

Practices and problems of female health/medical technicians in North-west Frontier Province, Pakistan

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الممارسات والمشاكل المتعلقة بالتقنيات الصحيات والطبيات في محافظة الحدود الشمالية الغربية بباكستان
أرجند فيصل ، وبارفين أعظم خان ، وألفينا نورين

أنشأت وزارة الصحة الباكستانية في سنة ١٩٧٧ كادراً متوسطاً جديداً ، من العاملات الصحيات أطلق عليهن لقب التقنيات الطبيات ، ليقدمن الإسعافات الأولية والخدمات الطبية الأساسية في وحدات الصحة الأساسية والريفية . ومع تطبيق سياسة توزيع الأطباء على هذه الوحدات في أوائل الثمانينات ، تغيرت تسمية التقنيات الطبيات ووظيفتهن ليصبحن تقنيات صحيات . وأسندت إليهن بصفة رئيسية أعمال وقائية بدلاً من العمل كبديلات للأطباء . والغرض من هذه الدراسة هو تقدير نسبة التقنيات المتخرجات اللاتي لازلن في الخدمة ، وتحديد أسباب عدم الالتحاق بالخدمة أو تركها ، وتقييم أعمالهن بالمقارنة بالأداء المتوقع ، وتحديد وتسجيل المشاكل الدراسية والعملية ، والتوصية بإجراءات من شأنها أن تحل المشاكل وتنهض بالأداء .

The Ministry of Health in Pakistan introduced in 1977 mid-level health workers called medical technicians to provide emergency aid and rudimentary services at basic health units and rural health centres. With the policy of placement of doctors in these units in the early eighties, their name was changed to health technicians, whose duties emphasized preventive activities instead of working as doctors' substitutes. The objectives of this study were to estimate the percentage of graduated female technicians in the service, understand their reasons for not joining or leaving the service, appraise their practices in comparison to the expected performance, identify and report the academic and operational problems and recommend measures to resolve these problems and improve performance.

Pratiques et problèmes des techniciennes sanitaires/médicales dans la province de la Frontière nord-ouest au Pakistan

En 1977, le Ministère de la Santé du Pakistan a introduit une catégorie d'agents de santé de niveau intermédiaire appelée « technicien médical » afin de fournir une aide d'urgence et des services essentiels aux unités de soins de santé de base et aux centres de santé ruraux. Avec la politique consistant à placer des médecins dans ces centres au début des années 1980, leur dénomination a été transformée; on les appelle maintenant techniciens sanitaires et ils ont des fonctions centrées sur les activités préventives au lieu d'effectuer le travail des médecins. Cette étude avait pour objectifs d'évaluer le pourcentage de femmes techniciennes sanitaires diplômées qui ont un poste, de comprendre les raisons pour lesquelles elles n'ont pas rejoint leur affectation après la formation ou bien elles l'ont quittée, d'évaluer leurs pratiques par rapport aux performances escomptées, de cerner et signaler les problèmes théoriques ou opérationnels et de recommander des solutions pour résoudre ces problèmes et améliorer les performances.

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Introduction

The Ministry of Health in Pakistan introduced in 1977 a new cadre of mid-level health workers called medical technicians (MTs) to provide emergency aid and basic medical services at basic health units (BHUs) and rural health centres (RHCs). With the policy of placement of physicians in BHUs in the early eighties, the role and name of medical technicians was changed to that of health technicians (HTs). They were assigned duties with emphasis on preventive activities instead of working as doctors' substitutes.

Thirteen HT training schools have been constructed throughout the country. A special effort has been made to recruit female students to the HT schools, as 70% of Pakistan's population are women and children, and women prefer to seek care from female health workers. It was decided to assess the practices of female technicians (FTs), both HTs and MTs, as their competent performance can bring a significant positive change in the health status of females and children.

The objectives of this study were to estimate the percentage of graduated FTs still in the service; understand the reasons for not joining the service after training or leaving the service; appraise their practices in comparison to the expected performance; identify and report academic and operational problems; and recommend measures to resolve these problems and improve performance.

Materials and methods

To begin with, the Directorate of Health Services in North-west Frontier Province (NWFP), the Divisional Director of Health Services (DDHS), all district health offic-

ers (DHOs) and the examining body of technicians were contacted to acquire information about the number of FTs who have graduated since 1977 and to learn how many are still in service. Later, about 20% of those FTs not in service were approached to investigate the reasons for their leaving.

To appraise the practices and problems of the FTs, 30 health facilities were selected through two-stage random sampling from 802 BHUs and RHCs from the 23 districts/agencies in NWFP. Appraisal of the practices of the FTs and identification of their problems was done through observation of their practices at the health facilities, during home visits and by interview. Four tutors in one of the HT schools formed two teams of female workers (FWs) to carry out the fieldwork, and one of the authors supervised their work. They visited the RHC/BHU unannounced, according to a prior plan as a two-person team, and conducted the observations and the interview if the FT was present, after obtaining consent. One FW observed practices and later assessed them with the help of a checklist of key practices expected to be performed on a routine day. Meanwhile, the second FW interviewed the medical officer (MO) to assess his or her understanding of the job and the role of the FT. She also reviewed the medical officer's Lady Health Visitors' and FTs' registers for the previous five days to identify the numbers of patients in different age groups, then reviewed the FTs' register, if available, to assess the percentage of interactions of children under five years of age and women of child-bearing age (CBA) with the FT.

At the end of the day, the FWs interviewed the FT to learn about those practices which could not be observed at the facility and about the problems that hindered her work. Replies were cross-checked to assess their validity through

inferences from the day's observations and during home visits, which were made following interviews (wherever applicable). The FWs requested the FTs who claimed to be undertaking field visits to make a routine follow-up visit, as prescribed in the curriculum, to assess their familiarity with the family and observe their actions in relation to newborns, children under five, pregnant women, sick persons, cleanliness of the home environment and any other relevant activity.

Results

The information obtained from various sources showed that 400 FTs have graduated since 1977, of whom 265 (66%) have been posted to BHUs, RHCs and HT schools in NWFP. Twenty five (19%) female technicians from the 135 graduates who never joined the service were given a questionnaire, written in Urdu, at their homes, but only 12 responded. The reasons mentioned for not being in service were: not receiving appointment despite several visits to the DDHS and/or DHO offices; place of posting being far away, with no facility at the site for lodging and schooling for children; decision to improve their qualifications by gaining admission to higher level courses; prohibition by the family from joining the service; increased responsibilities of managing the home after the death of the mother; and employment by other organizations with better service terms and conditions.

The study target was to assess the practices of 30 in-service FTs for at least two hours each. It was anticipated that this would provide the opportunity to observe interaction with at least 90 children, 50 pregnant women, 60 to 70 CBA women and 30 to 40 other general cases. Instead of

these expected 250 observations only 20 were possible, for several reasons. It was very difficult to identify the centres with FTs.

In the effort to locate such centres, restricting the observations to the sampled site had to be abandoned. The FWs visited 53 facilities (45 BHUs and 8 RHCs) in six districts and one agency in NWFP, and found 17 FTs (13 FHTs and 4 FMTs) working in 15 BHUs and 2 RHCs. Out of these, 17 centres, only one BHU and one RHC were from the randomly sampled list of facilities.

These 17 FTs were observed for interaction with patients at the facility, for between 1 and 3.5 hours. Out of these, only nine interacted with women and children purposefully, and it is important to note that the Lady Health Visitors (LHV's) were not present at eight of these centres on that day. Children under five came to six centres and to three places where the FTs (two FHT, one FMT) were allowed to provide care. The total number of interactions was four, and the female technicians were observed for activities related to nutrition, diarrhoeal diseases and immunization. Out of the four cases observed, in only one case did the female technician make an effort to estimate the age of the child correctly and enquire about breast-feeding and weaning. None of the children was weighed, i.e. no growth chart was made and nutritional status was not determined. Later, the FTs mentioned that they did not have weighing scales nor growth charts to conduct growth monitoring. Out of the three required elements, weaning was discussed in two cases, but breast-feeding was not discussed with two mothers whose children were under two years of age. Only one interaction for a child with diarrhoea was observed, in which the FT made the assessment of the degree of dehydration and explained to the

mother the preparation and use of oral rehydration salts. She did not initiate therapy at the centre, gave no advice regarding feeding or when to come back and explained no preventive measures. In two cases a need for immunization was assessed, and the children were referred to the EPI room, while in the other two cases the mothers requested measles immunization. The measles vaccination was not given, as the EPI centre was closed.

During the survey only two pregnant females came to two places to seek care for the treatment of some minor ailment. FTs (one FHT and one FMT) were allowed to see them. An LHV was present at each centre. Both FTs enquired about the age of the mother and outcome of previous deliveries. They recorded blood pressure, assessed anaemia clinically, examined the height of the fundus, listened to the fetal heart sounds, advised on diet during pregnancy, inquired about tetanus toxoid vaccination and advised it. One of the women was vaccinated, but the other could not be, as the EPI centre was closed. One FT advised future family planning and follow-up. Neither of them took weight, measured height, examined the patient's breasts or checked urine for sugar or albumin. They later mentioned nonavailability of instruments and chemicals as the reason. One did not estimate the expected date of delivery, and no records were made for these two cases.

FTs were observed interacting with 12 CBA women. Only three CBA women were given advice on family planning by the FTs, in addition to the treatment for which these women came to the FT. The use of contraceptives was explained inadequately in one of these three cases. In the other nine cases no assessment of the need for family planning advice was made.

Two FMTs and three FHTs were observed providing services to female patients

other than those listed above. These were examination and prescription writing for minor ailments, giving injections and intravenous infusions, evaluation of a postnatal patient, dispensing drugs and some health education.

The female technicians are trained to maintain some important registers at the BHU and the RHC. This duty was seen to be carried out more often than any other practice, as the outpatient (OPD) register was maintained by thirteen, the abstract register by nine, and the stock and expense register by five technicians. The other registers that were found to be maintained by at least three female technicians were the family folder, the antenatal register, and the confinement register.

Eight FTs mentioned during the interview that they had performed home visits in the previous month. These ranged from three to fifteen visits, but only one had a written schedule for the home visits and two had records of previous visits. FWs requested them to make a home visit and carry out routine procedures. Observation periods lasted for 30 minutes in two homes and 15 minutes in the remaining six homes, as the FTs inquired only about a few minor things. Seven of the eight FTs had good rapport with the family, and they were welcomed into the home. Since there had been no recent births in these homes, activities related to newborns could not be observed. In six houses, children under five were present, and in five of these homes the technicians inquired about the illnesses of the children in the previous month. At none of these places were the children weighed. In one home a pregnant female was identified, but the technician enquired only about the general condition and did not perform any antenatal examination or advise about extra food and follow-up. In three houses sick persons, other than those mentioned above,

were present, and at two places the FT made an effort to identify the problems and gave prescriptions. Seven households required advice on improving cleanliness but it was given in only four houses. The interesting thing to note was that these FTs, with the exception of one, took no apparatus or register with them to the homes, and the whole interaction was like a social visit rather than a well defined health visit.

All 17 FTs were interviewed about those areas of their practices that were not observed though important for better health care, and enquiries were made about administrative, social and personal problems. These interviews revealed that only four FTs had prepared a map of the area. Only five FTs made a single effort to establish contact with community leaders and none had established contact with any informal leader in the community. An encouraging finding was that 12 of them mentioned that they had conducted home deliveries in the previous six months. The cumulative total was 174 deliveries with a range from 1 to 49 deliveries. Out of the five who did not perform any deliveries, one was prohibited by the doctor of the centre and the other by the LHV, two gave no reasons, while one was never called upon to do this job. Five FTs said that they insert IUDs, and in the last six months, one had inserted 33 IUDs, another 16, two had inserted four each and one had inserted one IUD. It was felt that the FTs were taking this initiative as they were most probably charging fees for this service, but this could not be verified. Among the 12 FTs who did not perform this activity, two said that the DHO had prohibited them from doing so, six gave nonavailability of IUDs as the reason, while four gave no reason. Thirteen FTs mentioned that they perform vaccinations regularly, most commonly tetanus toxoid to pregnant females. Seven said that they conduct health

education regularly, and six showed the list of topics that they had planned to discuss. Their claims could not be verified. The monthly reports were prepared by three FHTs independently, and two FMTs in collaboration with the male MTs.

The problems mentioned by FTs that hindered their work were that the DHO, medical officers and the other staff are not aware of the FTs' job descriptions. Therefore, they are asked to do different odd jobs at their centres, such as replacing the absent LHV, male MT, dispenser or EPI technician. Some expressed a lot of frustration at the dominance of LHVs, mentioning that they have been prohibited by the LHV from interacting with patients and are allowed to work only as assistants to them to pass on the stethoscope, gloves, etc. The FTs and LHVs are placed in the same room, but the rooms are referred to as the LHVs' rooms and, at least at 10 places, the FTs expressed their discomfort at having to work in somebody else's room, especially as working relations with the LHVs are strained. At one place the medical officer, and at another place the male MT also restricted them from interacting with patients. At least eight FTs also had serious complaints about the noncooperative attitude of the *dai* (traditional birth attendant) working with them, as the *dai* works under the LHV and follows her instructions.

This was also noted at a couple of places by the FWs. Nine FTs expressed their desire to have registers for themselves separate from those used by the LHV and MO, as this might give them some authority. Eleven FTs identified the nonavailability of allowances as one of the reasons for not making home visits. They mentioned that the catchment area is spread over several kilometres, and they felt that they should be given daily allowances and travelling expenses to work in the field.

Some complained that nobody from the health department ever made any supervisory visits to check their performance. DHOs, if they do visit, interact only with the MO, LHV and male MT. At places the FT mentioned that the people of the area consider it a bad practice for a female to move about openly in the community. This claim could not be verified. Six FTs mentioned that they do not get support from any staff in the centre to visit with them, and they cannot go alone for home visits, as it is culturally inappropriate and also not safe. Five mentioned that daily commuting is a major problem for them because they live far from their centre and the transport system was unsatisfactory. Only two FTs did not appear to be interested in their job, and one was unwilling to cooperate with the FWs.

Of the 17 centres where FTs were observed, medical officers were present in 10. They were interviewed about the responsibilities and performance of FTs at their facility. Only five MOs mentioned at least five of those duties and responsibilities being performed at the centre by the FT out of the 11 that are listed in the job description of FTs. One MO mentioned four responsibilities, and three identified only one responsibility being performed at the centre that was related to the job-description. The most commonly mentioned responsibilities of the FT at the centre was immunization of women and children and conducting health education sessions. The other two responsibilities mentioned by at least four MOs were home visits and record-keeping. The other tasks and responsibilities that the MOs have assigned to these technicians, like dispensing drugs, making OPD chits, assisting the LHV, giving injections and washing dusters, are not part of the prescribed job description of the FT. This con-

firms the view of FTs about the lack of understanding of their job, duties and responsibilities by the MOs in charge of the facilities. Interestingly, eight out of the ten MOs were satisfied with the FTs performance.

The medical officers were asked about the problems being faced by the FT at their centre. Six MOs did not specify any problem, three mentioned nonavailability of satisfactory transport for commuting and one mentioned lack of proper working space as the problem. Medical officers, when invited to give suggestions to improve the training and practices of FTs, gave a few general vague pieces of advice.

An effort was also made to establish the workload at the centres and to identify the percentage of interactions of mothers and children with the FTs. Towards this end, registers of medical officers or male MTs, LHVs and FTs were reviewed for the previous five working days. The results are presented in Table 1, which shows that the utilization of the centres appears to be very low. But at several places the FWs noted that many patients were being charged by the health centre staff for consultation, and were being given prescriptions to purchase medicine from outside. These patients were not entered in the registers. The medical officer and male MT share the register. LHVs were present at nine centres, but at two places their patients were recorded in the OPD register maintained by the MO or male MT. The three centres where FTs maintained the registers were those at which LHVs were not present.

Considering the number (17 on average per day) and category of patients seen at a BHU/RHC, female technicians can independently manage at least 60% of the cases, if allowed to do so.

Table 1 Patient attendance in the five days prior to the study

| Activity | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Total | Average/ day/centre |
|--------------------------------|-------|-------|-------|-------|-------|-------|------------------------|
| MO + MMT register (17 centres) | | | | | | | |
| Total patients | 220 | 253 | 147 | 231 | 255 | 1106 | 13.0 |
| Children < 5 | 36 | 48 | 30 | 41 | 44 | 199 | 2.3 |
| Female 15-45 | 72 | 74 | 30 | 60 | 91 | 327 | 3.8 |
| LHV register (7 centres) | | | | | | | |
| Total patients | 31 | 28 | 24 | 15 | 40 | 138 | 3.9 |
| Pregnant women | 8 | 4 | 3 | 5 | 5 | 25 | 0.9 |
| Family planning cases | - | - | 2 | 3 | 3 | 8 | 0.3 |
| FHT/FMT register (3 centres) | | | | | | | |
| Total patients | 7 | 11 | 15 | 21 | 11 | 65 | 4.3 |
| Children < 5 (1 centre) | 1 | - | 1 | - | - | 2 | 0.1 |
| Females 15-45 | 6 | 11 | 14 | 21 | 11 | 63 | 4.2 |

Conclusions and recommendations

The FHT/FMT programme is working much below expectation, bringing very little benefit to women and young children; it needs urgent attention to introduce appropriate changes. It was good to note that 82% (14 out of 17) of the technicians were interested in their work, but it was disturbing to see that about 50% of them were not allowed to work. The dominance of LHVs appears to be a genuine problem. The FTs are given much less respect at the centre as compared to LHVs. It was felt that the LHVs and *dais* do not see them as partners but as a threat to their private practice. The FTs' complaint that their job description is not known to the other staff of their centre and DHOs holds true: only 50% of the MOs could identify 50% of the duties and responsibilities, and the four DHOs and one ADHO who were met during the study were not aware of the job description of FTs. These two factors appear to be most important in keeping the FT from interacting with women and chil-

dren visiting the centre. But the most disturbing feature was that, at the places where they are interacting with women and children, their performance is much below the expected level. Even the home visits were nothing more than social calls. Could this be attributed to lack of supervision, as pointed out earlier, or is there lack of hands-on experience during training?

Nonavailability of allowances was mentioned as a reason for not making home visits. But visits were not being made by at least 50% of the FTs to nearby homes, and those who visited did not have a schedule or plan. Another noticeable area of deficiency is the lack of community involvement in the activities of the centre. It appears that no genuine effort was made by most of the FTs to initiate effective community participation, which is one of their important duties.

To change the existing situation, the authors strongly recommend that various cadres of female paramedics with almost similar responsibilities (such as LHVs, FHTs, FMTs), be merged into a single cat-

egory incorporating the job description of all these cadres. Since LHV is an established position which commands respect from the medical officers and other health staff, it is suggested that this nomenclature be maintained. This change will require merging and renaming of public health schools and health technicians' training schools, and also the revision of the curriculum to create an appropriate balance of preventive, promotive and curative approaches, including midwifery. If this change is not acceptable to the authorities, immediate measures must be taken to inform the DHOs and staff of the RHCs and BHUs about the job description of the FTs. They should be advised to allow, support and encourage FTs to perform their work according to their job description. The MOs should make active efforts to end the cold war between LHVs and FTs and facilitate their work as a team for the patients' benefit.

The Health Department must reassess whether or not it is possible for the female paramedics to work in outreach activities. The validity of various social reasons inhibiting field activities, as mentioned by them, need to be explored further. Based on the findings, an appropriate and effective strategy for preventive and promotive work should be designed. Further, the inadequate performance of the FTs observed during the limited interactions highlights the need for strengthening hands-on practices during training in the schools and on the job.

Supervision at present is almost nonexistent. District supervisors must ensure adequate technical and managerial supervision at regular intervals. The visits, when made,

should not only be limited to checking the registers, but utilized as an opportunity to enhance the knowledge and skills of the staff and thus help them solve problems. DHOs should encourage the staff of the BHUs and RHCs to initiate community participation. This will not only serve to enhance the utilization of services at the health centres more effectively, but will also encourage the female staff, including technicians, to improve their outreach activities.

Incentives such as travel allowances for field work and rural allowances, should be provided. Technicians working in rural areas are deprived of house rent equivalent to 40% of basic pay, which is available to them in cities. This disparity could be removed by providing rural allowances equivalent to 50% of basic pay.

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