# **Original Article**

# An Appraisal of the Institutional Training Arrangement for Community Health Workers in Bangladesh

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#### **Abstract**

This research sheds light on the nature, design and provision of institutional services for providing training to the premier community health service providers in the public sector (i.e. the Family Welfare Visitors or FWVs) in Bangladesh. Virtually no major study exists on the training of the FWVs in the country. The methodology of the research mainly consists of personal interview and questionnaire survey, covering of the concerned trainers and officials of the major public health administration and training institutions of the country, including the National Institute of Population Research and Training (NIPORT), the Family Planning Directorate (FPD) and the Family Welfare Visitors' Training Institute (FWVTIs). The findings suggest that there is a broad agreement among the trainers and managers of concerned training institutes about the general inadequacy of the existing training programmes for the FWVs. The reasons behind the main inadequacy of training, as mentioned by the respondents include lack of gender awareness in the training programme, insufficient fund and properly qualified trainers, lack of an evaluation system, inadequate emphasis on practical training. The majority of the respondents were in full agreement that the FWVs needed substantial in-service training in-order to increase the effectiveness of their services to the community. The principal areas of training, which have been suggested by the respondent managers and trainers, included EOC, BCC, MR, RTI/STD, HIV/AIDS, clinical contraception, etc. The significance of the key role played by the FWVs has also been almost universally agreed.

**Key words**: Bangladesh, Community, Health, Training, health workers.

### **Introduction: Setting the Scene**

The public health sector policies in Bangladesh have undergone substantial change and rethinking in the recent times. In 1978, the WHO-UNICEF International Conference on Primary Health Care (PHC) at Alma-Ata adopted a comprehensive global strategy to achieve 'Health for All by the Year 2000'<sup>(1)</sup>. Maternal and Child Health care (MCH) was seen as one of the essential components of PHC. As part of this strategy, the Government of Bangladesh (GoB) has subscribed to the overall objectives of 'Health for All'. It has agreed, in principle, to pursue a policy for providing essential minimum health care to all citizens, particularly to those who are under privileged and under served (mostly women, living in the rural areas of Bangladesh). During the last Fourth Five Year Plan (FFYP) period (1990-91 through 1994-95), the health and family planning programme has achieved some progress in reaching the most vulnerable groups of the country's population, i.e. mother and children. After the expiry of the FFYP's population and health programme, the Ministry of Health and Family Welfare (MOH&FW) formulated the 'Health and Population Sector Programme (HPSP)' in June 1998<sup>(2)</sup>. The HPSP became operational in July 1998 for a period of five years with the goal of achieving "improved health and family

welfare status of the people of Bangladesh in general, and the most vulnerable women and children in particular"<sup>(3)</sup>. Its primary focus is to ensure "client-centred provisions and client utilisation of an Essential Services Package (ESP) and associated health services"<sup>(2)</sup>. Inorder to ensure the quality of, and universal access to health care at the community level, the services, under the ESP system, will be provided from a permanent centre called the 'Community Clinic' (this is a significant shift from the existing domiciliary-based service delivery system). The Government has now decided to establish one Community Clinic per 6,000 population.

In view of the above changes and development in the country's health policies, the role and significance of the appropriately trained health personnel, especially those engaged in field or community level service delivery, have moved centre stage. For successful operation and management of the Community Clinics, for example, the role of Family Welfare Visitors (FWVs) – the premier health service providers at the local community level – is vital. They are assigned to attend each Community Clinic on a regular basis and to (rotationally) supervise the activities of other health staff (such as the Health Assistants)<sup>(4)</sup>. This study, therefore, focuses on the existing institutional training arrangements for the FWVs as principal community level public health workers in the country. The following discussion is divided into a number of related sections. After this introductory background, the next section presents the major goals and methodology of the study, together with its justification. The third, fourth and fifth sections focus on the present role and significance of the FWVs, the urgent need for their training, and the existing institutional training arrangement. On the basis of the empirical findings, the subsequent section analyses the respondents' opinion regarding the present level of training for the FWVs and explores possible ways of improvement.

### The Study: Goals, Rationale and Methodology

This study sheds light on the nature, design and provision of institutional services for providing training to the premier community health service providers in the public sector (i.e. the FWVs) in Bangladesh. In more specific terms the objectives of the research are to:

- analyse and evaluate the existing training programmes for the FWVs;
- identify the major problems of this training programme and to suggest possible ways of improvement; and
- assess the training needs of the FWVs through literature review and solicit the views and opinions of the managers and trainers of the concerned training institutes with a view to consider the issue from the trainers' (insider's) perspective.

The study is significant for a number of reasons. First, virtually no major study exists on the training of the FWVs in this country. The quantity and quality of research on the general state of education sector are poor in context of Bangladesh. Academic research is also very limited. For example, Sultana et al<sup>(5)</sup> offers a brief account of the training needs assessment for the health personnel at the local level. Hussain et al<sup>(6)</sup> have reported that the performance of the FWVs in the area of ante-natal and post-natal care has yet to be improved to a significant extent. Nessa<sup>(7)</sup> and BRAC<sup>(8)</sup> also showed that the FWVs had very low level of performance in record keeping as well as utilising institutional facilities and management of equipment and supplies. The role of the FWVs, especially in the welfare of

mother and children in rural Bangladesh is very significant. Notwithstanding their role, however, the training services for the FWVs have remained inadequate and poor in general. Baqee and Koblinsky<sup>(9)</sup> reported that FWVs were neither trained appropriately in their basic training nor they received routine in-service training to maintain a standard for all their services. Besides, a recent research<sup>(5)</sup> based on the reports provided by the concerned health personnel has found that FWVs' training to be inadequate and this led to the limited performance. In context of the government's newly introduced 'Health and Population Sector Programme (HPSP)' strategy, Khuda et al<sup>(10)</sup> have suggested that the service providers need to be retrained to perform all their current job requirements.

It is therefore important that the current institutional provision for training be analysed with a view to identify possible ways of improvement. The present study tries to fill up the gap in the academic research of this crucial area in the health sector and it eventually may help the concerned quarters in designing an efficient training programme for the FWVs.

The methodology of the research mainly consists of personal interview and questionnaire survey, covering of the concerned trainers and officials of the major public health administration and training institutions of the country, including the National Institute of Population Research and Training (NIPORT), the Family Planning Directorate (FPD) and the Family Welfare Visitors' Training Institute (FWVTIs). 19 managers and trainers of the NIPORT, 22 similar staff of the FWVTIs, and 13 staff of the FPD were interviewed through a semi-structured questionnaire schedule. The questionnaire included open and closed inquiries on issues such as existing training design, limitation and problems of the training programme, evaluation of current practices, and recommendation for further improvement of that training design. Additionally, relevant secondary literature were extensively consulted.

## The Role and Services of the FWVs

Family Welfare Visitors (FWVs) are the front line service providers for reproductive and child health, and family planning services. They are working under the FPD. After completion of the 18 month-long basic training, the FWVs are posted in different outreach health and family planning facilities. The clinical services, provided by the FWVs, cover ante-natal and post-natal care of pregnant women and delivery care, growth monitoring and immunisation of children. It includes also, providing family planning services as Intra-Uterine Devices (IUD) and injectable contraceptives to eligible clients. Non clinical services of the FWVs aim to bring a change in knowledge, attitudes and practice of the community. Sometimes, FWVs visit the home of ailing mother and children who are not able to come to the H&FWC owing to their illness.

Under the current health policy, as primarily manifested by the Health and Population Sector Programme (HPSP), the FWVs have to provide all kinds of first level obstetric care to the pregnant mothers, Menstrual Regulation (MR) services, Family Planning (FP) services (both clinical and non-clinical) and treatment of Reproductive Tract Infection / Sexually Transmitted Disease (RTI/STD). Besides, they have to counsel on family planning methods to clients' with RTI/STD, HIV/AIDS and STD related infertility.

Under the system, the FWVs are responsible for initially identifying and referring the complicated maternal, IUD and RTI/ STD related cases to the *Thana* (sub-district) Health Complex. The FWVs have their managerial responsibilities as well. These include

planning and scheduling for their activities, proper record keeping, and reporting on their performance to the higher authorities. The FWVs are also assigned to supervise technical issues of the HPSP and community workers. The overall responsibilities of the FWVs include reproductive health, clinical, mother care and family planning activities at the Union (a cluster of villages; an important field tier of Local Government system) and community levels.

# The Significance and Need of Training for the FWVs: A Selected Review of Literature

The significance and the need for management and clinical skills training for the FWVs have been strongly emphasised on a considerable number of studies. Ahsan and Thwin<sup>(11)</sup> have argued that enhancing clinical and managerial skills of health personnel is a vital issue for health management. The study by Sultana et al<sup>(5)</sup> revealed that although the FWVs were more or less knowledgeable about their managerial jobs (i.e. recording and reporting, preparation of monthly work-plans, etc.), their performance as clinical service providers was unsatisfactory.

Although MR services and facilities are available from almost all the government Family Planning (FP) clinics, UNFPA<sup>(12)</sup> reports that thousands of women are still use traditional methods to terminate pregnancy. This suggests, to some degrees, the ineffectiveness of public FP services. Chowdhury et al<sup>(13)</sup> found that the FWVs did not have adequate knowledge to counsel women about the consequences of repeated MR, and the dire need for use of FP methods. Khuda et al<sup>(14)</sup> identified some special areas in which further training would be urgently required for the FWVs. These areas included interpersonal communication, supervision and quality of care. The FWVs are the paramedics who perform mostly midwifery job. Henderson<sup>(15)</sup> noted that the education and leadership capacities were crucial for successful performance of the midwifery role.

Ahlborg and Akand<sup>(16)</sup> reported that, on an average only 12% of the FWVs were adequately skilled for clinical services in Bangladesh, 19% for basic infection prevention guidelines, 22% family planning counselling and 30% on injectable contraceptive service delivery. Bhadra and Sabir<sup>(17)</sup> found that the FWVs had a low level of skills in some of the activities, especially in ante-natal and post-natal services. A number of other studies also suggested for organising an effective training programme for the FWVs to provide better services to the community<sup>(18-20)</sup>. Chowdhury et al<sup>(13)</sup> observed, inter alia, that in the FWVs' in-service training curriculum, RTI/STD has been generally neglected.

Bhuiyan and Rob<sup>(21)</sup> summarised the lesson learned from a project on Mother and Child Health and Family Planning (MCH-FP) in Bangladesh. Among other things, they found that the general level of training, especially on HIV/AIDS, was not adequate and not practically oriented. The authors emphasised the need for intensive counselling on HIV/AIDS for the FWVs.

Behaviour Change Communication (BCC) is one important component of the current health policy. It concerns the provision of Information, Education and Communication (IEC) services to enable the local communities to access public health facilities. In this context, Ahlborg and Akand<sup>(16)</sup> suggested that the FWVs' attitudes towards their extension duties had to be changed; and Ahsan and Thwin<sup>(11)</sup> underscored the need for providing training on counselling to the FWVs.

From the above literature review, one can see that the major studies have unanimously underscored the need and significance of training for the health personnel in

general and the FWVs in particular. The principal training-need areas, as identified in the process of the literature review, are: strategy for ESP delivery, counselling to the FP clients, gender awareness, management of EOC, ANC-PNC, MR, RTI/STD and HIV/AIDS, etc.

## The Current Training Set-up for the FWVs

In Bangladesh, the National Institute of Population Research and Training (NIPORT) is the premier public training institute under the MOH&FW for imparting management and clinical skills training for the mid-level programme managers, paramedics, and field workers to augment the productivity and efficiency of health and family welfare services. NIPORT is operating through NIPORT headquarters (HQ) in Dhaka, 12 Family Welfare Visitors Training Institutes (FWVTIs) in district headquarters and 20 Regional Training Centres (RTCs) in *Thana* headquarters.

FWVTIs are the providers of basic and in-service training for the Family Welfare Visitors (FWVs). The FWVs are posted at the Health and Family Welfare Centres (H&FWCs) at *Thana* and Union (cluster of villages; one of the lowest tier of the Local Government system) level MCH-FP services. There are as many as 5,871 FWVs working at different tiers of administrative hierarchy<sup>(22)</sup>.

The frequency of the FWVs training is inadequate. For example, after receiving their 'Basic Training' for 18 (eighteen) months, most of them received in-service training only once in their service life. The proportion of receiving in-service training is very negligible<sup>(5)</sup>.

As part of the training of FWVs, the NIPORT offers in-service or refresher training courses which are generally conducted by the FWVTIs on a regular basis. The current training design for the FWVs in-service training programme is briefly outlined in Box 1:

## Box 1 The Current Training Design for the FWVs' In-Service Training Programme.

Objectives: On completion of the training, the participants will be able to demonstrate their tasks (management of H&FWCs and quality care services on MCH-FP efficiently at their place of posting.

Topics: Management skills

- \* Management of Health & Family Welfare Centre
- \* Management of Satellite Clinic
- \* Record keeping and report writing
- \* Management of logistic, drugs and equipment at the working place

#### Clinical Skills

- \* Family planning and reproductive health care services
- \* Ante-natal care to the mothers
- \* Delivery and post-natal care to the mothers and new-born babies
- \* Assessment and management of diarrhoea, ARI
- \* Orientation on Emergency Obstetric Care (EOC) services
- \* Management of deficiency disease e.g. vit-A, iodine, iron, etc.
- \* Management of contraceptive side effect and referral for complication.

Duration: 30 (Thirty) working days

Venue: FWVTIs for classroom session and Mother and Child Welfare Centres (MCWCs),

Thana Health Complexes (THCs), Health and Family Welfare Centres (H&FWCs),

District Hospital, NGO clinic, Satellite Clinic, etc. for skill training.

*Number of participants*: 12 (Twelve)

*Number of Modules*: The total number of curriculum modules is seven in the FWVs in-service training programme. These are:

Name of the Modules: 1. Maternal Care

2. Reproductive Health and Family Planning

3. Under-5 Child Care

4. Attitudinal Change and Community Participation

5. Gender Awareness

6. H&FWC and Satellite Clinic Management

7. Field Practice Guideline

The structure of training design combines classroom session with practical field exercises. Out of the total period (30 thirty days), the classroom session spreads over 8 days which involves lectures and discussions and demonstrations. The typical topics of lectures include, emergency obstetric care, antenatal & post-natal care, reproductive health care and family planning services, gender awareness & development, etc. The next 6 days the trainees visit local medical institutions such as hospitals and H&FWCs. On return from the field, the trainees get together in the institute to share their experiences and learning with each other. At this stage they have to undergo a written test, designed to assess the extent and effectiveness of their experience and learning so far during the course.

From the above discussion, a few limitations of the existing set-up of training for the FWVs become clear. Firstly, the duration of training, i.e. 30 working days, is very long which can cause some practical problems. For example, if FWVs are withdrawn from their field post to the central training institute, a vacuum is created in the field and the normal services are disrupted. Secondly, the practical skills (e.g. MR, IUD insertion, injection pushing, delivery conduction, etc.) have not received sufficient importance in the existing modules. Alongside theoretical knowledge, these practical needs are vitally needed for the success of health service delivery to the local communities. Thirdly, It has been found in many cases that during the field level training at the THCs, H&FWCs and Community Clinics, close monitoring and supervision (of the trainees by the trainers) are not satisfactorily maintained. This reduces the effectiveness of the training programme. There is also a provision of making a follow-up visit by the trainers to see the performance of the FWVs after a few months of receiving training. In many cases this follow-up visit is ignored or poorly done. Besides, there is no provision of any incentive for the trainers for providing field level training.

## **Empirical Data Analysis and Discussion**

In light of lessons revealed from the above review of literature and existing training arrangement, we now move on to the empirical context of the study and attempt to focus on the perceptions and opinions of the respondents regarding the significance, need and the suggestions for improvement of the system of training for the FWVs.

## The Significance and Needs of Training: Respondents' Perceptions and Opinions

In analysing data, first we have tried to throw light on the importance of FWVs' training programme in accordance with the opinions rendered by the concerned personnel in the NIPORT, FWVTIs and FP directorate. Analysing the information gathered for this study has also revealed some critical issues on the existing training programme. The following discussion elaborates these issues.

From the questionnaire survey, it is evident that almost all respondents appreciated the significance of providing training to the FWVs. When asked whether they agreed that the "FWVs are the *key functionaries* for providing MCH-FP and clinical contraception services to the mother/women at *Thana*, Union, Community levels", the respondents gave the following opinions in Table 1.

Table 1 The respondents' opinions about the role of the FWVs.

Name of Organisation	No. of Respondents	Strongly Agree	Agree	Disagree
NIPORT	19	7	12	•••
FWVTI	22	20	2	•••
FP Directorate	13	6	5	2
Total	54	33	19	2

Of the 54 respondents, 33 (61.1%) respondents strongly agreed and 19 (35%) agreed that FWVs were the key functionaries for providing maternal child health and family planning contraception services to the mother/women. Only 2 (3.7%) respondents showed reservations about the role of the FWVs.

In response to the statement, "as a paramedic, FWVs need *regular* in-service training to develop their knowledge, skills and attitude and to ensure smooth delivery of clinical services", the reactions listed in Table 2 were noted.

Table 2 The need for regular in-service training for the FWVs.

Name of Organisation	No. of Respondents	Strongly Agree	Agree	Disagree
NIPORT	19	14	5	
FWVTI	22	18	4	•••
FP Directorate	13	8	4	1
Total	54	40	13	1

Out of total 54 respondents, 40 (74%) strongly agreed and 13 (24%) agreed that FWVs needed regular in-service training while only 1 (1.85%) disagreed.

The present arrangement and system of in-service training for the FWVs has already been discussed above. The respondents were requested to give their opinions about the adequacy of the existing training system. From a total of 54 respondents 45 (83.3%) mentioned that the present arrangement and design of training was not adequate to meet the increasing demand of the training of health and family planning services in the country. Seven (13%) respondents opined that the current training design was adequate. A few of them explained the reason of adequacy that the current training design covers their required

clinical efficiency. The rest 3.7% respondents did not make any comments regarding the current training design.

Interviewees have identified different causes that hinder the efficiency of the existing training design and management for the FWVs. The Table 3 has depicted such thirteen identified causes which they think are responsible for inadequate training design & management.

Table 3 The major causes behind the inadequate training design and arrangement for FWVs (as identified by the respondents).

SI. No.	Causes/Reasons	No. of Respondents	%
1.	Present training programme is not designed in light of Essential Services Package (ESP) under Health and Population Sector Programme (HPSP)	22	40.7
2.	Less emphasis is given on EOC, ANC-PNC, clinical contraception (i.e. IUD, vasectomy, injectables, tubectomy), reproductive health, breast-feeding etc.	12	22.2
3.	Counselling training is not being organised	2	3.7
4.	More theoretical rather than skill based and practical oriented	13	24
5.	Lack of gender awareness in this training module	2	3.7
6.	Lack of proper evaluation of current training design	4	7.4
7.	No systematic approach of training (i.e. lesson plan, course module, etc)	2	3.7
8.	Lack of skilled faculty and trainers	2	3.7
9.	Lack of sufficient midwifery training	1	1.85
10.	Lack of financial support for the trainers during field visit	7	13
11.	Inadequate Training of Trainers (TOT) and limited overseas training	5	9.25
12.	Selection of trainees is not properly maintained due to haphazard data-base	4	7.4
13.	Supply of training materials and equipment are inadequate	3	5.5

Note: The total figure does not make up to 100% because each respondent identified more than one reason.

Twenty two (40.7%) respondents stated that the present training design of the FWVs did not address the newly promulgated health policy, as manifested in the HPSP. Twelve (22.2%) managers and trainers mentioned that less emphasis has given on some important health and family planning issues like EOC, ANC-PNC, reproductive health, breast-feeding and clinical contraception. Thirteen (24%) respondents mentioned that the current training programmes manifested a strong theoretical orientation. They opined that the FWVs needed skill based and practically oriented training.

Some respondent trainers (7 or 13%), who were directly involved in implementing the training programmes for the FWVs, expressed their dissatisfaction about the inadequate

financial support and poor incentive during field visit with the trainees. Shortage of skilled trainers is one of the weak areas in the NIPORT system. A few respondents (7.4%) mentioned that there was virtually no evaluation system in current training design. They opined that training programmes should be regularly evaluated to strengthen their effectiveness.

## The Possible Improvement Measures of Future Training Needs

The respondent managers and trainers suggested training course in various topics and subject areas. Table 4 provides a summary of the suggested topics of training to be imparted to the FWVs with a view to increasing their in-service training efficiency.

Table 4 Types of training suggested by the respondents.

Organisation	Type of Training									
	EOC	BF	Adolescent	MR	BCC	Gender	RTI/STD	Counselling,	Clinical	ARI/
			Health Care	Training		Training	&	Communication	Contraception	CDD
							HIV/AIDS	and Motivation	Training	Training
NIPORT	13	6	7	5	8	5	6	3	8	
FWVTIs	16	4	4	8	3		4	2	9	6
FP Directorate	10		3	2	5		2	3	7	1
Total	39	10	14	15	16	5	15	8	24	7

From Table 4, the (suggested) 'average' (the middle point of the highest and the lowest frequency of the respondents) duration for each area of training has been calculated as below:

- EOC Emergency Obstetric Care: 3 weeks
- BF Breast-feeding: 2 weeks
- Adolescent Health Care: 1.5 weeks
- MR Menstrual Regulation: 1 week
- BCC Behaviour Change Communication: 1.5 weeks
- Gender Training: 1 week
- RTI/STD and HIV/AIDS: 2.5 weeks
- Counselling, Communication and Motivation: 2 weeks
- Clinical contraception training: 3 weeks
- ARI/CDD Acute Respiratory Infection/Control of Diarrhoeal Disease: 1.5 weeks

Some respondents have gone further to suggest various other means of increasing the efficiency of the FWVs roles and services. The following is a selected list of the most common suggestions from our respondents:

- the in-service training of the FWVs should be more practical and skill based;
- they should get regular in-service training on different relevant components of ESP like, clinical FP methods, maternal & child health care, BCC, etc.
- the duration of the training should be arranged for a short period;
- their services should be monitored regularly; and
- there should be a continuous process to do the performance evaluation or post training follow-up and impact evaluation.

#### **Conclusions and Recommendations**

It appears that there is a broad agreement among the trainers and managers of concerned training institutes about the general inadequacy of the existing training programmes for the FWVs. The reasons behind the main inadequacy of training, as mentioned by the respondents include lack of gender awareness in the training programme, insufficient fund and properly qualified trainers, lack of an evaluation system, inadequate emphasis on practical training. The majority of the respondents were in full agreement that the FWVs needed substantial in-service training in-order to increase the effectiveness of their services to the community. The principal areas of training, which have been suggested by the respondent managers and trainers, included EOC, BCC, MR, RTI/STD, HIV/AIDS, clinical contraception, etc. The significance of the key role played by the FWVs has also been almost universally agreed. The lessons and experiences reported in the reviewed literature are in conformity with the empirical findings of our research.

For further improvement of the FWVs in-service training, the following recommendations may be taken into consideration.

- i. To select the FWVs for in-service training in a priority basis, a comprehensive trainee database should be developed. The NIPORT can develop the 'trainee data-base' with the help of FP directorate and the directorate of health services. This will help to identify the FWVs, who did not receive in-service training and will provide training immediately. Each FWVTI could maintain the profile of trainees those who have received training from the institute. Data-base are also necessary to keep track of training indicators, and to facilitate regular and efficient in-service training to maintain standards in performance;
- ii. The curriculum for the FWV's in-service training should be reviewed and revised by the concerned persons to fill in necessary information on the task that are poorly performed by the FWVs. There should be a flexibility of trainers to make necessary changes as per requirements;
- iii. The FWVs should be provided with a regular follow-up in-service training within a short period (preferably on a yearly basis), which was also recommended by Bhadra and Sabir<sup>(17)</sup>. A monitoring system should be developed in each institute to identify training needs of the FWVs who received in-service training;
- iv. Shortage of skilled trainers is one of the weak areas of the NIPORT system. Training of Trainers (ToT) is urgently needed to improve the performance of the trainers and, also, to orient them to the demands of the newly introduced HPSP strategies;
- v. It is important to maintain the co-operation and co-ordination between the trainees (representing the Health Service and FPD) and trainers (organised by the NIPORT/FWVTI) for smooth implementation of the training programme. Therefore, the management of these organisations at the central (policy) and district levels should take initiative for strengthening mutual co-operation through regular consultative meetings; and,
- vi. The research unit of the NIPORT should undertake some studies to assess programmatic influences on the performance of the FWVs. This could lead to the development of appropriate tools and indicators by which the training needs can be identified for both the trainees and trainers.

## References

- 1. World Health Organisation. **Report of the international conference on primary health care**. USSR: Alma-Ata, 1978.
- 2. Health and Population Sector Programme (1998-2003). **Programme implementation plan.** Dhaka: Ministry of Health and Family Welfare, Government of the People's Republic of Bangladesh, 1998.
- 3. Shahid, M. Updating and enactment of HRD related legal instruments in health and family planning in Bangladesh. Dhaka: Dhaka, 1999: 2-3.
- 4. Azim SM, Kabir MH, Alam MM. Current record keeping systems in the context of delivery of essential services package: a review. Dhaka: International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), Special Publication No.-97, 1999: 1-18.
- 5. Sultana S, Sabir A, Bhadra SK **Training needs assessment of Thana, union and unit level family planning and health personnel**. Dhaka: NIPORT-GTZ, 1997: 83-90.
- 6. Hussain MB, Mita R, Hagga JG. Quality of care and contraceptive adoption in rural Bangladesh: MCH-FP extension project areas. Dhaka: International Centre for Diarrhoeal Disease Research, Bangladesh, 1991.
- 7. Nessa F. Evaluation of FWV: quality of care through pre-training observation. Dhaka: International Centre for Diarrhoeal Disease Research, Bangladesh, Operations Paper 42, 1985 (unpublished).
- 8. BRAC. A tale of two wings: health and family planning programmes in an Upazila in Northern Bangladesh. Dhaka: Bangladesh Rural Advancement Committee, 1991: 31-35.
- 9. Baqee L, Koblinsky MA. **The family welfare visitors (FWVs): paramedics of the MCH-FP programme.** Dhaka: International Centre for Diarrhoeal Disease Research, Bangladesh, 1984.
- 10. Khuda B, Stoeckel J, Piet-Pelon N. **Bangladesh family planning programme: lesson learned and directions for future**. Dhaka: International Centre for Diarrhoeal Disease Research, Bangladesh, 1997.
- 11. Ahsan SS, Thwin AA. Bangladesh's experience with human resource development strategies in family planning service delivery: a critical look at the past and directions for the future. Operation Research Project. Dhaka: International Centre for Diarrhoeal Disease Research, Bangladesh, 1998.
- 12. United Nations Population Fund. **Reproductive health and gender.** Dhaka: UNFPA, 1996.
- 13. Chowdhury JH, Khan SA, Rahman S. Assessment of existing institutional capacities for training in reproductive health. Dhaka: NIPORT-GTZ, 1997: 14-17.
- 14. Khuda B, Barkat A, Helali J, Shahzadi N, Akhter R, Mannan MA. **Literature review for the development of the national FP-MCH IEC strategy**. Report prepared for the Johns Hopkins University, Centre for Communication Programmes. Dhaka: University Research Corporation, 1992 (unpublished).
- 15. Henderson C. Midwifery: Delivering Our Future. *British Journal of Midwifery* 1998; 6: 292-297.

- 16. Ahlborg J, Akand RN. **FWV clinical skills and in-service training assessment.** Dhaka: NIPORT-GTZ and AVSC International, 1996.
- 17. Bhadra SK, Sabir A. Study on job performance of the family welfare visitors on completion of in-service training. Dhaka: NIPORT-GTZ, 1996: 3-24.
- 18. Kamal GM. **IUD annual evaluation 1990.** Dhaka: Associates for Community and Population Research, 1990.
- 19. Ahmed S, Hassan K. MIS in SMC. Paper presented at the seminar on Management Information System (MIS) in the Health and Family Welfare Sector in Bangladesh, Dhaka, 1992.
- 20. Barkat A, Khuda B, Helali J, Rahman A, Faisal AJ, Bose ML. **Situation analysis of clinical contraceptive service delivery system in Bangladesh.** Dhaka: University Research Corporation, 1994.
- 21. Bhuiyan I, Rob U. **Strengthening RTI/STD services in FP-MCH programme: lesson learned from a pilot project**. Dhaka: Population Council, 1998.
- 22. DFP and Population Council. **Workshop report on operations research priorities in family planning.** Dhaka: Directorate of Family Planning (DFP) and Population Council, 1993.