Trained traditional birth attendants as educators of refugee mothers

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Following training courses for traditional birth attendants among refugee Afghan women in Pakistan, a survey was conducted to test the knowledge and practices of the participants and of mothers whose babies had been delivered by them, using untrained birth attendants as the basis for comparison. Marked improvements in knowledge and skills were demonstrated, and recommendations made by the trained birth attendants about breast-feeding, maternal nutrition, immunization and hygiene were generally followed by mothers before and after delivery. Furthermore, far fewer complications and deaths were associated with deliveries performed by trained birth attendants than with those conducted by their untrained colleagues. The training of traditional birth attendants was clearly an effective way to educate women about hygiene and health.

The military upheaval in Afghanistan which began in 1979 led to the exodus of millions of refugees, many of whom went to Pakistan, where their residence in densely populated camps presented an opportunity to upgrade the skills and knowledge of the traditional birth attendants among them and thereby to improve the health of women and children.

Training programme

A programme was developed for the training of traditional birth attendants among refugee women in three camps in the province of Baluchistan. During its first 18 months the programme was administered by Médecins Sans Frontières-Belgium; supervision was then transferred to Mercy Corps International, an American nongovernmental organization. The training staff comprised seven Afghan women who were fluent in Pushto and Farsi. Between September 1990 and March 1993, 720 traditional birth attendants were trained in accordance with a curriculum adapted from material prepared by WHO, UNICEF, the Save the Children Fund, UNHCR, and the Pakistan Chief Commissioner for Afghan refugees.

Each course was attended by eight to ten students and was conducted by an experienced trainer in the home of a student. The classes met for a total of 75 hours over a period of ten
weeks. Acceptance for a course depended on the students being married, aged 18–45 years, and experienced as birth attendants. No family was allowed to have more than one trainee in the programme. The untrained traditional birth attendants had learnt their skills from female relatives in 80% of instances and from older traditional birth attendants in 16%; one was self-taught.

Assessment

An interview questionnaire for birth attendants covered work activity, knowledge and practice of prenatal and postnatal care, labour and delivery, general health awareness, sanitation and immunizations. Inspections were made of the delivery kits given to trained traditional birth attendants when they had successfully completed a course. A questionnaire for mothers dealt with knowledge about general health, immunizations, knowledge and practices in the field of sanitation, and the deliveries performed by the trained birth attendants. The questionnaires were administered by four of the trainers, and the interviews each lasted up to an hour and a half.

An initial survey was conducted in January 1992, when 30 trained and 20 untrained birth attendants were questioned; a second survey, in September 1992, covered 25 trained birth attendants and 25 mothers who had recently been delivered by them. The results for the two groups of trained birth attendants were similar, and for this reason only those obtained in September, together with the ones for the corresponding mothers, are examined in detail below. Every seventh traditional birth attendant on the class roster was selected for participation, while untrained birth attendants, with the same cultural, socioeconomic and religious background as the trained individuals, were selected at random in areas where no training had been given. The trained birth attendants were interviewed without advance notice four months after the completion of training. Each was asked to name the mother she had most recently delivered.

The average time for which the interviewees had lived as refugees in Pakistan was nine years. The mean ages of the trained and untrained birth attendants were 39 and 55 years respectively. On average the trained birth attendants had been practising their profession for eight years and had performed two deliveries in the previous four months. The corresponding figures for untrained birth attendants were 14 years and four deliveries. The trained birth attendants had, on average, visited two pregnant women and treated one child for diarrhoea during the week before being interviewed, and were currently caring for up to six pregnant women. The untrained birth attendants did not make prenatal visits, nor did they treat ill children.

Payment for delivery was partly in cash, in the range US$ 0.30–1.60, and partly in kind, as soap, clothing, food and henna, for both trained and untrained birth attendants. However, no payment was received for about 15% of the deliveries conducted.

The inspections revealed that all the trained birth attendants had retained their delivery kits and had stored them in clean places. All the kits except one were in a clean condition but none was complete. Some 60% of the kits lacked between one and three of the 15 items that had been issued, and 20% lacked between four and six items. Soap was missing from 82% of the kits, thread for tying.
umbilical cords was absent from 34%, and razor blades and cotton wool were lacking in 30% and 26% respectively. None of the kits contained drugs. Additional items such as photographs and jewellery were found in six kits.

Prenatal practice and delivery

The trained birth attendants visited each pregnant woman on two to five occasions before delivery, giving advice on immunization, nutrition and hygiene in 96%, 84% and 84% of instances respectively. The mothers remembered what these birth attendants had told them about tetanus immunization, nutrition and cleanliness in 88%, 96% and 64% of instances respectively. The trained birth attendants’ prenatal evaluation included questions about bleeding, fever, headache, fetal position, oedema, anaemia and the condition of the breasts. All the mothers confirmed that the trained birth attendants had examined them before delivery, whereas 91% of the untrained birth attendants stated that they never did this.

The trained traditional birth attendants had delivered 61 infants in the previous four months. At delivery, the mothers all observed that these birth attendants washed their hands with soap, used a cooking pot for sterilization, tied the cord three times with sterile thread, and used a clean razor blade to cut the cord; 24 of the 25 mothers stated that no injections or tablets were given during labour and delivery.

In contrast the untrained birth attendants frequently cut the cord with a dirty razor blade, knife, stone, or pair of scissors; in about a third of cases the cord was tied by means of a shoelace, in about four-fifths it was tied only once, and in 5% of instances it was cut before being tied.

Whereas the trained birth attendants put either nothing or gentian violet on the cord, the untrained ones used various combinations of substances including surma (a black powder), henna, mud, johar (a red powder), vaseline, cotton wool, and the ashes of the mother’s hair.

Maternal complications reported by the trained birth attendants included stillbirth, prolonged labour and excessive bleeding. Three infants delivered by these birth attendants died of unknown causes, one immediately after birth and the others at the age of two months.

The 25 untrained birth attendants reported maternal complications in 32 of the deliveries they had recently attended, the commonest being severe haemorrhage and malpresentation, of which there were 12 and seven cases respectively; there were five cases each of prolonged labour and retained placenta, and one each of placenta previa, severe rectovaginal tear, and prolapsed uterus; three of the mothers died. The same birth attendants reported delayed crying in five babies, eight stillbirths and eight deaths of infants in the perinatal period, two of the latter caused by neonatal tetanus and three of them related to congenital anomalies.

Many of the procedures adopted by untrained birth attendants faced with such complications were bizarre, to say the least. For instance, one response to retention of the placenta was to pull out clumps of the
mother’s hair, put the hair into her mouth, and give her snuff. In a case of delayed crying, cold water was poured on to the baby’s face and its genitals were squeezed; in another such case, the birth attendant pulled hard on the umbilical cord, pulled the infant’s ears and blew into them.

**Postpartum evaluation and breast-feeding**

All the trained birth attendants visited the mothers after delivery and at this stage examinations for anaemia, vaginal bleeding, uterine size, oedema, breast problems and fever were conducted in 92%, 88%, 64%, 48%, 36% and 28% of instances respectively; advice was given on nutrition, breast-feeding, immunizations for infants and general cleanliness.

Almost three-quarters of the untrained birth attendants, on the other hand, did not visit the mothers after delivery. It was recommended by the ones who did make visits at this stage that the mothers should avoid eating melon, vegetables and potatoes until 20 days after delivery.

Breast-feeding was started within an hour after delivery by 22 of the mothers. All the trained birth attendants knew that colostrum was good for the baby, whereas 68% of the untrained birth attendants rejected the use of colostrum and most of them recommended that breast-feeding be delayed for periods ranging from a day to a week after delivery.

If a mother had insufficient milk the trained birth attendants advised an increase in fluid and food intake and more frequent putting of the baby to the breast; one recommended the use of powdered milk and another advised using goat or cow milk. In the same circumstance most of the untrained birth attendants recommended giving powdered milk in a bottle; other suggestions were to visit a mullah, to feed the infant on butter, or tea and sugar, and to buy unspecified medicines.

Most of the trained birth attendants advised the mothers to breast-feed for two years, whereas only about half the untrained birth attendants made this recommendation. If a woman became pregnant again during this time, about half the trained attendants advised that breast-feeding should continue until the eighth month of pregnancy, whereas almost all the untrained ones recommended immediate discontinuation of breast-feeding.

**Improved sanitation**

Each mother who was under the care of a trained birth attendant had requested this precisely because of the training that had been given. At delivery, a mother was usually also attended by her mother, her mother-in-law, a sister-in-law, a friend or a neighbour.

The results obtained for the trained birth attendants and for mothers recently delivered by them in respect of matters connected with sanitation, including the use of containers for drinking-water, general cleanliness, latrine cleanliness and type, and the method of household waste disposal, were markedly superior to those for the untrained attendants.

As an alternative to breast milk for newborn infants the untrained birth attendants most frequently recommended butter or cooking oil.
mothers, 79% referred to protection against microbes or illness in this connection. Prominent among the reasons for hand-washing given by the untrained attendants were those of cleanliness and religion. The significance of correct timing of hand-washing, for instance before food preparation, was well understood by the trained birth attendants but not by the untrained ones. Mothers had a better understanding of this than the untrained attendants, but few of them realized the importance of washing the hands before feeding a child.

Knowledge of disease and its prevention

The trained attendants and the mothers whose infants they had delivered considered immunization to be a major protection against disease, whereas 60% of the untrained attendants could give no reason for immunization. These views were reflected in the children’s immunization records which, on verification, were complete and up-to-date for all the children of the trained attendants but for only 20% of the children of the untrained attendants.

The trained attendants could give at least three methods of preventing malaria, and over half the mothers were able to indicate at least two methods; both groups were aware that mosquitoes transmitted the disease. The untrained attendants attributed the disease to God, cold or hot weather, cold water, dirt, dirty water, flies or excessive intake of cooking oil; a third of these attendants were unable to indicate any preventive measure, while others suggested a wide range of solutions, among them calling on God for help, keeping warm, avoiding the consumption of too much cooking oil, keeping children clean, covering vegetables and water, and avoiding hard work and exposure to the sun.

The trained attendants could give at least three methods for preventing the spread of tuberculosis and most of the mothers were able to give at least two methods. Among the untrained attendants there was some knowledge of preventive measures but also a degree of apathy about tackling the disease.

When trained attendants were asked how an eight-month-old baby with diarrhoea should be cared for, the main approaches they suggested were continued breast-feeding, the administration of sugar/salt solution or oral rehydration solution, and the giving of additional food and liquids; the replies of mothers delivered by trained attendants were similar, but the untrained attendants concentrated on continued breast-feeding and the use of local remedies, for instance ones derived from mountain flowers.

All the trained attendants could recognize and name tetanus from a clinical description, and almost all were aware that it resulted from contamination of the umbilical cord; 77% knew that immunization of the mother during pregnancy and a clean delivery could prevent the disease. Only 40% of the untrained attendants could identify the illness as tetanus, and none knew the medical reasons for its occurrence.

There were undoubtedly shortcomings in the prenatal and postnatal examinations conducted by the trained birth attendants, and a need remained for improvements in household sanitary practices and in knowledge about the prevention and treatment of childhood
diarrhoea and the prevention of tuberculosis and malaria, suggesting that more emphasis should be placed on these subjects in the curriculum. It was also necessary to tackle the matter of the disappearance of essential items from the birth attendants' kits.

Despite these problems, mothers delivered by trained birth attendants clearly exhibited improved basic knowledge of health matters and improved hygiene and sanitation practices, in some cases reaching the standard of these attendants and generally surpassing that of untrained birth attendants.

Because of the high incidence of illiteracy and the restrictions associated with purdah among the Afghan refugee women their gains in knowledge were especially important. Evidence of improved family health in neighbourhoods where there were trained birth attendants encouraged many community leaders to request that training courses be offered in their areas. Furthermore, expectant mothers clearly appreciated the value of the training given to birth attendants.

The trained birth attendants readily recalled the core concepts explained during the courses and they adopted the main basic measures of hygiene. Nevertheless, refresher courses would undoubtedly be of value in improving their knowledge and maintaining their skills.

The training of traditional birth attendants provides an effective route for educating the women they deliver about hygiene and health, and thereby reduces both maternal and fetal complications and raises the level of family health.

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Women: the link between generations

In looking at health issues affecting women it is essential to take a life-span perspective, since health conditions in one phase of woman's life not only affect subsequent phases of her own life but also have an impact on future generations. This intergenerational link is a characteristic unique to women.