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First Private Sector Midwifery Education initiative in Bangladesh: Experience from the BRAC University

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Abstract

In an attempt to further improve maternal and newborn health in Bangladesh, the BRAC University has started a three-year diploma in midwifery education programme, with the goal of ensuring availability of at least one midwife in all the 4,500 unions of the country by 2030, starting from the hard-to-reach under-served areas. The programme used a 'hub and spoke' model, where the BRAC University is the hub and six NGOs working in the rural under-served areas are the spokes, termed as academic sites. In addition, a new academic site was established in 2014 by the BRAC University in urban, Dhaka through its newly established Department of Midwifery and Nursing. The urban academic site, or spoke, is the Department of Midwifery and Nursing at the BRAC University.

The curriculum, which has been developed and is being followed, is of international standards and is consistent with the national curriculum. The first cohort of 180 students, second cohort of 170 students, and third cohort of 60 students started their classes, respectively, from January 2013, July 2014, and January 2015. There are 52 faculty members. The programme is expected to create a cadre of midwives on the one hand, and test the effectiveness of a retention strategy for keeping the midwives in hard-to-reach under-served areas on the other hand.

Getting faculty and students for the programme has been a challenge in the absence of a full time midwifery professional and established career for them in the country. This paper describes the approach that the BRAC University has taken, the challenges faced and the ways adopted to of tackle them. It is expected that the programme will improve the situation of maternal and neonatal health in Bangladesh, significantly.

Keywords

Bangladesh, BRAC University, Midwifery education, Hub and Spoke Model, Diploma in Midwifery, Retention strategy, Universal health coverage.

Introduction

Despite the impressive progress in reducing maternal mortality, from 332 to 194 per 100,000 live births during 2001 to 2010 (40% declined), Bangladesh still has a high maternal mortality ratio¹. During the same period, the reduction in neonatal mortality, from 37 to 32 per 1000 live births from 2007 to 2011 has been slow². Access to maternal health services in Bangladesh has been low in general and more so for the poor and those living in hard-to-reach under-served areas—availability of maternal health services has been highly inequitable². Part of the reason for this inequality is the shortage of a skilled dedicated midwifery workforce for the health of childbearing women and the newborns^{2, 3}.

Bangladesh, with approximately 3.3 million births per year, needs about 19,000 midwives to provide service for every birth^{4,5,6,7}. At present only 32% of these births are being attended by skilled health professionals, consisting of doctors (22%), nurse-midwives/paramedics (9%), and family welfare visitors/community based skill birth attendants (1%)². In addition, approximately 115 million episodes of care, from pre-pregnancy, antenatal, birth, post-partum to postnatal care, are needed for managing nearly 5 million pregnancies per year. However, members of the workforce available for maternal and neonatal health services are about 19,000 (14,377 auxiliary midwives, 3,736 nurse-midwives, while 20% of the time is provided by the existing 18,684 nurse-midwives, and 802 Obstetrician and Gynecologists) and, as such, the estimated met need is only 41%⁴.

Bangladesh has been identified by the WHO as one of the 57 countries facing a crisis in the supply of human resources for health (HRH)^{8, 9}. The density of professionally trained health personnel is only 7.7 (5.7 doctors and 2 nurses) per 10,000 population; this is coupled with the imbalance of urban (80%) and rural (20%) distribution while about 26% of the population lives in the urban areas and the remaining 74% lives in the rural area^{10,11}. The majority of the rural population relies on informal sectors, with untrained or semi-trained health service providers, where 71% of the deliveries still taking place at home². Of them 95% births are attended by untrained providers². Taking services of skilled attendance at birth to the hard-to-reach under-served areas is crucial for further improvement in maternal health; and this continues to be a big challenge and unless it is tackled, further improvement in maternal health will suffer.

There is growing international consensus on the critical role of midwives in reducing maternal and neonatal mortality and sustaining safe and high quality care for women during pregnancy, labor, and the post-partum period^{12,13,14,15,16,17}. The Ministry of Health and Family Welfare (MoHFW) of the Government of Bangladesh developed a midwifery strategy in 2011, outlining a systematic approach to imparting and scaling up midwifery education, both in the public and private sectors with special attention to communities with the greatest needs¹⁷.

This strategy comprised both short term and long term approaches. The short term approach is to add six-month post-basic midwifery training to nursing education and the long term is to develop a three-year direct entry to diploma programme in midwifery. The six-month post-basic training to existing nurses started in September 2010 and so far 1,000 midwives have received training¹⁹. The first direct entry programme was started in December 2012 by the MoHFW which is the first of its kind in Bangladesh. In line with the Programme of MoHFW, the BRAC University (BRACU) launched its direct entry to the three-year Diploma in Midwifery Programme in January 2013 and the first batch of 180 students will graduate in December 2015.

BRAC, is a pro-poor development organization and BRACU, being a subsidiary of BRAC, is also committed to bring changes in under-served and disadvantaged rural and urban

communities. BRAC envisions a Bangladesh in 2030 where there will be a minimum of one qualified midwife in all the 4,500 unions, the lowest administrative unit with a population of 33,400 on an average thereby providing services and care to pregnant women and their newborns¹⁸. In the backdrop of the above, BRACU started the three-year midwifery education programme to develop a cadre of qualified, competent and compassionate midwives to serve the women in hard-to-reach under-served areas.

This paper describes the experiences in developing and implementing the programme from the selection of academic sites to the development of the sites for midwifery education; the selection of faculty to the development of the faculty with skills, and from obtaining accreditation of the programme, and the challenges faced and solutions adopted.

Programme Strategy

BRACU's midwifery education model has two main objectives: developing midwifery faculty in the country and ensuring availability of qualified and competent midwives in hard-to-reach under-served areas. BRACU had to start from the scratch, where the country had no policy for private sector midwifery education, no midwifery programme, and as such no midwives to speak of. Thus, BRACU had to face challenges at every step including the hiring of midwives from abroad. Keeping in mind the need to serve hard-to-reach under-served areas and the retention of health workforce in those areas, the midwifery educational model of BRACU comprises a "hub and spoke" structure, where the BRACU serves as the hub and the non-government organizations (NGOs) working in these areas, with experience in health related training form the spokes. This is in line with WHO's 'Global Policy Recommendation 2010' for the retention of healthcare providers in hard-to-reach under-served areas²⁰.

The partner NGOs were selected based on maternal and neonatal health needs in their area of operation, in terms of poor maternal health indicators^{20,21,22}. Among a total of seven academic sites, the six rural sites are locally managed by the partner NGOs, under BRACU administration, and the one urban academic site in Dhaka is directly managed by BRACU. A description of the components of the programme is given below.

Curriculum

A competency-based curriculum was developed by BRACU with technical input from the Bangladesh Nursing and Midwifery Council (BNMC). The curriculum meets national and global standards for midwifery education, with some modifications in terms of the skills necessary to provide quality services at the community level²³. The curriculum is of 155-credits (4,518 hours), with 40% theory and 60% practice hours; it is a 36-month full time residential course. The three-year Diploma Programme is divided into six semesters- two semesters in each year, and the 5th and 6th semesters are designed for internship. The curriculum was reviewed by international experts, such as the former president of the International Confederation of Midwives (ICM), and midwives from Afghanistan and Jhpiego – a John Hopkins affiliated organization. The curriculum has 47 modules, including six English language modules spread over the three years – proportionately more in the first two years as the third year is devoted to internship.

The curriculum required having 60% practical or clinical training, thus the delivery case load in each academic site was crucial. To ensure facilities for clinical training BRACU has established collaboration with 10 public hospitals situated in the proximity of the academic sites, and the partner NGOs have established collaboration with nearby private hospitals in addition to their

own hospitals, if any. Delivery case load was a major criterion in selecting the hospitals and the clinics. The delivery case load is assessed yearly in all the academic sites.

Development of Education Resource

The development of education resources or modules, with teaching methods and evaluation for teachers and students, and their standardization across the sites has been a continuous process, for no readymade materials were available in the country. The clinical team of the programme at BRACU has developed the modules using up-to-date and evidence-based information and has trained the faculty. The team also ensures that each module is in line with the global competencies for midwifery education, with technical support from Jhpiego. Jhpiego also reviewed the contents of the modules that are being used for the programme.

The BRAC Institute of Language (BIL) has been responsible for developing the English language teaching modules for each semester, focusing on the clinical modules of the respective semester for the students and teachers. The textual comprehension exercises, case studies, role plays etc. have been set and prepared on maternal and newborn health issues, so that students can learn the language relevant for the context. This has made English language learning very effective. BIL has been very successful in developing the modules and the teaching methods from scratch, to cater to the needs of the midwifery students.

Though it was challenging to ensure parallel education for all academic sites with uniformity and quality, eventually, it has gotten on track, after going through trials and errors.

Development of Faculty

Faculty development is a critical area due to the absence of any qualified midwifery experts, faculty and resources in the country. A continuous faculty development strategy has been designed and is being implemented at the same time. Faculty includes both classroom teachers and clinical preceptors. The faculty comprises the staff members of the BRACU and of the NGOs at the academic sites involved in teaching. The BRACU staff members have been deployed as resident faculty in all the academic sites.

The faculty development programme focused on competency-based continuing education, with due emphasis on respect for women, following a humanistic approach to teaching and providing midwifery care. Before starting the academic programme, 30 faculty with medical education, nursing-midwifery, and clinical background were recruited and provided 3.5 months' basic training. Their basic training consisted of teaching the content of the midwifery course and pedagogic skills and clinical competency was taught by placing the faculty in hospitals, clinics and community setting, to gain hands-on training. The community placement aimed at familiarizing the faculty with the overall health service delivery system in the community and in helping faculty understand the facilities and services available in the community and meeting the informal service providers, such as traditional birth attendants, village doctors, and kabiraj. The Obstetrical and Gynecological Society of Bangladesh (OGSB) and the Liverpool School of Tropical Medicine (LSTM) conducted the faculty development training at the BRACU in late 2012.

From the beginning of 2013 onwards, technical assistance has been received from national (OGSB) and international (Jhpiego) organizations for faculty development training every six months, prior to the start of each semester. Depending on the number of modules and skills needed, the capacity of faculty has been developed by providing them two to three weeks of

training on the modules to be taught in the upcoming semester. These include both pedagogic and clinical training skills on models, and the process of assessment and evaluation of students. Simultaneously, BIL provides training on the English module to faculty who conduct the English language sessions. In addition, the faculty have been receiving on-the-job training to strengthen their capacity from the clinical team at the BRACU as well as from the members of the local OGSB network.

Preparation of Academic Sites

Initially, six academic sites, one for each of the partner NGOs, in five districts (two sites in Sylhet and one each in Mymensingh, Khulna, Dinajpur and Cox's Bazar), were developed in 2012. There were two academic sites in Sylhet for it has the highest maternal and neonatal mortality rate and poor performance for other health indicators as well. The partner NGOs, serving in these areas include Friends In Village Development, Bangladesh (FIVDB) and Shimantik in Sylhet, Garo-Baptist Convention-Christian Health Project (GBC-CHP) in Mymensingh, HOPE Foundation in Cox's Bazar, Lutheran Aid for Medicine Bangladesh (LAMB) in Dinajpur, and Partners in Health and Development (PHD) in Khulna. In addition, BRACU has started a new academic site in an urban area, Dhaka, in 2014, establishing a new Department of Midwifery and Nursing.

The BRACU is responsible for the overall preparation and management of all seven academic sites. The academic sites are being assisted, equipped and supported by the BRAC University to prepare the classrooms, skill labs, computer labs and to conduct the academic programme as per set standards. The recruitment of faculty is carried out as per BRACU standards for faculty recruitment, retention, and evaluation.

BRACU prepares the call for admission for partner NGOs for advertising through local newspapers and by NGO field workers through community-based communication. The NGOs are involved in student selection and are responsible for maintaining the safety, security, health, and nutrition of the students, collaborating with local hospitals, clinics and communities for clinical and community placement of students, and for advocacy with the local government, health professionals, and community leaders about the deployment of graduated midwives. BRACU monitors the programme regularly by making site visits. In addition, the NGOs are being assessed yearly by a third party for their performance in managing the programme.

Student Enrolment

Call for the admission of the first cohort of student enrolment was circulated through the local newspapers during August-September 2012. Women with 12 years of education with at least a 2.5 Grade Point Average (GPA), who lived in the NGO catchment areas were considered eligible for applying to the programme. A total of 1,473 candidates applied for the academic year 2013-2015 (Cohort 1), from the six academic sites. Of them 1014 applicants met the BRACU admission criteria. A total of 180 students, 30 students per site, were selected based on results in the public examinations, performance in the written admission test, interviews, and geographical representation. The students of the first cohort came from 117 unions under the six academic sites. The classes of the first cohort started from January 2013 and they are now in their 5th semester, with only one dropout so far.

The second call for admission for the second cohort of student enrolment was announced during August-September 2013 for five academic sites, including one new academic site in urban Dhaka. A total of 1,929 applications were received, including 273 applications from the under-

served peri-urban areas of Dhaka for the urban academic site, in response to the second call for admission. Of the total applicants 1,371 candidates met the BRACU admission criteria. In alignment with the BRAC vision on midwifery to had at least one midwife per union, students from unions where at least two students have already been enrolled in the first cohort were excluded from the second call. In total 1,371 out of 1,929 applicants were shortlisted for the written tests. Finally, a total of 170 students were selected from five academic sites, based on their past academic record in public examinations, written tests, interviews, and geographical representation. Based on the yearly evaluation of the programme and focusing on maintaining the quality of the programme, student enrolment was delayed for six months for five (four rural and one urban) academic sites and 12 months for two rural academic sites. As such, the classes for the second cohort students have started from July 2014, instead of January 2014. Similarly, the third cohort of 60 students from the third call was enrolled in two rural academic sites and classes started in January 2015 (Table 1).

Table 1

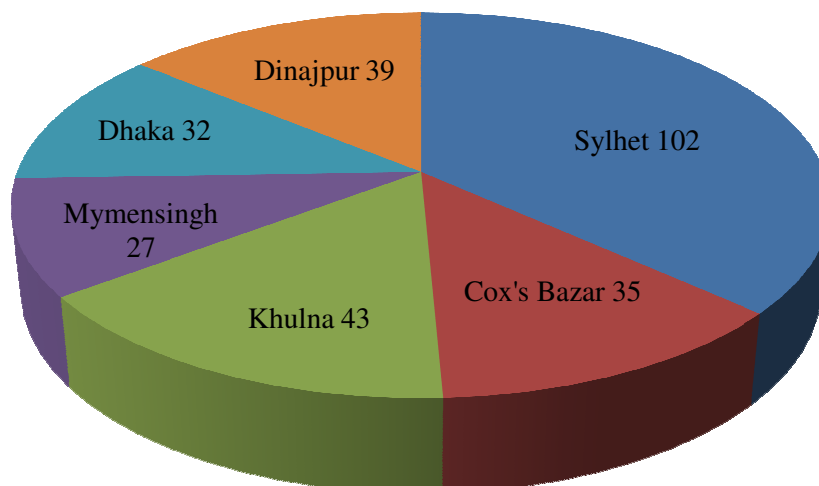
Diploma in Midwifery Student Enrolment

Cohort	Call for admission	Total applicants	Shortlisted applicants	Applicants appeared in written test	Applicants shortlisted for interview	Shortlisted applicants appeared interview	Enrolled students	Timing of enrolment
Cohort 1	Sept-Oct, 2012	1473	1014	833	593	551	180	January 2013
Cohort 2	July – Oct, 2013	1929	1371	596	327	303	170	July 2014
Cohort 3	Oct-Nov, 2014	563	458	302	206	191	60	January 2015
		3965	2843	1366	1126	1045	410	

So far, a total of 410 students have been enrolled in the programme, from 278 under-served unions, with at least one from each union.

Figure 1

Number of unions with at least one student



Faculty and Student Evaluation

Faculty (classroom teachers and clinical preceptors) are evaluated in four ways. Firstly they are evaluated during and at the end of the training by the Jhpiego technical experts for clinical modules, and BIL for English language. The participants’ knowledge is assessed with a written test and their clinical skills by using objective structured clinical examination (OSCE), along with direct observations, for competency, throughout the training. Secondly, at the end of each module, the students also evaluate the faculty. Thirdly, they are evaluated by the peer faculty through observation of their sessions. Fourthly, the BRACU staff members also evaluate the faculty during their routine monitoring visits. Based on the evaluation scores of the faculty, the BRACU staff provides on-the-job refresher training, if necessary.

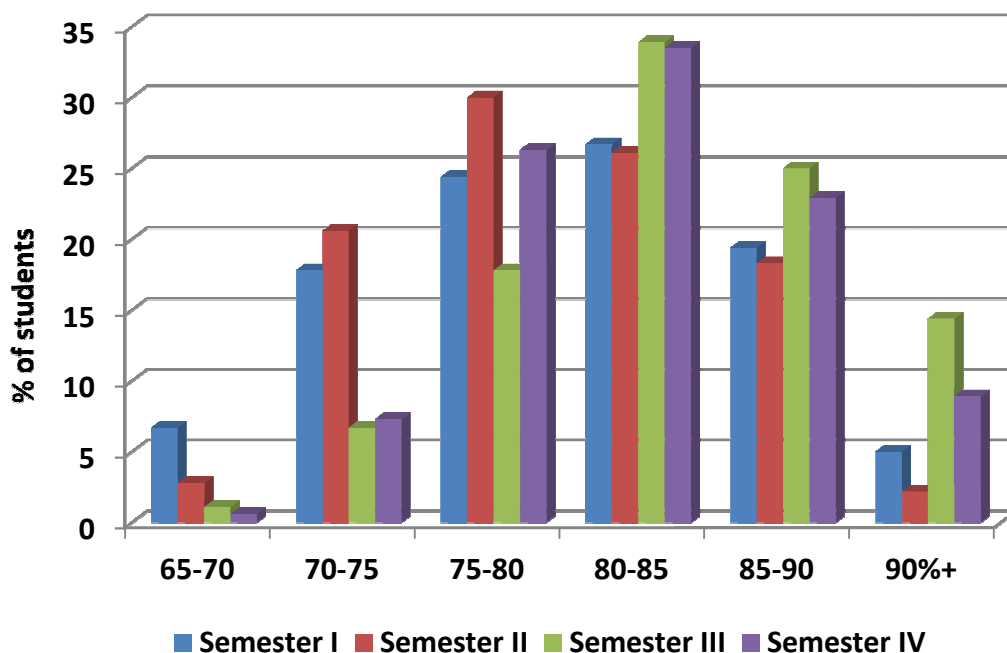
The students undergo continuous evaluation and assessment in a systematic manner in five ways. Firstly, via modular examinations at the end of the each module, the students are assessed through written, OSCE, and viva examination, with 60% as pass marks. Secondly, the students are assessed through written, OSCE, and viva examination at the end of each semester, on all the modules of that semester with 60% as pass marks. The semester final examinations are conducted by the BRACU, across all academic sites, at the same time. The same process is followed for the English module and the examinations for the English language are conducted by BIL. Thirdly, competency assessment is done during clinical training or clinical placement in hospitals/clinics by the preceptors. Fourthly, after clinical training the students are assessed through reflective case writing and presentation through spot checks by the BRACU staff during classes and clinical placements.

Student Performance

The performance of students has been satisfactory, with a small number of students having to retake some subjects. The percentage of students in various semesters scoring 60 and above is presented in Figure 2. The distribution follows the normal distribution pattern, as expected with small proportions scoring very low and very high.

Figure 2

Percentage of first cohort of students in various scoring bands by semester



Approval and Accreditation

The programme had to go through the BRACU process of approval for the Diploma in Midwifery curriculum and the programme. The Academic Council, Syndicate and the Board of Trustees approved the curriculum and the programme at the beginning of 2013. It took nearly two months to go through the process within the BRACU. The Board of Trustees also recommended that a Department of Midwifery and Nursing be established in BRACU.

BRACU then submitted the application for approval and accreditation to MoHFW and BNMC in mid 2013, based on the existing nursing policy. Both MoHFW and BNMC felt an urgent need for a policy for midwifery education in the private sector. Finally, the policy came into effect on 10 September 2014. In response to the application from the BRACU, the Government accreditation and approval team visited all the seven academic sites and gave approval and accreditation to BRACU for the Diploma in Midwifery Programme for the four academic sites and rest are in the process. It took nearly six months to get the accreditation from the MoHFW.

Discussion and Conclusion

Even though the progress so far has been very impressive there have been many challenges, which are worth mentioning. Getting qualified/trainable faculty at the local level and, retaining them in remote under-served areas has been a huge challenge for this programme. Initially, a total of 30 faculty (doctors, nurse-midwives) were recruited by partner NGOs and trained by BRACU with respect to teaching skills, training skills and midwifery model of care. Within one year, 23 of them left the programme, and the attrition was mostly among the doctors. Subsequently, BRACU recruited new faculty with nursing-midwifery background, and trained and deployed them in remote academic sites. So far, three of them have left the programme due to personal reasons, including higher studies. As part of the retention strategy financial incentives have been introduced, along with higher performance-based yearly salary increment than what the BRACU usually offers. Recruiting nurse-midwives instead of doctors with enhanced financial incentives might have played a major role in retaining the second batch of faculty in hard-to-reach under-served areas.

The other challenge was the lack of background of the partner NGOs in such academic programmes, which is quite different than conducting short term health related training to field workers. Motivating the NGOs about maintaining academic quality and standards of the courses as per BRACU standards was another challenge. It took nearly more than a year to make them understand the scope, dimension, and importance of adherence to academic standards for the programme, as opposed to training. Similarly, as apart from the diploma in midwifery programme there is no Diploma Programme in BRACU the students were assessed for admission based on undergraduate assessment tools and examination grades were based on the undergraduate grades. Moreover, since the University administration was familiar with undergraduate and graduate level degrees, and the midwifery programme, being a diploma, created confusion within the university as to whether it was of a level that the university usually dealt with.

Additionally, there was a tendency of treating the diploma in midwifery programme as a simple community based project rather than as a formal academic programme. Many had difficulty in accepting that midwifery students are taught in the English language, without realizing that they can aspire to develop further and that all the text books used now are in English.

Treating midwifery as a profession with dignity has also been a challenge though there are signs of improvement as the need for midwifery in Bangladesh has started to be felt. In fact, MoHFW has recognized the need for establishing midwifery as a profession in the country. As such, the Government of Bangladesh sanctioned 3,000 posts in government service, as second class gazetted officers, in June 2014, which is a huge step forward. Observance of the International Day of Midwives, Safe Motherhood Day, and International Women's Day at the academic sites by the students to showcase their knowledge, skills, and competency and providing services through organizing health camps among key stakeholders has also been effective in raising awareness, and the profile and recognition of the profession.

Based on the experience so far, and the possible slow production of midwives as against the number required in the country, new thinking on how the production can be accelerated is required.

In conclusion, the success of the midwifery education programme in the long run will depend on the shift in the attitude of the people, in general, and those in authority, in particular, in favour of the importance of midwives. They should understand that only a compassionate cadre of trained midwives can understand and be effective in helping women to save their lives and of their newborns. It is the extent of involvement of women in the programme from leadership and teaching to oversight that will determine how effective the BRACU midwifery programme will be in serving the purpose and what it is meant to serve.

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