Internship Report

on

The Emerging roles of Medical Assistant training on Bangladesh: situation Analysis

Submitted To

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Letter of Transmittal

May 09,2016

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Subject: Submission of internship report on The Emerging Roles of Medical Assistant Training School: A Situation Analysis.

sir,

It is an immense pleasure for me to smite the internship report on **'The Emerging Roles of Medical Assistant Training School. A Study on The Green Leaf MATS. W**hich I have prepared by performing 45 dayes internship at Noble Medical Institute, Dinajpur to fulfill the requirement of MBA degree in the faculty of business studies, Hajee Mohammad Danesh Science & Technology University.

I sincerely Believe that this internship program will help me to enrich my adaptability quality in the long ran when I will involve myself in practical field . I am grateful for your valuable advices and great cooperation. I tried my best to go deep into the matters and make full use of my capabilities in making the report meaningful, though there may be some mistake and shortcomings .I shall be pleased to answer any kind of query you think necessary.

Now I have placed this report before you for your kind approval. I hope that my report will satisfy you. For any of your further queies I would be at your disposal at your convenience.

Sincerely Yours

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Student's Declaration

I do here by solemnly declare that the internship report 0n The Emerging Roles of Medical Assistant Training School is submitted in partial fulfillment of the requirements for the MBA (Evening) degree of Hajee Mohammad Danesh Science & Techonology University, is the result of my own research work and written in my own view.That no part of this report materials copied from published or unpublished copied or unauthorized from other published work of other writers and that all materials ,borrowed or reproduced from other published or unpublished sources have either been undr quotation or duly acknowledged with full reference inappropriate place . I understand that program conferred on me may be cancelled /withdraw if subsequently it is discoverd that this report in not may original work and that it contains materials copied or borrowed without proper acknowledgment.

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Supervisor's Declaration

I hereby declare that the concerned report entitled **''The Emerging Role of Medical Assistant Training School in Bangladesh: A Situation Analysis**. A Study on The Green Life MATS" has been worked by Md. Sanowar Hossin ,Student ID-E 130501088,MBA 1st Batch, Hajee Mohammad Danesh Science & Technology University,Dinajpur-5200,who has completed his internship under my supervision and submitted the report for the partial fulfillment of the requirement of the degree of Master of Business Administration (MBA) at HSTU, Dinajpur.

Therefore ,he is directed to submit his report for evaluation . I wish him success at every sphere of his Life .

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Md. Main Uddin Ahammed

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CO-Supervisor's Declaration

It's my pleasure to certify that Md. Sanowar Hossin, Student ID: E-130501088,MBA 1st Batch ,Hajee Mohammad Danesh Science & Technology University,Dinajpur-5200. has successfully Completed MBA internship program titled on '' The Emerging Role of Medical Assistant Training School in Bangladesh : A Situation Analysis: A Study on The Green Leaf MATS" under my Co- supervision and Guidance.

I am wishing him a very Successful Life.

_____

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ACRONYMS

BMRC	Bangladesh Medical Research Council
CME	Centre for Medical Education
DGHS	Directorate General of Health services
GOB	Government of Bangladesh
HRH	Human Resources for Health
HRM	Human Resource Management
HSC	Higher Secondary Certificate
ICDDRB	International Centre for Diarrheal Disease Research, Bangladesh
JPGSPH	James P Grant School of Public Health
LMIC	Low and Middle Income Countries
MA	Medical Assistant
MAT	Medical Assistant Training
MATS	Medical Assistant Training School
MDG	Millennium Development Goals
MOHFW	Ministry of Health and Family Welfare
SMFB	The State Medical Faculty of Bangladesh
SSC	Secondary School Certificate
UHC	Upazila Health Complex
UHFWC	Union Health and Family Welfare Center
WHO	World Health Organization

CHAPTER ONE

1.1 INTRODUCTION

The policy-makers around the world, particularly in low and middle income countries (LMICs), are facing significant challenge in meeting the health needs of general population . The main underlying factor is the shortage of qualified health care providers and also the migration (internal/international) of skilled human resources for health (HRH), which has a profound impact on equitable distribution of health care providers and also delivery of quality health services . It is now well understood that the adequate number of skilled and motivated health care providers in LMICs is critically important to deliver health services effectively, thereby improving health outcomes . Shortages of health care providers in LMICs like Bangladesh, has a significant impact on access to health services as well as the impact on achieving health-related Millennium Development Goals (MDGs) Like as many LMICs, in recent years Bangladesh government has recognized the importance of private sector in producing trained HRH including MAs , and has given approval to establish private sector MATS since 2007/8. Currently, there are 103 MATS in the country with 93% schools run by private sector. The number of seats allocated for these schools are 6,730 per annum (private MATS 6,030 and public MATS 700 seats. The MA training both in public and private MATS is offered for four years duration with three years theory and one-year internship at district hospitals or UHCs. In general, there is greater availability of information and more direct and extensive regulations in public sector MATS as they are regulated and monitored by the Directorate General of Health Services (DGHS). However, for most cases, less information is available about how the private MA training is designed, implemented, monitored, and evaluated. In addition, little attention is given on the accreditation, quality assurance, and standardization of the programmers in these educational institutions.

1.2 Objectives

This study aimed to assess the current situation of the private MATS and also to examine their roles in producing adequate number of quality MAs in Bangladesh.

The specific objectives, at the national level were to:

1. Explore and compare, between 1990 and 2010, the number of public and private medical assistant training schools and their production capacity, enrolments, and graduations;
2. Explore at institutional level the issues such as governance, source of financing, recruitment of teachers, MATS curriculum, quality assurance, student recruitment, and exposure to clinical and community practices; and
3. Explore the students' perspective on study experiences, financing for the course, and employment opportunities.

1.3 METHODLOGY :

Study design

This study used a mix of qualitative (key informant interviews and roundtable discussion) and quantitative (survey questionnaire) methods to understand the current situation of medical assistant training schools in Bangladesh.

Study methods

The study was conducted at two levels - one at the institutional level and the other at the students level. The institutional level was designed to have better understanding on institutional governance and its implementation, curriculum, financing and infrastructure, human resources, and quality assurance mechanism of the MAT programmes. These study components were identified based on the WHO six building blocks . Key informant interviews were conducted with the institutional head or the responsible person nominated by the head of the institution. In addition, we did a thorough literature review of published documents, grey literature (particularly government policies, acts, statues, etc.) relevant to the MATS in Bangladesh. Table summarizes how each study objective was fulfilled through different study methods. The preliminary findings of the study were shared with the key stakeholders and the relevant personnel involved with MAT programme at national level in a roundtable meeting. The feedback from the roundtable meeting was used as qualitative data for this study. The key stakeholders are listed in Annex A.

Table 1.4 Summary of study methods used to fulfill each study objectives

Objectives	Methods
1. Assess and compare, over the period between 1990 and 2010, the number of public and private MATS	Document review, key informant interviews, roundtable meeting
2. To investigate the sources of financing, teachers' recruitment, MATS curriculum, quality assurance, student recruitment, exposure to clinical and community practices etc.,	Documents review in-depthinterview with the institutional heads, roundtable meeting
3. The final year students - to examine their general characteristics, their study experiences, financing for the course, and employment opportunities	Students' survey with self administered questionnaire

1.5 Tools development

A number of study tools were used for this study. The tools for institutional level assessment consist of both open-ended and closed questions and also some Likert scales. The questions were developed to assess the situation according to the WHO health system building block conceptual framework, including Institutional governance; Educational services; financing; health workforce/faculty; infrastructure and quality assurance .The study tool for students' survey was developed as a self-administered questionnaire focused on assessing students' perception on the training program, self competencies, attitude and perception of future career path and towards working in rural and remote areas, availability of 7 infrastructure and services. Closed questions and some Likert scales were used in the questionnaire. All assessment tools were thoroughly reviewed and consulted with relevant experts. Prior to data collection, the study tools were protested in one of the MATS located in Dhaka city. Necessary revision and amendment of the tools were done.

Sample selection and sample size estimate

Purposive sampling was done to determine the institutions as well as the key informants. The representations of the institutions by their ownership (public or private) and geographical (rural or urban) and divisional locations were considered to maintain equal representation of MATS. The aim was to select one-third of the existing MATS and a representative number according to the division-wise distribution of the existing schools. Selection of at least one private and one public. MATS from each division was considered. If there were two or more MATS in each division, the preference for selecting one old and one new school was also given. For students' survey, the classroom census of the selected schools was used. Primarily the final year students were selected for the survey. However, in those schools which did not have final year students yet, the groups of students closer to final year were selected. Table 2.2 shows the number of MATS and the samples included in the study. Of the total 101 private and 8 public MATS in Bangladesh, 30 private and 5 from public MATS were purposively selected. These consist of 7 MATS (all private) located inside the capital city and 28 (public 5, private 23) outside the capital city in Bangladesh. Annex A shows the list of sampled MATS and their details. Altogether 732 students from private and 238 from public MATS were surveyed.

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Training of the field research team

The field researchers were trained for two days before data collection.First day of the training was focused on the theoretical aspect of the project including study concept, methods, and study tools. A comprehensive participatory discussion was done to have better understanding about the project and data collection process. They were also given information about how to build rapport, engage participants in the study, and also follow the ethical aspects of the research while involving human participants. In the second day, a simulation exercise was done among the training participants. Altogether six field researchers were given training, and the training was facilitated by one of the co-investigators and the project coordinator.

Field data collection

Three field data collection teams, each composed of two field researchers, were dispatched in different parts of the country during February to June 2013. They spent, on average, three days in each institution to complete institutional assessment and students' survey of the respective institute. They were closely supervised by the project coordinator and co-investigators. During data collection, a debriefing session with the field researchers was conducted to obtain their feedback and to facilitate the data collection process.

1.6 Data management

Quantitative data management

After completion of checking and double-checking of the questionnaire,data were coded and entered into SPSS programme for Windows. With the close supervision of the project coordinator, data were entered by the research assistants having background of public health and also having previous experience of data entry. Data analysis template also was developed and was followed while performing data analysis.

Qualitative data analysis

Upon completion of key informant interviews, the notes written inBangla were translated into English and was prepared a soft copy according to the interview guidelines. Two research officers went through this procedure and identified themes with the close supervision of the principal investigator and project coordinator. The translated contents of the interviews were entered into the Atlas Ti software for qualitative data analysis for preparing a transcription according to the identified themes.

CHAPTER TWO

RESULTS

This chapter presents qualitative findings obtained from the KIIs of institutional head and the quantitative findings obtained from MATS graduate students. Part A primarily contains results of the institutional level study, supplemented by the findings obtained from the documents review. Part B contains findings of MATS graduate students and supplemented by the findings from the document review Part A. Endings of the institutional level study.

2.1. **Institutional governance**

Policy steering committee - roles and responsibilities in private MATS
According to the establishment of Private Medical Assistant Training School Policy, each school should have a governing body of seven members for two years. Representation from DGHS and The State Medical Faculty of Bangladesh (SMFB) in the governing body is mandatory. If the newly-formed committee fails to conduct the first meeting of the steering committee within 30 days, then the principal of the institute, with the approval from DGHS, can form the ad-hoc committee and send to DGHS for further approval within 6 months to transform ad-hoc committee into a regular one. The study findings show that all private schools have their governing bodies formed to maintain overall management of the school. All schools also seem to be well aware about the existence of national guidelines for establishment of private MATS in Bangladesh. In most cases the principal of the school takes initiatives to appoint the members in the committee. In general, the number of committee members is seven as suggested by the national guidelines, but in few cases some schools have greater or less number of members in their committee.

Academic council in the public MATS

The public schools are under the direct governance of the directorate of medical education. They normally have academic council formed by the members of the school which is responsible for managing academic aspects of the school. In one school they also have a disciplinary committee formed looking after moral aspects of the students.

Roles and responsibilities of the steering committee and academic council

Majority of the private schools were not aware of the mandate androles of the steering committee. However, some schools mentionedthe roles of the committee as

academic development, financial and administrative management, appointment of teachers and decisions for salary scale, student admission, management of class routine, timeline, students performance, etc.

According to the guidelines, it is mandatory for private schools to conduct committee meetings at least four times a year with three months interval. For public schools, as suggested by the rules, most of the schools were organizing meetings at least once a month. The duration of the council seems to be not fixed as it was considered as the management of the public school is a continuumprocess.

Extent of directing power of the body

Almost all private schools (94%) said that the governing body had executive power for implementing as well as changing the policies within the institutions, whereas only two out of five public schools thought that academic council had such executive power for policy change in the organization. The qualitative findings in this regard suggest that the private schools in general have more liberty in making any kind of decisions for school management, which the public schools may face. In most cases, the chairman of the governing body with the agreement from other members has authority in making decisions for different issues including students' admission, examination, recruitment, staff welfare, promotion, financial management, etc. Different sub-committees are also formed to look after specific issues in the schools.

Partnerships with other related institutions

Almost all private and public schools mentioned that they had some level of collaboration with other related institutions in order to enhance the quality of medical assistant education and also to complete the courses. For public schools, in addition to having their own hospital, they also have partnerships established with other public hospitals for the clinical practice as well as internship for their students. All schools reported that the partnership has been able to improve clinical competency of the students. All private schools reported that they had established informal agreement with the private hospitals or clinics for clinical practices and internships of their students. They also reported having partnership with the public hospitals . Majority of the schools reported that the partnership had positive impact on improving hands on training for the students, increasing the competency level and also broadening the areas of their works.

Students' admission and eligibility criteria

All private schools acknowledged that they are following the SMFB guideline for students' admission. They also have 5% seats allocated for poor and meritorious students, which is mandated by the SMFB [19]. Some schools stated of having other preferences while recruiting the students. Some of them include quotas for female students, orphans, ethnic minorities, and children of freedom fighters. For public schools, the students are entered into the programme through the national entrance exams conducted by directorate of medical education, DGHS with the close coordination with respective schools. In addition, the students with different background are also recruited, such as quota for ethnic minority and for children of freedom fighters.shows additional preferences for the MATS recruiting students. The socioeconomic background of the students and the history of being children of freedom fighters seem to be the major preferences for private schools, whereas ethnicity and history of being children of freedom fighters for public schools.

Students' retention in MATS

Despite having no formal student retention strategies for all private schools, the common informal strategies employed by these schools include participatory teaching learning activities, students counseling and motivation, financial support, extra class for relatively poorly performing students, meeting with guardians, regular follow-up and lessons for career development, etc. For public schools, the retention was not a problem at all and they also reported of not having used any strategies for students' retention.

2.2 Educational services

Medical assistant training programme in Bangladesh The current State Medical Faculty was established in 1914 to offer diploma programme such as LMF doctors. The current medical assistant course was started in 1976 . Since then, the SMFB has been holding examinations and awarding diploma. They are responsible to maintain the quality of the paramedics programme in Bangladesh. Bangladesh government established the first MATS in 1979 to produce medical assistants to serve at government health facilities like UHC, UHFWC and Union sub-centers [9]. Since then other government medical assistant training schools have been established. However, in recent years a number of privately run MATS are also established, the 18 first one being in 2008 . To date, there are altogether 8 public and 103 private MATS in Bangladesh .

MATS curriculum

Majority of the respondents of both public and private schools said that MATS curriculum was a standard programme inclusive of medical and general education, and it also covered almost all aspects of medical assistant training that they should learn. For example, general English, computer course, and a 12-month internship programme with 9 months at district hospital at 3 months at UHC were included in the new curriculum. However, few responded reported that "The curriculum covers all aspects of medical education like MBBS course, but the duration is not enough to cover all contents." In addition, there is a lack of quality textbooks recommended in the curriculum. Annex B gives the basic information on MATS curriculum. With regard to review of the MATS curriculum, one KI from the SMFB stated that, "There is no specific mechanism to review the MATS curriculum and it is in general based on needs of the time and course and the CME normally takes the lead for this

Table 2.1 Percentage of MATS assessing different types of student competencies

Innovative methods	Public(n=3)	Private (n=12)
Interdisciplinary working competency	33	25
Evidence-based practice	33	33
Skills on the use of new informatics	33	25
Understanding of a thorough health system	33	8
Integration with public health	0	8
Ethical principle	0	8
Others tests such as assignment, class test, surprise test, tutorial, etc.	67	75

2.3 Teaching workforce

General characteristics of the teaching workforce Majority of the teachers' age in public schools was ≥50 years (65%), which is more than double of those in private schools (28%) (Table 3.7). More than three quarters of the teachers were males in both the schools. Currently 30% of the teachers in private schools are employed on a part-time basis. However, the establishment policy for private MATS 2010 suggests having provision of no more than 25% part-time teachers if full-time teachers are unavailable (19). The proportion of part-time teachers in public school is 15%.

Recruitment and retention of teachers

Despite quantitative results suggesting majority of the schools (public and private) having full-time teachers, the qualitative data suggest that majority of both private and public MATS prefer to recruit part-time teachers. This is partly to reduce the cost of payment and also due to unavailability of competent teachers on a full-time basis. But, they were quite aware of that the full-time teachers would devote more time for teaching quality improvement and support to better performance of the schools than the part-time teachers.

Table 2.2 Criteria for staff recruitment by type of MATS

Different criteria for staff appointment	Public %(n=2)	Private %(n=30)
Rural experience	50	30
Secondary language fluency	0	20
Doctorate degree or equivalent	0	23
Outstanding student's profile	0	40
Demonstrated teaching ability	0	50
Others (MBBS, job/teaching experience)	50	50

Retention of teaching staffs

Table 2.3 Staff retention strategies/mechanism in public and private MATS

Different strategies for staff retention	Public %(n=5)	Private %(n=30)
Financial incentive	0	25
Performance based payment	0	45
Non-financial strategies (Recognition, reward, promotion etc.)	0	25
Provision of scholarships	0	5

2.4 Financing in MATS teaching and learning

Majority of the private schools considered the tuition fees as a major source of financing. For public schools, the budget is centrally allocated from the DGHS. Regarding the update of the unit of cost for the education, majority of the schools said that they updated it within last one year, however, there were few schools which updated the cost of education two or three years back.

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2.5 Infrastructure and technology

School facilities describes availability of infrastructure and other related technologies in both public and private MATS. Majority of the public and private schools reported of having moderate level of availability of building facilities. The similar pattern was seen for the availability of library services and teaching facilities, with private schools having relatively better position. Regarding the information technology (IT) facilities, majority of both public and private schools have moderate facilities of computer and internet facilities. However, almost all public and private schools did not have conference call, video conferencing, and tele-medicine facilities. In a similar pattern, they also offer training on using computers and internet facilities at the schools. Field sites, learning materials, and accommodation and transport are relatively better available for private schools compared with public schools.

Table 2.3 Interactive dialogue between MATS and other related institutions

Interactive dialogue with	Public %(n=5)	Private %(n=30)
MOHFW	60	13
General public	0	3
Others (Civil surgeon, VARD)	0	7

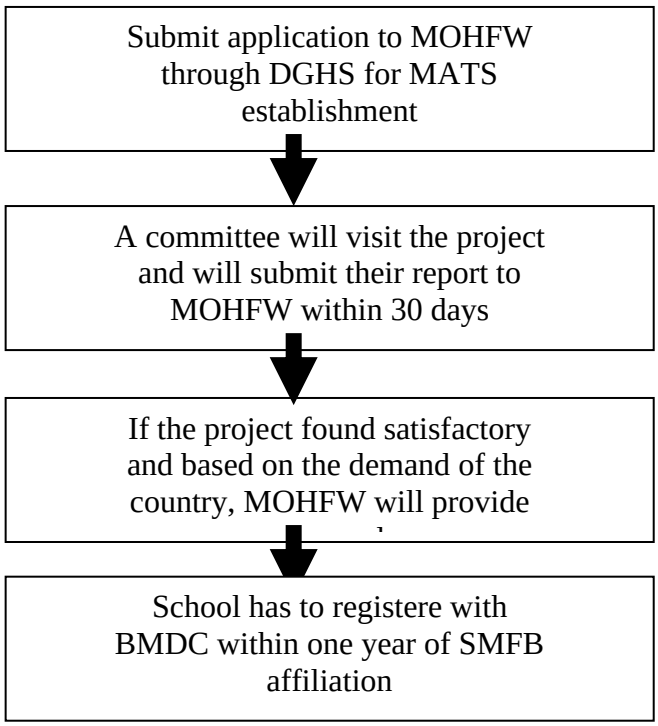
The most common reasons for MATS having interaction with MOHFW seems to be focused on curriculum update, admission and examination, overall management of the schools, etc. Almost none of the schools provided information about effectiveness of the dialogue with MOHFW. However, one private school, which had interaction with public, found effective in publishing their health camps and collecting free of cost medicines from different pharmaceutical companies. In addition, other two private schools, which had interactions with civil surgeon and a national NGO called VARD, found to be effective in terms of organizing health camps and also developing networks for students' teaching learning activities.

2.6. Accreditation and quality assurance in MATS education

None of the public schools reported to have any kind of unit within the school to maintain the quality, whereas only 10% of the private schools revealed that they had quality assurance unit within the school . However, majority of the schools reported to have provision of external evaluation. Those schools that reported to have quality assurance unit informed that the unit was normally formed with the representation of principal, vice-principal and teachers of the schools, and secretary of the school management committee. Some of the private schools revealed that though they did not have formal unit of quality assurance in the schools, but they had informal practice of maintaining quality of education and management in the school

Figure 2.1 shows the procedure for establishing private MATS according to the Private MATS Establishment Policy 2010.

Figure 2.4 Procedure of establishing private medical assistant training schools (MATS), SMFB, 2010



Three public schools mentioned that DGHS sends personnel to conduct financial audit of the school. The main focus of the school accreditations were the entire institutional performance (77%), followed by institutional infrastructure (53%) and the course curriculum (27%) Of the five public MATS, only one responded that the entire institutional performance is the major focus of the institutional accreditation.

B1. General characteristics of the MATS students

This Section presents the results obtained from the graduate survey. Table describes general characteristics and family background of the MATS students by type of schools. Majority of the students participated in the survey were males completed their school education from rural areas. Almost one-third of the parents were involved in business and another one-third with government or private sector services. Majority of the parents were educated having completed some kind of formal education. However, there were still almost one in ten parents who actually never attended any school.

Perception and attitudes towards working in rural, remote or hard to reach areas

Despite a majority of the students being aware of not having adequate amenities and entertainments in rural, remote and hard to reach areas, they perceived that working in these areas could have several other benefits. Such as, opportunity to use various skills learned during MAT, rural people are friendly, MAT programme is helpful in preparing students working in rural/remote areas, and opportunities for real-life problem solving experience. On the other hand, the students from both sectors perceived that working in rural, remote and hard to reach areas has a lot of challenges and also has a lack of supportive working environment.

B2. Competency self-assessment in medical assistant training and skills

Majority of the MATS students reported having developed competency in almost all aspects of health care management (Table 3.23). These include professional judgment, health promotion and prevention, critical thinking, partnership with communities, cultural competency, continuing life-long learning, etc. However, the proportion of students who reported having confident in managing emerging health needs and competency in information technology was relatively less in students of both public and private MATS. Further, the students of private MATS were relatively more competent in managing emerging health needs and having IT skills compared to the students of public MATS., learning materials and field sites, etc.

Table 2.5 Students assessment on available facilities in MATS

Availability of	Public % (n=100)			Private % (n=100)		
	Low	Neutral	Adequate	Low	Neutral	Adequate
Number of teachers	17	48	35	4	18	79
Qualification	3	15	82	1	6	93
Attendance in class/lab	15	37	48	3	21	76
Prepared for class/ lab	18	37	45	4	24	73
Constructive feedbacks	20	31	49	4	22	74
Counseling for better career	24	35	41	8	26	65

In terms of total cost for medical assistant training, the average cost as responded by the public students was Tk. 66,000, whereas it was almost three times higher in private sector (Tk. 168,000). Almost all students reported that they paid their tuition fees with support from their parents. More than half of the MATS students thought that they were having financial hardships in attending schools. Of them, 32% public and 23% private school students thought that they would consider quitting the programme because of the financial hardship.

CHAPTER THREE

DISCUSSION

This study has focused on the professional education of a specific cadre of health professionals in Bangladesh. The Bangladesh government has created medical assistant training (MAT) programme as an effort to address the shortage of health workforce and imbalance of skill mix in the country. Through this study we assessed the MAT programme and its current situation with special attention to private sector education through a mixed method approach. Introduction of MAT programme can be mentioned as one of the praiseworthy efforts of the Bangladesh government to combat the health workforce crisis through a skill-mix approach. MAT programme was started in 1979 to produce medical assistants who will be employed in the UHCs and Union sub-centres where there are deficit of doctors

to serve the rural community . It is a timely effort to address HRH crisis in two important aspects according to the country context. One aspect is to contribute in the health workforce shortage by skill-mix and task distribution between health professionals. Another aspect is to combat the rural-urban mal-distribution of health workforce by producing a cadre specifically to be appointed in facilities where retention of doctors is an enduring anomaly.Task shifting has been reported as an effective approach to overcome health workforce shortage in the low income countries to increase the access to service delivery and productive efficiency within a limited cost and time scale (22). A randomized control trial in Texas Health Science Centre with the patients of primary care practice-based facilities showed increased rate of referring patients with risky behaviour in the facilities served by medical assistants (23). In Mozambique, the surgically trained assistant Medical officers in district hospital produced equal patient outcome as that of obstetrician and Gynaecologists [22]. These types of successful examples are also found in Ethiopia and even in high income countries [22]. But as reported, on the other hand task shifting is associated with the concern of safety and quality. In 50 Bangladesh, appointment of medical assistants also has started playing a supplementary role in providing preventive and primary health care in the rural health facilities in the absence of doctors. But more exploratory studies are needed to know the outcome of the patientsreceiving treatment and care. Our study findings reveal some key facts regarding MAT programme. Overall governance of MAT programme under MOHFW and policy guidelines exists for conducting the training programme. Admission policies are principally based on the competitive assessment of merit. Some guidelines are praiseworthy as strategies intended to rural retention of health workforce. Accreditation and quality assurance issues were also addressed in the national governance. But more attention is needed towards monitoring and implementation especially in private sector. Curriculum revision has drawn attention in the study especially from the perspective of sluggish reform of pedagogic methods. Maintaining the number and quality of the faculty is a challenge for this rapidly growing private education sector manifested as high turnover rate and over-reliance on part-time faculty. More scrutiny is needed regarding the adequacy of infrastructure of the private schools. Lastly, even with the difficulties reported by the students to pay the tuition fees the financial viability of these private institutes mandates proper evaluation and guidelines. In the next section we tend to analyze and describe these key findings observed from different level of assessment including institutions, students' survey, and roundtable discussion. In assessing the situation we evaluated the existing national policy guidelines, how strictly these guidelines being followed in the rapidly growing private MATS.The situation was also assessed through the recommendations of the institutional heads those who actually implement the policies and also from the students' perspective who are the products of the system.

3.2 **Governance**

The overall governance for medical assistant training programme is under the MOHFW, GoB. There is minimum role of the Ministry of Education unlike the graduation or degree programmes [9]. Thus, the production and stock of health workforce is governed by the same ministry. This system can be used as strength of macro management considering better correlation of information between education and service, public and private. It may help establish a more direct system to collect information about demand and supply of the health workforce and take necessary actions with less bureaucratic complications.

The existing national policy guidelines are mostly formulated by and circulated from the ministry and respective directorate of health. The assessment shows that existing policy guidelines cover most aspects related to establishment and maintaining MAT programmes. These include instructions on governing body formation, students' admission, faculty recruitment, curriculum development, and accreditation of the institutes. A separate policy guidelines for private MATS in 2010 reveals the emphasis on the proper regulation of these institutes by the government. But the findings reveal deficit in strict application of the guidelines in private MATS, though the policy guidelines are equally applicable to the public and private schools, there is deficit of strategies for strict monitoring in private schools. One probable contributing factor can be that these policy guidelines are not reinforced by relevant parliamentary laws and ordinance. This may hinder the effective implementation of actions by respective authorities during monitoring and executing final decisions. We recommend that, enforcing the existing policies with law or ordinance would be more helpful for the respective authorities to take necessary action to ensure the quality instead of producing more or separate policy guidelines for private MATS.

Admission

The admission guidelines for MAT students were formulated by national regulatory bodies and equally applicable for both public and private institutes. Fairness and equal chance of intake of students appear as the main concern for formulating these guidelines. To ensure the fairness, the eligibility criteria and students' admission are mainly based on the assessment of merit. But regarding the existing admission processes almost half of the private MATS recommended for improving the existing criteria of students' selection to ensure the quality of intake. This differs from the feedbacks of the public schools, which is quite satisfactory regarding the existing strategy of national entrance examination. The provision of district quota is worth mentioning as a positive approach to promote equal chance of intake of students from every district of the country. It is expected that the medical assistants studying and completing education from the institute of their own district will have a greater

tendency to work in the respective area rather than in the capital city. The findings from students' survey also reflect positive feedback in this regard. More than 60% of the students are with rural background, who studied and passed the 1st 15 years of their childhood and education in village and upazila level. Also most of these students have positive perception about working in the rural areas, especially most of them do not feel the risk of being isolated from friend and family. Therefore, this admission criterion appears to be an indirect but more strategic step to ensure rural retention of medical assistants all over the country.

3.3 **Accreditation and quality Assurance**

To have proper regulation and empowerment of the regulatory bodies to ensure the quality of training in private institutes has been mentioned as one of the key challenges in NHP 2011 [16]. A definite process has been outlined through national policy guidelines and through nominated regulatory bodies (DGHS & SMFB) for establishing and getting approval for conducting school activities [19]. The MATS seem to comply with the guidelines too.

But a contradictory picture is revealed from the students' survey. The findings show that 50% of the public MATS students are satisfied with the number of teachers, their class attendance and well-preparedness for teaching. On the contrary, the satisfaction level of the private students is higher than those of public MATS. But while presenting this finding in the roundtable meeting with the key stakeholders involved in the accreditation process, more concern is raised about the private training programme rather than public. These contradictory comments mandate more exploratory research in this issue. It should include objective assessment of teachers' performance evaluation with standard guidelines or criteria prescribed by the relevant agencies to reduce the confounding factors and have proper comparison of the public and private programmes.

3.4 **Curriculum**

For MAT programme a single curriculum is developed and reviewed nationally and provisioned to be followed by all MATS. It seems to be a positive effort on the part of the national policy-makers to ensure the broader aim of maintaining a similar standard of training in both public and private sectors. But some aspects of the curriculum need to be addressed as lagging behind the current demand of health professional education. One of them is old pedagogic method. A strategic decision of NHP 2011 is to improve the skill in modern technology and modernization of the training programme [16]. But assessment at the institute level shows minimum deviation from the traditional lecture-based approach of learning. Little use of team-based and problem-based teaching is reported by the institute, but that is also

without any definite guidelines or instruments for teachers to maintain a standard. The essentiality of the curriculum content to be contextualized according to the current need and to serve the general people are emphasized in national health policies from 2001 to 2011 [16]. MATS curriculum of 2009 has also reflected the need of adequate exposure to local health facilities and community. But in practice, 7-8% of total study hours' is estimated to be used in community practice. In the national health policy 2011, the importance of educating the future health professionals on communication, behavioural skills, and ethics was well emphasized . But the institutional assessment shows that areas for student assessment are more oriented towards assessing the technical skill rather than the communication skill and ethical practice. The assessment techniques of the students are also found to be following a traditional trend. But practical examination and assessment of skill of working in different contexts were not included or emphasized in general guidelines of students' assessment techniques.

Language of instructions - The textbooks are written in English. The difficulties of teaching- learning process is evidenced by the use of Bangla translation of the textbooks and use of Bangla in lectures for better apprehension of the students. The importance of studying in mother tongue is well accepted as the most convenient method of learning. And it is undeniable for preparing the health workforce who come into the primary contact with the community to provide health services. Therefore, national level policy-makers and academics should consider the strategies and advantages of conducting the course in own language. Meticulous efforts in translating the textbooks and training of the teachers should be designed and planned ahead to accomplish this challenging task.

3.5 **Faculty**

As per the policy guidelines for private MATS not more than 25% of part-time teachers are allowed to be recruited . But as per the study findings, almost one-third of the total faculty in private MAT schools is recruited as part time basis. Unavailability of competent full-time teachers is a well-agreed factor. But another factor revealed through indepth interviews with institutional heads - that is favouring recruitment of part-time teachers for cost reduction. This attitude needs to be addressed properly as a factor weighing down the quality concern of the private MAT programmes. 55 Number of younger teachers (<50 years of age) is higher in private schools compared to public schools, which may be contributed by the higher frequency of faculty turnover in private schools. Better career opportunities and higher studies are the main factors contributing to the faculty turnover in private schools. It is not common in public institutes where the staff are

recruited in permanent posts rather than contractual agreement, and every three years the faculties are transferred in other public schools. Rapidly growing private MATS, younger and less experienced teachers, rapid turnover, and more part-time faculties obviously can be identified as contributing factors to the quality of the private training programme. Efforts were observed in the case of private schools for faculty retention, which include some forms of financial and non-financial incentives. Incentive strategies have been evident in other low and middle income countries like India, China, and Tanzania . According to their evidences financial autonomy at the local governance level and alternative distribution of health allowances can be regarded as incentives and have better impact on work performances . Another strategic comparison noticed between Malawi and Rwanda. Rwanda has shown better impact from performance-based increase of salary rather than mere increase of salary even by 50% in Malawi. Bangladesh government can consider re-evaluating the policy guidelines regarding this issue with extensive research on past and present strategies of other countries similar to our country context.

3.6 **Financing**

Though the students' survey shows more than half of the students expressed having financial hardship for paying tuition fees, the institutional authorities of private MATS seem quite confident regarding their financial viability. As per the in-depth interviews of the institutional heads, it seems more of a concern for the private schools to get enough students according to their capacity. This attitude may be contributed by the sudden rise of private MATS along with the huge cost of education in these schools. But this attitude of increasing the number of students to improve their financial conditions rather than ensuring the quality of existing students needs to be addressed by the government with strict regulation. Infrastructure In general the Likert scale analysis of satisfaction scale filled up by the principals and students of the MATS reveals more satisfactory attitude from both the students and teachers of private MATS than those of public. It is universal for every item of infrastructure like building, library services, lab facilities, recreation facilities, etc. But in the roundtable discussion, contradictory comments were made by the policy-makers and key stakeholders. They expressed more concerns regarding the newly established MATS whereas the public schools are quite old and well organized. Also the Likert scale analysis is the subjective response of the students and teachers which cannot be emphasized. As a whole, the analysis shows a deficiency of IT facilities in both public and private schools. Considering the emphasis on the modern technology learning in the revised curriculum the facilities and instruments for adopting the methods need to be monitored and improved accordingly.

CHAPTER FOUR

FINDING, LIMITATIONS ,RECOMMENDATIONS AND CONCLUSION :

4.1 FINDING AND RECOMMUNDATION

The results presented in this study provide current scenario of the MATS in Bangladesh, with a particular focus on emerging roles of private MATS in producing enough competent medical assistants. We conclude that the private as well as public MATS in Bangladesh have uniformity in using a standard curriculum, governance under the same ministry, modes of delivering the educational activities, and also accreditation process. However, differences exist in terms of modes of admission, source of financing and unit cost for medical assistant training. Our findings suggest that the policy guidelines have been developed to guide establishment of private MATS and also to improve quality of the training. However, lack of strategies to effectively monitor the implementation process of these guidelines in private schools could be the matter of concern. Since the students in both types of schools spend majority of their time in more traditional mode of teaching, in particular classroom teaching, this also maybe the matter of concern in optimizing the quality of medical assistant training. Further, while the number of private MATS is increasing, the high turnover rate of the teachers, their part-time involvement to the schools, and less experience in teaching also can jeopardize the production of competent MAs in the country. Given the needs for producing adequate number of competent medical assistants to serve demand of the country, there is a need for formulating a comprehensive strategic plan to address all possible aspects of medical assistant training. Our recommendations are as follows: 1. A comprehensive assessment system can be developed to effectively monitor the growth of private MATS according to the increasing demand considering both public and private sectors and total skill-mix.

2. National policy implementation should be reinforced with the government stewardship role with more attention towards monitoring strategies in the private MATS programme.

3. Curriculum review should be more focused towards upgrading the pedagogic methods to more practical, field-based, and problem-based approaches of learning and competencies complying more with country context and rural population. Emphasis is also needed on the faculty orientation to adapt the revised curriculum.

4. More comprehensive and evidence-based guidelines need to be developed including strategies for faculty recruitment, job description, in-service training and career development of both full-time and part-time teachers. Strict monitoring is essential to ensure the observation of the guidelines in private MATS.

5. Emphasis on maintaining regularity of the existing accreditation mechanism is necessary.

6. Financing of the private sector should strictly be monitored and a standard protocol on the tuition and admission fees need to be established and monitored with the government stewardship.

Limitations

The green left MATS has very significant role in our human resource development. But there are some limitations. That can may be solve.

Limitation are as follows:-

* Political oppointment top in management level.
* Political unrest, like strike, movement etc.
* Political unrest in management
* Lack of available fund.
* Lack of government attention.
* Lack of modern instrument.
* Lack of skill manpower.
* Lack of time.

Conclusion

We conclude that the private as well as public MATS in Bangladesh have uniformity in using a standard curriculum, governance under the same ministry, modes of delivering the educational activities, and also accreditation process. However, differences exist in terms of modes of admission, source of financing and unit cost for medical assistant training. Our findings suggest that the policy guidelines have been developed to guide establishment of private MATS and also to improve quality of the training. However, lack of strategies to effectively monitor the implementation process of these guidelines in private schools could be the matter of concern. Since the students in both types of schools spend majority of their time in more traditional mode of teaching, in particular classroom teaching, this also maybe the matter of concern in optimizing the quality of medical assistant training. Further, while the number of private MATS is increasing, the high turnover rate of the teachers, their part-time involvement to the schools, and less experience in teaching also can jeopardize the production of competent MAs in the country. Given the needs for producing adequate number of competent medical assistants to serve demand of the country, there is a need for formulating a comprehensive strategic plan to address all possible aspects of medical assistant training.

4.2 REFERENCES

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4.3 Annex A

Annex Name and address of the sample schools

Name and address	Name and address
Saic Instiute of Medical Assistant (Saic MATS), House no-1, Road No-2, Mirpur, Dhaka. Mirpur-1, Dhaka.	Spark Medical Assistant Training Academy 44, Chiriakhana Road, Trauma Medical Assistant Training School Dhaka.
EDEN Medical Assistant Training School Mirpur, Dhaka. Bangladesh Medical Institute Uttara-1213.	National Institute of Medical & Dental Technology & MATS, Mohammadpur, Dhaka.
Shamoly Medical Assistant Training School 45/4, Khilji Road, Mohammadpur, Dhaka.	Prince Medical Assistant Training School Savar, Dhaka.
Community Medical Assistant Training School, Faridpur.	Rajbari Community Medical Assistant Training School, Rajbari.
Taleb Ali Medical Assistant Training School Mymensingh.	Rumdo Medical Assistant Training School Baundari Road, Mymensingh.
Jalalabad Medical Assistant Training School House No-32, Main Road, Block-A, Jalalabad Upasahar, Sylhet.	Comilla Institute of Health Technology and MATS Comilla.

Chittagong Medical Assistant Training School Halisahar, Chittagong.	Zam Zam Medical Assistant Training School Barishal.
Tangail Medical Assistant Training School Tangail.	Sirajganj Medical Assistant Training School, Sirajganj.

4.4 Annex B

Basic Information of the MATS Curriculum

Objective of the course

To produce medical assistant with required knowledge, skill and attitude to provide promotive, preventive and first line curative care to the community .

1.1. Name of the Course : Medical Assistant Training Course
1.2 Duration of the Course : Three years plus one year internship
1.3 The academic session will start from the month of January or July
1.4 Medium of instruction and examination : English

Selection of students

1.5 Following are the requisites for admission into the MATS
• SSC Pass or equivalent as per Govt. decision
• Science with Biology.

GPA and others criteria and conditions as per Govt. decision
1.6 The Course is divided into three parts
1st Year-12 months
2nd Year 12 months
3rd Year 12 months
1.6.1 Duration of 1st year is twelve months. The following four basic subjects will be taught.
1. Basic English
2. Basic Computer Science
3. Basic Community Health & Medical Ethics
4. Basic Anatomy & Physiology
1.6.2 Duration of 2nd year is twelve months. The following two basic subjects will be taught.
1. Basic Pharmacology
2. Basic Pathology & Microbiology

NB. Clinical teaching (Indoor, outdoor) on Basic Medicine & Paediatrics, Basic Surgery and Basic Obstetric & Gynaecology will start at 2nd year. Classes of Basic Community
Medicine & Health Management will also start from 2nd year.
1.6.3 Duration of 3rd year is twelve months. The following four basic subjects will be taught
1. Basic Medicine & Paediatrics
2. Basic Surgery
3. Basic Obstetric & Gynaecology
4. Basic Community Medicine & Health Management

1.7 Subjectwise Hour Distribution (1st, 2nd & 3rd Year).

NB: Student computer ratio should be at lest 1:10. Basic Computer science teaching should be imparted by qualified diploma holder persons or at lest one year certificate holder on computer science from a recognised institute. Basic English to be taught by English teachers who have capability of communicative English

Completion certificate from all four units will be a mandatory criteria to be eligible to seat for the final faculty examination.1.8 Faculty Examination
There will be three faculty examinations after 1st year, after 2nd yearand after 3rd year

1 st year final = Conducted by faculty
2nd year final = Conducted by faculty
3rd year final = Conducted by faculty
Regarding class attendance - 75% will be considered as pre-requisite for form fill up for faculty examinations
Completion of card and field visit will be considered as pre-requisite for form fill up for faculty examinations
• After every One Year there will be faculty examination
• The examinations will be conducted in English
• Students who will not pass 1st year final faculty examination,

will be allowed to attend academic activities of 2nd year but not be allowed to appear 2nd year final faculty examination before passing 1st year final faculty examination

• Students who will not pass 2nd year final faculty examination will be allowed to attend academic activities of 3rd year but will not be allowed to appear 3rd year final faculty examination without passing 2nd year final faculty examination.

• Respective institution will be the place of examination if it is approved by SMFB

• **Certificate for examinations**

The principal of the institution in which a candidate has undergone the course shall submit on behalf of every candidate, a certificate showing the number of lectures and practical classes taken and number attended by the respective students. 75% attendance in each subject, both in lecturers and practical classes, field visit, clinical class is mandatory

.

• **Arrangement for examinations**

All arrangements supervision etc. shall be made under the order of the state Medical Faculty with co-ordination of respective principals

• Application for examination

Every candidate for three faculty examinations shall apply through the Head of the institute to the Secretary, State Medical Faculty of Bangladesh in prescribed forms available in the office of the institution (which will be supplied by Faculty) along with requisite four weeks before the commencement of examinations.

• Examination fees For each candidate the examination fees shall be submitted as per faculty decision.

• The centre fees shall be retained in the centre and be utilized to pay the remuneration ‘to presiding officer, hall superintendent, invigilators, clerks, bearers and sweepers etc. selected for the paid by the state Medical Faculty of Bangladesh, examination scripts working papers etc. will be supplied by the Faculty.

• The fees paid by candidates who fail to pass or present themselves for the examinations shall not be refunded or carried over for a subsequent examination.

• Hours of examination: The hours of examination for written papers shall be 3 hours for each paper.

• The time tables of oral and practical, clinical examination showing the dates, times and place of examination will be notified by the secretary of the state medical Faculty of Bangladesh.

• For passing any examination (i.e. 1st, 2nd & 3rd year final faculty) an examinee is required to obtain 50% marks in written paper for each subject and 50% marks in oral -practical examinations.

• The examinees are required to pass separately in theoretical paper and in oral, practicals/ c1inicals.

• Board of Examiners for 1st year, 2nd year & 3rd year faculty examinations shall be appointed by the Faculty. There will be examiners for each subject. The internal examiner shall be the teacher of respective subject from the same institute while the· external examiner should be a teacher of same subject from another Medical Assistants Training School/medical institute.

• After the completion of examinations, the marks shall be submitted by the Principal of the respective institution within ten (10) days to the Secretary of State Medical Faculty. The Secretary, state Medical Faculty will publish the result of the successful candidates within further ten (10) days.

• For developing written question Short Answer Question (SAQ) will be chosen.

• Question setting, moderation, printing, distribution, tabulation, result publishing will be as per faculty rules, guidelines and instruction.

• The oral and practical examinations of each paper shall be conducted by two examiners jointly. The external examiner preferably be a teacher of the respective subject from another Institute.

• One of the examiners of the subject shall visit the examination hall when the written examination is being held.

• Examiners and examinees will follow the code of conduct of SMFB in examination halls.

Internship

Duration – 12 months
• 9 months –at General /Sadar hospital or any equivalent hospital
• 3 months – at Upazila Health Complex
Each students after successful completion of 3rd year final faculty examination will go under 12 month compulsory internship. 9 months –at General /Sadar hospital or any equivalent hospital and 3 months – at Upazila Health Complex
After successful completion of 12 moths rotatory internship he/she will get permanent registration. 1.11 How to use this curriculum
This curriculum is meant for the guidance of three groups for people:
1. Students to guide them in what to learn and how to learn
2. Teachers to guide them in what to tech and how to teach
3. Examiners to guide them in what to evaluated and how to evaluated

It will be meaningful only if above groups succeed in discharging their responsibilities relating their role properly.As there is no standard text books for the Medical Assistants the teachers must prepare their lesson plan having learning objectives, subject-content, teaching methods and methods of evaluation and list of resource materials. The whole instruction design or lesson plan should be set as per time allocation.