Research on the long-term impacts of trained midwives on health outcomes in Bangladesh

Key findings from the baseline study

INTRODUCTION

Over the last few decades, the maternal and neonatal health services have improved steadily in Bangladesh as evidenced through increase in uptake of antenatal care (ANC), skill birth attendance, postnatal care (PNC) and reductions in maternal and neonatal mortality rates.

Despite the tremendous effort in reduction of maternal deaths nationwide, the country still loses 14 mothers a day due to complication of pregnancy delivery and post-partum period; delivery by unskilled birth attendants at home and lack of appropriate care for obstetric complication from a skilled provider at facilities . Progress on neonatal mortality has been slow. More than 80% of the neonatal deaths occur within 7 days, 50% within first 24 hours of life and most of these deaths are at home in the absence of care by skilled birth attendants and are often unregistered .

There are significant global evidence on the impact of skilled midwives on saving maternal and newborn lives. A Cochrane Database of systematic review with 15 trials involving 17,674 women of revealed that women who received the midwife model of care versus other models were less likely to have complications. Midwife-led care for low- risk women have health and other benefits with no evidence that maternal care led by midwives is any different to that led by physicians, and that too, with no adverse impact on mothers cared by midwives. Midwives and out-of- hospital birth settings can also enable women to avoid unnecessary caesarean sections in comparison to alternate care models.

Bangladesh did not have dedicated diploma midwives and the service was mainly dominated by nursing services, who had supplementary midwifery training. Since 2010, the Government of Bangladesh with the support from the development partners have taken a series of policy reform and started to train dedicated midwives with the aim to deploy them in public sector health facilities throughout the country with the aim to increase the skill birth attendance at birth.

To accommodate this newly midwifery programme, Directorate of Nursing Services (DNS) has been upgraded and renamed as Directorate General of Nursing and Midwifery (DGNM); Bangladesh Nursing Council (BNC) has been renamed as Bangladesh Nursing and Midwifery Council (BNMC) through adaptation of new law in 2016 and Bangladesh Midwifery Society was formed in 2010.

Currently total 54 institutes (38 government and 16 private) have total 1,535 seats (975 government and 560 private) for 3 year diploma in midwifery. Three batches of midwives have completed diploma so far and many of them have been deployed in the public sector through Public Service Commission (PSC). The strategy composed of: 6-month advanced midwifery certificate to expand the skills of existing nurse-midwives, running since 2010; and a 3-year diploma in midwifery, launched December 2012.

The UK Department for International Development (DFID) has commissioned Oxford Policy Management (OPM) in collaboration with Mitra and Associates to carry out a baseline study on the long-term impacts of trained midwives on health outcomes. The overall objectives of this study is to understand the long-term impact or value added by the new midwifery cadre to maternal and new-born health in Bangladesh following their introduction to the health system and to suggest suitable strategies to effectively develop, deploy and utilise them for better maternal and new-born health outcomes.

We believe that the findings of this study will help the policy makers and development partners in Bangladesh to better understand the baseline status of the midwives in the public services, identify potential challenges in the integration of the midwives into the broader health systems.

METHODS

Research questions

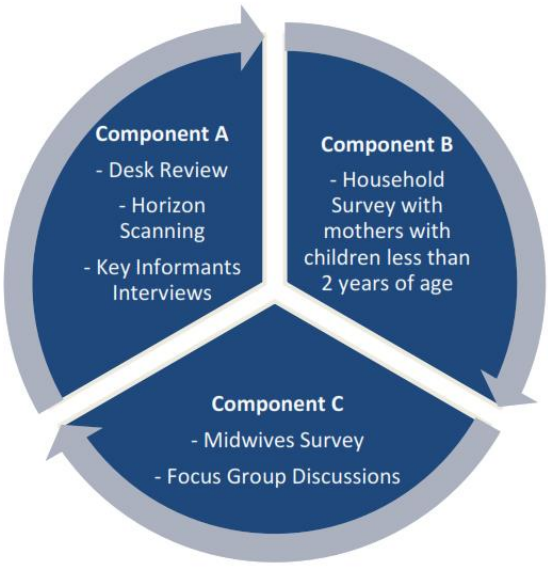
The research questions that we explored in this study were:

- Whether the licensed midwives have necessary knowledge and skills?
- Is the health system utilising them optimally and efficiently?
- Are the midwives able to make any difference to the health and well-being of women of reproductive age especially pregnant and the new-borns?
- If not, then what are the barriers and what needs to be done to remove these?

Overall design

We have applied a mixed methods approach coupled with three different components yet ensuring a cross cutting theme and analysis across them all. The three components to this research and the tools used in each components is shown in the following diagram.

Figure 1: Research components and tools



Component A (policy landscaping) involved desk review and key informants' interviews (KII). A rapid horizon scanning was also carried out as a part of the KII. The themes explored in the KIIs include: historical background and introduction of the midwifery programme; preparedness of the midwives education institutes; integration with health systems, utilization and potential impact. We used semi-structured questionnaire for the KIIs and the participants included officials from various organizations who are actively engaged in scaling up the midwifery programme.

Component B (user survey) included a cross-sectional household survey involving the women with recent experience of receiving maternal health services in the areas where the midwives are deployed. Hence, the survey population were the mothers who have children less than 2 years of age from the selected upazilas (subdistricts) that have been identified by the government for the first and second phase of midwife deployment. We sampled 1,320 mothers from 50 upazilas. We used structured questionnaire to collect data using Computer Assisted Personal Interviewing (CAPI). The modules included household characteristics, maternal, neonatal and reproductive health services.

Component C (study on midwives) involved both quantitative and qualitative methods. The quantitative survey included interviewing 329 midwives including 190 midwives trained in government institutes and 139 midwives trained in institutes affiliated to BRAC University. For the qualitative part, 6 Focus Group Discussions (FGD) sessions were carried out. We have also obtained 10 case studies in this component. We explored various aspects of the training, motivations, satisfactions and constrains and knowledge and skill of the midwives.

Limitations

One of the important limitation of this study is lack of control that would have allowed a quasi-experimental design to fully understand the counterfactual of the programme. Because of budgetary constraints, we could not do a systematic and rigorous skill test to understand the competencies of the midwives, but used self-assessment questions, which may have some bias.

Ethical considerations

Institutional Review Board (IRB) of Institute of Health Economics (IHE-IRB) of the University of Dhaka and Ethical Review Committee (ERC) of OPM approved the study. Informed consent was obtained from all respondents. Data were presented at an aggregate level and were anonymised prior to the analysis.

FINDINGS

Policy landscaping

One of the main features of the policy landscaping workstream was to explore the challenges with the integration of the newly trained midwives into the existing health systems. We used desk review and KIIs and have used a horizon scanning to explore this topic.

Some of the key challenges that have been identified in the policy landscaping are summarised below.

- **Creating distinct identity:** Creating distinct identity for the diploma midwives would be important to distinguish them from other types of midwives deployed in the past.
- **Working as nurses:** There are shortages of nurses in the upazila level health facilities. Unless local health authorities are well oriented about the roles and responsibilities of the midwives, many may end up functioning as nurses.
- **Lack of technical supervision:** District Public Health Nurse (DPHN) are not directly supervising the midwives, creating a possibility of lack of technical supervision from midwifery specific aspect.
- **Empowerment:** In Bangladesh, nurses are posted where physicians are available to assist the physicians. In this context it will be challenging to empower a new cadre (midwives) who are in the same level to have greater empowerment and independence.
- **Age:** Historically most women in Bangladesh, particularly those in rural areas are comfortable to get pregnancy and delivery care from an elderly. The newly trained midwives thus due to their age may suffer from credibility issue.
- **Facility preparedness:** At the union level, the midwives are not posted at Union Health and Family Welfare Centres (UH&FWC), but only at Union Sub Centres (USC), which is less equipped. UH&FWCs can be better utilized by deploying midwives in those facilities.
- **Home delivery:** Nearly half of the deliveries are still taking place at home, with higher proportions among the low socio-economic population. Midwives are only working at the facilities at this moment. To make delivery services safe in totality, both fronts need to be covered.
- **Career progression:** Career progression plans for the midwives and subsequent issues are yet to be thought through. If these are not ready, in next 7-10 years' time, block posts of midwives may cause lack of motivation and frustrations.

User survey

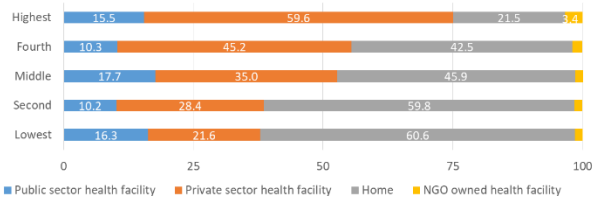
A total of 1,320 mothers with children less than 2 years old were interviewed from 50 clusters from all 8 divisions of Bangladesh. The mean age of the mothers was 24.5 years.

Most of the maternal heath indicators are showing improvements including increased antenatal care, skill birth attendance and institutional delivery and reduced complications in pregnancy.

Table 1: Trend in key maternal health indicators

Indicators	Percent	Trend
ANC coverage	86%	↑
Four ANC visits	38%	↑
ANC visits in public sector	36%	↓
Complications in pregnancy	34%	↓
Facility delivery	54%	↑
Skill birth attendance	56%	↑
Caesarean section delivery	35%	↑
Immediate breast feeding	48%	↓

Figure 2: Place of delivery, by wealth quintiles



There is continuous and steady increase in caesarean section, especially among people from higher socio-economic group and who deliver at the private sector.

Figure 3: Trend in caesarean section

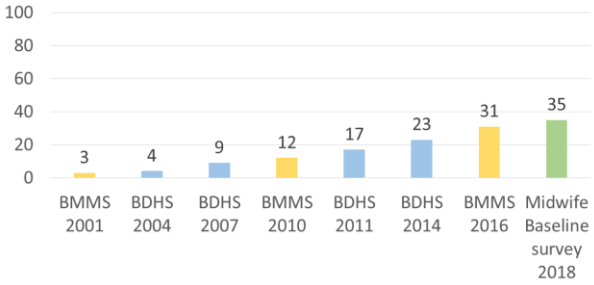
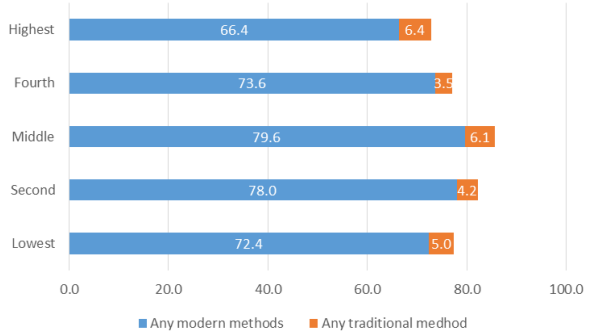


Figure 4: Contraceptive prevalence, by wealth



Study on midwives

We have interviewed 329 midwives. Of them 190 (58%) midwives were trained at government institutes and 139 (42%) were trained in the institutes affiliated with BRAC University.

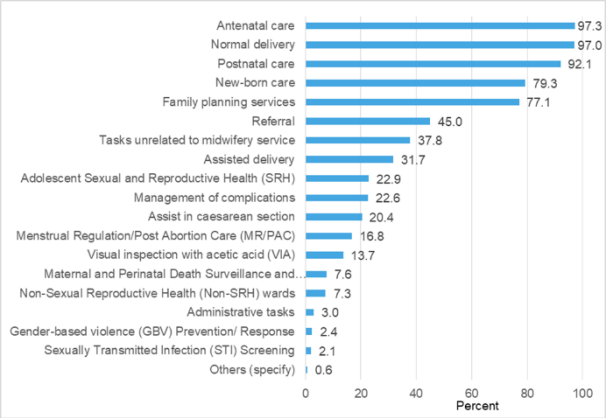
Table 2: Main motivation to be a midwife

	Overall	Govt trained	BRAC trained
To help people	82.5	83.3	77.3
Suggested by others	6.4	5.7	11.4
Others	5.5	5.7	4.5
Greater responsibilities	2.1	2.5	0
Better social status	2.1	1.4	6.8
Job that pays well	0.9	1.1	0
Lighter workload	0.3	0.4	0
Job security	0	0	0
Weighted N	**327**	**282**	**45**

Most of the midwives are highly motivated, while some where not fully aware of their career.

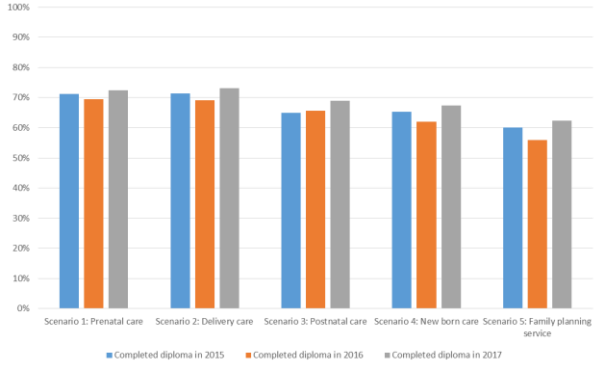
"I thought it was nursing. After joining in the course, when I found that it was midwifery and not nursing, I was so upset and was thinking of leaving the course"

Figure 5: Tasks performed by the midwives



"I do night duty alone. The other night nine patients came of which two were related to delivery and other seven general patients and I had to manage the general patients too."

Figure 6: Knowledge level, by key areas



CONCLUSIONS

The key take home messages from this study includes:

- The findings of this study is in line with other surveys and the most of the indicators shows positive trend
- The policy landscaping suggests that integrating the midwives in the health systems would continue to be a major challenge with many areas of potential issues from the top level policy making to local level management
- Further efforts are required to create a distinct identity of the new cadre of midwives
- To ensure growth of this profession, there needs to be a clear career trajectory for midwives
- Positive trend in most of the maternal, neonatal and reproductive health indicators
- Caesarean section is increasing, especially in the private sector and among the higher quintiles
- Costs of maternal health services are high, more so in private sector
- Midwives are largely motivated although many of them has just joined and some expressed some dissatisfactions during training and at work while further probing by the qualitative teams
- Most of the midwives want to work at public sector in the long term
- A significant proportion of the midwives are doing works that are unrelated to midwifery
- Many midwives want to migrate abroad in future and do not want to stay in rural areas
- Some midwives reported that they worry about being transferred
- Knowledge level is at satisfactory level and most of the midwives have reported that they have required skills to perform the tasks that they were trained for
- Supervisors are not allowing to perform many tasks
- Midwives reported having lack of required equipment and supplies
- A follow-up survey after 3-4 years will enable assessing the effectiveness of the programme and the status of the same cohorts of midwives

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