saikia Das a 31 year old panchayat member who had graduated from college said that she wanted to do something to improve the condition of schooling in her village and this encouraged to stand for this public office. She also said that her husband, who is a businessman, encouraged her to take this position and also helped her in understanding the roles and responsibilities of the panchayats (Das 2017, personal interview).*

Barnali [13]was among the few women who seem to have chosen to participate in politics due to their own interest in bringing about a change in their societies. However, when I asked these women if their husbands participated in the workings of the panchayat, all of them revealed that none of their husbands were involved in their job. This can be explained because women in Assam enjoy greater decision-making power at the household level (Nayak and Mahanta 2012:15). There is evidence (Sathe et.al 2013) which suggests women are just elected for tokenism sake, when either the family members or other panchayat member took decisions on their behalf. This came about because of their subordinate position within the family rather than as a consequence of any increased sense of self-confidence or self-worth, typical requisites for a process of empowerment.

4.2.2 Women's descriptive representation and Substantive Representation

Counterintuitively, increasing the number of women as compared to men has an ambiguous effect on different components of maternal healthcare. While it has no significant impact on

[13] Personal interview with Barnali Das on the topic of her political career and what motivated her to join politics.

antenatal and postnatal care, it has a negative impact on institutional delivery. This contradicts Dahlerup's (1998) critical mass theory and might indicate that descriptive representation might not translate into substantive representation automatically.

Some possibilities for why descriptive representation of women in panchayats is not leading to effective representation are, first and the foremost, women sarpanch are not empowered to fulfil their roles and responsibilities, second the conditions attached with the reservation policy and the underlying political structures might create barriers for women's political empowerment and finally financial decentralization do not give women enough power to function properly.

A. Lack of Capacity and Knowledge:

One of the major reasons for limited impact on policy outcomes can be the inferior characteristics in terms of education and experience that accompany newly elected women (Munshi & Rosenzweig, 2008). In Tamil Nadu, women pradhans on reserved seats were observed to perform poorly as compared to candidates selected on the seats reserved for SC and STs in a test designed to check their knowledge on government procedures (Gajwani & Zhang, 2008).

One of the reasons for why women are not able to perform effectively could be that women sarpanch do not receive any capacity building workshop, where they can learn the nuances of how to implement the government schemes on ground. Only 11 out of 15 women in the qualitative survey, reported that they received some kind of capacity building training. About 6 of the sarpanch claimed that they have to make out-of-pocket expenditures to attend these workshops which take place at the district office which can be anywhere from 20km to 150 km far from their villages. In the survey in Assam women who were less educated weren't informed about the government schemes as compared to women who were at least school graduates.

B. Institutional and Structural Challenges

When I asked the panchayat members of Sonitpur district it they would like to stand for the election again, they refused and some of the key reasons for this attitude were that they felt

it was difficult to handle both housework and their public duties, they couldn't work because of lack of funds or because 5 years weren't enough for them to bring a change.

The time that women can dedicate to public service is also dependent on the gender roles existing in the society. In India women are still the primary care givers, and thus it becomes difficult for them to fulfil all their obligations as sarpanch as they have to divide their time between household and workplace. Women in the sample from Assam, who had small kids claimed that they tried to finish their work by the time their children came back from school and it was difficult for them to go long distances to attend meetings with block and district officials.

> *I have to handle work at home also and have to look after the kids when they come back from school. My husband is supportive however he is a farmer and has no fixed hours so I have to be home before my children come back from school – (Rahil Guria, 2017 Personal Interview)*

Some important conditions attached to the reservation policy that might act as barriers to women's participation in politics are that of rotation after 5 years term, two child norm and the minimum completion of high school to participate in the elections. While these conditions seem to support meritocracy, in a society like India where there is no level-playing field they are just an obstruction to social justice for women as their decision making power hasn't been improved at the household level so that they can abide by these conditions. Women in the qualitative term expressed that a longer term (of 10 years) would have been better for them to bring about the change they envisioned. Women in the qualitative survey complained that a 5 year term is a small amount of time for them to bring about an actual change. This supports what Sathe et al. (2013) found in Maharashtra where women wanted a longer rotation term, as women took the first two years to understand their work and the impact on the public goods start showing after the first two three years after their election. Deininger et al. (2015) also observe that women in the short term aren't able to bring about a big change due to lack of experience, however they observe that in the long run women overcome their short run shortcomings.

The two child norm contradicts the rights based approach to women's development, and with the objectives of the constitutional amendment enacted towards ensuring greater political participation and empowerment of politically and socially marginalised groups such as weaker sections and women. Those who had the power, influence and resources to manoeuvre or contest, could circumvent the norm (Buch 2005:2429).

C. Financial challenges

> *"One time, I had to go once every day to meet the block development officer to discuss the budgetary concerns that my village was facing however his staff always sent me away and asked me to come the next day. These higher officials lie to us about funds available for different projects" (Interviewee 15, 2017 personal interview)*

Since the local governments depend on the state governments for finances, their expenditure depends on funds and guidelines received by the state. The women sarpanch complained that they have to follow the recommendations given by the fourteenth finance commission 2015, when spending the funds. According to finance commission report, the funds can only be used for the improvement of basic services - water supply, sanitation, sewerage, storm water drainage, solid waste management, roads and street lighting, parks and playgrounds, burial and cremation grounds (Ministry of Finance 2015:102). Two sarpanch in Jorhat district complained that they received funds in 2017 when they were supposed to be released two years before. When asked about their relationship with higher officials 12 out of 15 sarpanch said that they are lied to about the funds by the block development officer and that they have to wait a long time to get a reply to their grievances. The ASHA workers also complained and said that they didn't receive the extra 1000 rupees as honorarium that they were promised for their contribution. The main role of the panchayats is fund allocation and monitoring rural public service delivery and both men and women have been asking for further empowerment of the panchayats specifically they asked for training and capacity building and an honorarium for the elected members(Ministry of Finance 2015:102). Women in the qualitative data also talked about the restrictions of a 5 year rotation term. All 5 women who were elected through gender quota said that it is difficult for them to govern given that people know that they will

be in power for five years, and most of them believed that it would be difficult for them to get re-elected if they are competing with men.

4.2.3. Women's Community and Maternal Health services.

Participation in community activities has an ambiguous relationship with the three components of maternal health care. A women who is a SHG member has higher odds of receiving antenatal care by 1.55 times, as opposed to women who aren't SHG members. However when we control for village characteristics being part of a self-help group has no significant impact on institutional delivery and postnatal care. Attending the monthly village meetings also has a similar effect, unexpectedly, it has no impact on women accessing antenatal care and going for institutional delivery.

Increasing the number of women in politics might not have an impact on policy outcomes, when they fail to mobilize the community to take up maternal health services. It is important to note that empowerment is multi-locational, exists in multiple domains and is multi-dimensional. Thus, women's control over a single dimension – for instance, economic decision making – does not necessarily imply the ability to make reproductive or non-financial domestic decisions (Malhotra and Mather 1997). This is why alternative development initiatives, such as political quotas, awareness generation and property rights, and so on, are as essential for empowering women (Swain and Wallentin 2012: 428).

The village sarpanch whom I interviewed claimed that there is a paucity of the funds that they get, apart from multiple complaints to the district office. They believe a solution is to rely on SHG funds to finance maternal health care.

"Mostly we don't receive funds from the state government in time to help pregnant women, so we rely on the SHGs to help the woman with the finances." (Labnya Rejkhow, Teton Boi Panchayat, August 2017)

Self-help groups are also a platform which can be used to empower women and increase their awareness about government schemes. The women I interviewed unanimously said that being part of a self-help group is better for women looking for finances for maternal health services, they said that women also discuss about the importance of antenatal care and services available for them and their children at the Angadwadi centers.

Women can also raise their voices and opinions in the village meetings. It is an important component of the panchayati raj system. In the quantitative sample only 0.05% attended the gram sabha this could be one of the reason why participating in the village meetings or gram sabha have a negative or no impact. Contrary to what Duflo and Chattapadhyay (2004) found, women in this sample didn't attend the village meetings which could also explain the lack of awareness about different health schemes and importance of accessing them.

Chapter-5

Conclusion and Policy Implications

Maternal mortality is an important health indicator which can reflect if women have access to proper antenatal care, skilled assistance during delivery and postnatal care. According to the WHO most of the maternal deaths are preventable. The paper argues that the socio-economic indicators and governance structures impact access to maternal health services. It is important that there is an increase in women's participation in the decision making so as to bring women's issues to the forefront.

This paper uses a mixed method approach to investigate whether reservation for women in local governments has an impact on maternal health services. The paper found that the reservation policy has a positive impact on maternal health services, i.e. if a woman belongs to a village which is reserved for women has a greater chance of accessing maternal health services as compared to a man. This confirms the initial hypothesis that women in politics can bring about an actual change in policy outcomes. However, another interesting finding in the paper was that women who were elected on a seat not reserved for women performed better as compared to the so called 'quota' women. The paper relies on the qualitative survey and other research papers to explain this finding. It is argued that women who are elected through quotas for other or no categories are more empowered and motivated to take public offices and thus perform better in the provision of maternal health services. The paper also find that an increase in descriptive representation, or an increase in the number of women in the local government either didn't have an impact or had a negative impact on the different maternal health outcomes. To understand this result the paper takes insights from the qualitative survey. This paper has identified three barriers to women empowerment namely, lack of capacity and knowledge, structural and instutional and financial. Finally, it is also found that community participation has an ambiguous impact on women accessing maternal health services. Attending gram sabhas (village meetings) seems to have no impact on women accessing maternal health services which can be probably by the low attendance. Thus it is possible that these women aren't aware of the different schemes related to antenatal care, institutional delivery and postnatal care. Women participating in SHGs increase the chance of accessing antenatal care and institutional delivery.

The major contribution of this paper is that while reservation for the village head has a positive impact on maternal health services, there is a simultaneous negative or no effect of increasing the number of women in local governments. This finding indicates that reservation alone will not be enough for effective representation. It is important for the government to address the underlying gender structures, as well as to empower women policy makers through capacity building workshops. The local government institutions should also be 'engendered' so as to create a conducive and safe environment for women village leaders to function effectively.

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APPENDICES

APPENDIX 1: QUESTIONAIRRE for interview

1. Name:
2. Village:
3. District:
4. Age:
5. Marital Status:
6. Religion, Caste:
7. Educational Qualification:
8. Occupation:
9. Husband's profession:
10. Monthly household income
11. Is/Was any family member a part of politics?
12. How did you enter politics? (details)
13. Views about rotation?
14. Did you get any capacity building workshop?
15. Relationship with higher officials?
16. Maternal Health related infrastructure in the village:
17. Maternal Health related scheme in the village
18. Are you fully aware of your roles and responsibilities in promoting women and child health?
19. What are common problems faced by you in promoting woman and child health?
20. What are difficulties faced in collaboration with health workers?
21. How often do you monitor Angadwadi centers?
22. Do you conduct a community health needs assessment?
23. How do you help the public health workers in promoting institutional delivery
24. Do you collect health related data?
25. What is grievance redressal mechanism in case a villager isn't satisfied with government hospital?

APPENDIX 2: SAMPLING DETAILS – QUALITATIVE SAMPLE

Subject	Technique	Sampling Method
1. Indira Pradhan (Sarpanch)	Semi-structured interviews	Note-taking with consent
2. Susani Horo (Sarpanch)	Semi-structured interviews	Note-taking with consent
3. Bharati Uma (Sarpanch)	Semi-structured interviews	Note-taking with consent
4. Labnya Rejkhow (Sarpanch)	Semi-structured interviews	Note-taking with consent
5. Sumitra Nath (Sarpanch)	Semi-structured interviews	Note-taking with consent
Interview 6 (Sarpanch)	Semi-structured interviews	Note-taking with consent
7. Barnali Saikia Das (Sarpanch)	Semi-structured interviews	Note-taking with consent
8. Pushpa Devi (Sarpanch)	Semi-structured interviews	Note-taking with consent
9. Rahil Guriya (Sarpanch)	Semi-structured interviews	Note-taking with consent
10. Interviewee 10 (Sarpanch)	Semi-structured interviews	Note-taking with consent
11. Interviewee 11 (Sarpanch)	Semi-structured interviews	Note-taking with consent
12. Interviewee 12 (Sarpanch)	Semi-structured interviews	Note-taking with consent
13. Interviewee 13 (Sarpanch)	Semi-structured interviews	Note-taking with consent
14. Pallavi Gohai (Sarpanch)	Semi-structured interviews	Note-taking with consent
15. Interviewee 15 (Sarpanch)	Semi-structured interviews	Note-taking with consent
16. Shubheeha Tamuli (Panchayat member)	Semi-structured interviews	Note-taking with consent
17. Lakhi Neog (Panchayat Member)	Semi-structured interviews	Note-taking with consent

18. Sambhuti (Panchayat member)	Semi-structured interviews	Note-taking with consent
19. Debolina Das (Panchayat member)	Semi-structured interviews	Note-taking with consent
20. Interviewee 20 (Panchayat member)	Semi-structured interviews	Note-taking with consent
21. Ambika Nath (Panchayat member)	Semi-structured interviews	Note-taking with consent
22. Interviewee22 (ASHA worker)	Semi-structured interviews	Note-taking with consent
23. Interviewee 23 (ASHA worker)	Semi-structured interviews	Note-taking with consent
24. Interviewee 24 (ASHA worker)	Semi-structured interviews	Note-taking with consent
25. Interviewee 25 (ASHA worker)	Semi-structured interviews	Note-taking with consent
26. Prerna (Villager)	Semi-structured interviews	Note-taking with consent
27. Shibani devi (Villager)	Semi-structured interviews	Note-taking with consent
28. Interviewee 28 (Villager)	Semi-structured interviews	Note-taking with consent