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Maternal schooling and child health: preliminary analysis of the intervening mechanisms in rural Nepal*



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Abstract

This article provides evidence from a community-level study in rural Nepal of the mechanisms by which schooling affects maternal behaviour and infant and child health. Two hypotheses concerning the mechanisms are identified and tested. It was found that schooling equips women with specific skills and dispositions or identity which significantly predict two principal domains of health-care behaviour: use of medical services; and changes in household health behaviour. It was also found that women with schooling had healthier children using height-for-age as an indicator of health.

Introduction

Research in developing countries, at both the national and household levels, has shown that, even after controlling for socioeconomic status and access to health services, maternal schooling is significantly associated with the health status of children, as defined by a reduction in either mortality or risks to child survival (Caldwell 1979; Cochrane, O'Hara and Leslie 1980; Cleland and van Ginneken 1988; Bicego and Boerma 1991; Hobcraft 1993).

Researchers agree that the direct impact of schooling may account for as much as half of the observed effect¹ (Cochrane et al. 1980; Mensch, Lentzner and Preston 1985). However, the processes through which the effect is mediated are not well understood (Caldwell 1979; Ware 1984; Cleland and van Ginneken 1988; LeVine et al. 1991). This is primarily due to the 'dearth of studies that have been designed explicitly to examine the links between education and survivorship' (Cleland and van Ginneken 1988:1365). These processes require clarification; and our Nepal study is an effort in this direction.

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¹ The other half being attributed to socioeconomic advantage.

Background

In order to generate new questions relating to the effect of schooling on health it is necessary first to look at findings from earlier studies, and identify issues not previously addressed. Studies suggest that women acquire behavioural dispositions in school that then lead to two proximate changes in health-care behaviour: use of medical services; and changes in household health behaviour. Both these changes have been shown ultimately to affect child health measured either by mortality or biomedical risk factors of mortality.

Although medical and demographic studies acknowledge the importance of explicating the direct link between schooling and behavioural change, they focus almost exclusively on isolating the impact of schooling on health outcomes. Owing to the character of their large datasets, these survey-based studies have limited 'potential for revealing underlying behavioral and causal relationships' (Birdsall 1992:161). Moreover, exploration of the schooling-behaviour change link requires an outlook based on multiple disciplines including education, psychology, and anthropology. As a result of both the nature of the data and the multidisciplinary approach required, it is not surprising that the schooling-behaviour link has been poorly articulated. Only recently has this link begun to be investigated outside the medical-demographic domain (Lindenbaum, Chakraborty and Elias 1989; Lindenbaum 1990; LeVine et al. 1991; LeVine et al. in press) and it is this new work that is most relevant to the issues this paper attempts to address.

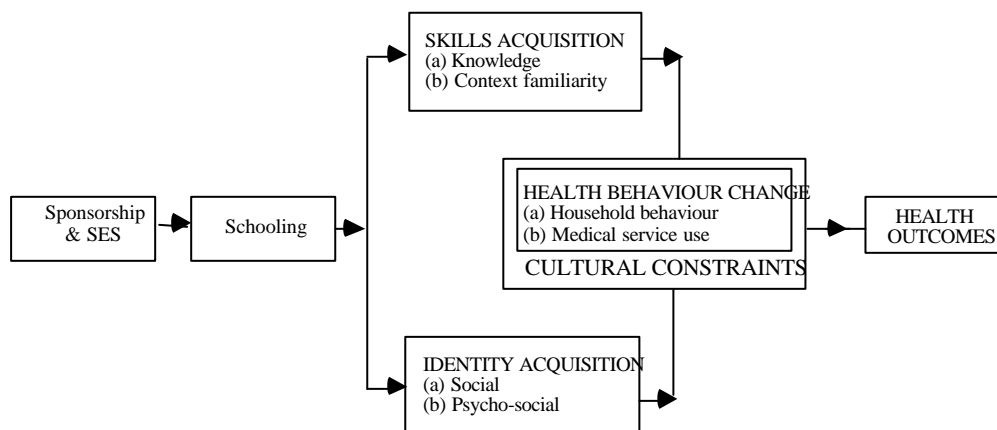
This paper briefly reviews the available evidence on the links between schooling and child health and identifies gaps in the literature; tests hypotheses concerning those gaps by presenting empirical results from a community-level study carried out in rural Nepal; and offers a model for future research that is consistent with prior and new findings (cited herein).

Theoretical context

Most scholars agree that evidence is inadequate and inconclusive for sound conclusions to be drawn about the nature of the link between schooling and child health (Cleland and van Ginneken 1988; Hobcraft 1993). However, literature on the topic proposes two broad explanations: the skills acquisition hypothesis, and the identity acquisition hypothesis.

Figure 1

Maternal schooling and child health: possible pathways



Two possible mechanisms for behavioural change may be identified under the skills acquisition hypothesis: knowledge acquisition, and context familiarity. Knowledge acquisition posits that literacy and language abilities help women acquire knowledge and a 'broader outlook' (Mechanic 1992) concerning health. It has, for example, been demonstrated that adults were more likely to attribute natural causes to diseases if they had some schooling than if they had none (Fosu 1981). More recently, it has also been shown that mothers with some schooling have a wider knowledge of the outside world than mothers who have none (LeVine et al. 1991). Preston (1985) argues that major declines in child mortality rates started to occur in America, when health messages began to be clearly understood. It has therefore been hypothesized that individuals with more schooling are more educated about health care and are inclined to learn more (Feldman 1966). When exposed to new information, they can also assimilate more than those with less schooling (Mechanic 1992).²

Context familiarity postulates that school-acquired literacy and language skills teach children patterns of speech, work and interaction useful for participating in modern health-care environments and other bureaucracies, thereby facilitating use of the modern health-care system (LeVine et al. 1991). Khan et al. (1987) have shown that in Northern India, women without schooling feel incompetent in modern interactive settings. Furthermore Nag (1981) claims that women with schooling have a greater understanding of where the health services are located and how to gain access to them.³

Skills, however, are not the only postulated mediators between schooling and better health-service use or other forms of health-related behaviours. School-acquired identity is a serious contender.

The identity acquisition hypothesis, or 'behaviour before cognition' hypothesis, assumes that schooling leads to a behavioural change through imitation of people in the 'modern sector'. In the health literature, there are two separate theories concerning the mechanisms involved. The first, the sociological hypothesis, suggests that schooling leads women to imitate the behaviour of the urban, Westernized middle class (Lindenbaum et al. 1989; Lindenbaum 1990). Schooling makes women

aware that the health centre, the medical practitioner, immunization of children against disease and taking early action about infant diarrhoea all belong to the same system as their school, the officials, the government and themselves (Caldwell, Reddy and Caldwell 1989:212).

According to this model, schools may be seen as transmitters of 'culture.' As Caldwell says:

the quality of schooling seems relatively unimportant, compared with the fact of schooling having taken place and its duration. It is not so much what you learn or understand, but how you see yourself and how others see you...

They are cleaner because educated people are cleaner; not because the health and hygiene lessons taught them that soap destroyed the bacteria that were the agents of infection (Caldwell 1989:106).

² This dynamic interaction of knowledge and school-acquired skills differs from the 'content acquisition hypothesis', which theorizes that women must learn about hygiene and health behaviour in schools when they are young. Since schools in developing countries are of poor quality and rarely teach health or hygiene in the first few years, most scholars are sceptical about the reasonableness of this hypothesis (Cleland 1989; Christikas, Ware and Kleinman, in press).

³ Many other studies confirm these positive associations between maternal education and the use of medical services (Sullivan 1975; Brown, Djogdom et al. 1982; Tekce and Shorter 1984; MbackŽ and van de Walle 1987; LeVine et al. 1991; Elo 1992).

Better health is thought then to be achieved primarily through health-producing behaviours, such as washing hands regularly or taking advantage of available health services, which are 'learned' swiftly through identification with modern lifestyles.

The second, the psycho-social hypothesis, acknowledges the positive impact of identity acquisition on health but emphasizes the developmental dimensions of the process (LeVine et al. 1991). Women with schooling do not arbitrarily imitate the behaviour of the upper classes; rather they internalize the teacher-pupil relationship⁴ and later express this relational structure in other settings. Thus in the household they act like a teacher toward her pupils. Lindenbaum suggests that an educated woman takes upon herself 'the role of family tutor, helping students learn to read and write, a task with social as well as economic implications' (Lindenbaum et al. 1989:119). Conversely, in 'modern' bureaucratic settings, women with schooling take up the role of student, learning and responding to, for example, radio advertisements and physicians' instructions.

This perspective on identity acquisition complements the skills acquisition hypothesis as it makes women with schooling into lifelong teachers and learners. Furthermore, the hypothesis does not discard the social dimension of identity acquisition. Since women with schooling 'become' teachers, they act, dress, and converse like teachers; since teachers are supposed to look clean and dress neatly, women with schooling are similarly more preoccupied with cleanliness. These dimensions of imitation are, however, the 'external' husk rather than the kernel, the kernel being the psychologically internalized teacher-student role.

Mention must be made here of cultural constraints on maternal behaviour. The benefits of maternal schooling may be more rapidly felt under cultural conditions that allow women a certain degree of autonomy with health-care decisions, both inside and outside the household (Caldwell 1986; LeVine et al. in press). On the other hand, it has also been suggested that schooling shifts authority patterns in the household, providing women with the 'assertiveness' to seek treatment for their children (Caldwell 1989). These cultural factors, therefore, may be looked upon as 'contextual' inhibitors or facilitators of the impact of schooling that are channelled through the mechanisms hypothesized above.⁵

Research questions

The above hypotheses have generally been seen as opposing one another. The Nepal study is an investigation of these hypotheses together.

The study addresses the following specific questions:

- (a) Skills acquisition hypothesis: are adult women with schooling more likely than women without schooling to possess and use or express the skills that are believed to be transmitted in schools and that have been hypothesized to influence adult behaviour?
- (b) Identity acquisition hypothesis: are women with schooling more likely to possess and use or express the dispositions or identity that are believed to be transmitted in schools and that are associated with 'modern' behaviour patterns that have an impact on child health?

The study then asks whether mothers with schooling are more likely to have healthier children.⁶ Finally, the study makes a preliminary attempt to disentangle the independent influences of skills and dispositions or identity on specific maternal health behaviours and child health outcomes.

⁴ LeVine suggests that this happens more easily for young children because their minds are more malleable (LeVine et al. 1991).

⁵ Household authority is an important determinant of health behaviour among Brahmins in Nepal (Joshi, in preparation).

⁶ The primary outcome variables in the study are wasting (weight for height) and stunting (height for age).

The national context

Nepal, virtually isolated from the outside world until the late 1950s, has been undergoing many changes. Infrastructural, industrial, health-care, family-planning, and education-development programs have expanded, with demographic and socio-cultural consequences.

Table 1
Nepal: key socioeconomic and demographic indicators

Indicators	1951-55	1971-75	1980-85
Economic growth: infrastructural development			
GDP (Rs. mil.) ^a	–	16,571	20,926
Number of roads ^b	624	–	4,940
Urbanization			
Urban population ^c (%)	2.9	–	6.3
Education expansion			
Students enrolled in primary schools ^a ('000s)	8.5	–	1,626.0
Adult literacy rate ^c (%)	5.3	–	23.5
Health expansion			
Ratio population/hospital beds ^a ('000s)	13.9	–	4.6
Infant mortality rate ^d	179	156	113 (1987)

Sources: ^aNepal (1988). ^bNepal (1985a). ^cNepal (1985b). ^dThapa and Retherford (1982).

Table 1 shows that major economic and social indicators show advance in the last 40 years. Access to schooling has expanded. The infant mortality rate has fallen.

Yet the country fares poorly by contemporary international standards. Nepal has a low Gross Domestic Product (GDP) and financial capacity (Nepal 1988; World Bank 1989), a low adult literacy rate and a high infant-mortality rate (Thapa and Retherford 1982; UNICEF 1990). Part of the reason for the poor performance may be low levels of investment by the Government in the health and education sectors (Banister and Thapa 1981): indeed, Nepal has the third lowest expenditure per primary-school pupil (US\$13.30).

In addition, there are within-country regional and urban-rural differentials in educational and health services and demographic and health outcomes. Government intervention and aid have not been uniform throughout the country. The western and mountainous areas have traditionally received proportionately less government assistance, while the central, eastern hill, and Terai⁷ areas have received proportionately more; infrastructural development, including construction of roads suitable for motor vehicles, has been greater in these areas as well. The urban centres have been indisputably the best served in the last 40 years. This is reflected in the regional and urban-rural differentials for rates of infant mortality. The 1981 census shows that the infant mortality rate is highest in the mountain region (185) and lowest in the Terai region (123) (Thapa and Retherford 1982). Similarly, analysis of the

⁷ The Terai is a flat lowland belt along the southern border of Nepal.

Demographic Survey Sample data shows that in 1977–78 the urban infant-mortality rate was 67 but the rural was 105 (Nepal 1981b).

Table 2
Nepal: selected reproductive and mortality variables by level of maternal schooling (years)

	Women's schooling levels				
	None	1–5	6–8	9–10	11+
Reproductive variables					
CEB (mothers 15–49) ^a	2.5	1.2	1.0	0.7	0.5
Current contraceptive use ^b (%)	5.7	16.1	16.6	25.7	35.6
Mortality variables: ^c probability of dying in					
Infancy (< 1 year)	143 (168)	91 (77) ^d	...
Childhood (1–4 years)	35 (144)	29 (70) ^d	...

Notes

^a Census (1971) cited in Tuladhar et al. (1977).

^b Nepal (1981a)

^c Nepal Fertility Survey data (1976) cited in Gubhaju (1991). Figures are for urban areas only. Figures in parentheses are number of live births for ${}_0q_1$ and number of children that survived to age one year for ${}_4q_1$.

^d Figures are for women with some education.

Table 2 shows that even as early as the 1970s, when data for most of the above studies were collected, the schooling of women was a predictor of key demographic variables in Nepal. Average parity was lowest among those women with the most schooling, although as Tuladhar, Gubhaju and Stoeckel (1977) warn, since it was not possible to control for relevant variables, such as age and duration of marriage, the finding should be treated with extreme caution. Expressive of a lifestyle more attuned to modern ways, current contraceptive use is also highest among those with higher schooling.

Gubhaju's (1991) analysis of the demographic and socioeconomic differentials in infant and child mortality in the Nepal Fertility Survey (part of the World Fertility Survey) is the most pertinent to the present investigation. Among the many variables explored, urban-rural and physiographic zone differentials were significant. Education of mother and father were significant predictors of infant and child mortality in urban contexts (see Table 2 for the influence of maternal education). In the rural areas, father's education had a significant influence on both infant and child mortality while mother's education was a predictor only of child mortality. While claiming that the results are generally consistent with findings from other parts of the world, Gubhaju (1991) believes that a more thorough understanding of the impact of schooling would require a larger sample size, allowing the variable to be categorized into finer divisions rather than merely dichotomized.

Several other studies exploring broader demographic processes have found maternal schooling to be a significant predictor of various other reproductive and health behaviours and outcomes, including use of family planning (Karki 1985; Schuler and Goldstein 1985) and modern medical services (Subedi 1989).

These and other findings presented in this paper that show associations between maternal schooling and demographic indicators make Nepal an appropriate place for studying the intervening variables. In addition, since relationships of maternal schooling to behavioural change are expected to

be stronger over time when demographic and educational transitions are more advanced, as in Latin America, it is also a suitable place for prospective studies, which are best suited for explicating complex processes such as these.

The study setting and subjects

The rural community of Godavari has a population of around 6,000 and an area of about ten square miles, and is situated about nine miles south-east of the Kathmandu Valley in east-central Nepal. It is located in the southern area of the Mahabharat hills. At approximately 5,000 feet above sea level, its climate is pleasant with temperatures ranging between 0° Celsius in the winter and 36° Celsius in the summer, and it rains heavily during the monsoon, which occurs between June and August.

The area is hilly with streams running down the surrounding forested slopes. The valley between the hills is very fertile and is used for rice, wheat, and corn cultivation at different times of the year. The cultivation of three primary crops annually is made possible by the fertile soil and the area's well-developed irrigation works.

Godavari is connected to Kathmandu by a regular bus service on a paved highway. Major modern features of the area include a botanical garden (frequented by city dwellers and foreign tourists), an apiary, a beer factory, a marble quarry, a bank, several primary schools and a high school, a health post, and some general stores. Most homes have electricity and transistor radios.

Both qualitative and quantitative data were collected. The study was conducted in three parts. The first took the form of a village-wide survey of 1,144 households in order to obtain an overall socioeconomic picture of the community and select samples of mothers according to the ages of their children. The sample population was thus divided into two groups: one of 156 mothers of children between five months and 36 months; and the second, a sub-group of the first, of 74 families with children younger than 15 months.⁸ Interviews were administered to the large sample (n=156) about various aspects of their lives, particularly health. Finally, the small sample (n=74) was subjected to literacy and language tests; time-allocation data were collected over one full year, mother-infant interaction was observed, and anthropometric measurements of children were taken.⁹ In addition, ethnographic information about Godavari villagers was collected in order to contextualize the findings of the quantitative analysis.

Most people in the area are Brahmins and Chettris (653 out of 1,144 households or 57 per cent). These families generally cultivate their own plots of land. The lower-caste families, including those of other ethnic groups (e.g. Tamangs), are generally poorer, have less education, and work as labourers in the local quarry and the beer factory. Our data from the village support Borgstrom's (1980) claim about the socioeconomic superiority of the Brahmins and Chettris of the area.

Figure 2 **Caste differentials in education, landholding, monthly income and presence of toilet**

⁸ Selected in order to conduct age-sensitive mother-child observations.

⁹ These instruments are briefly outlined in the text: for detailed descriptions, see Joshi (in preparation).

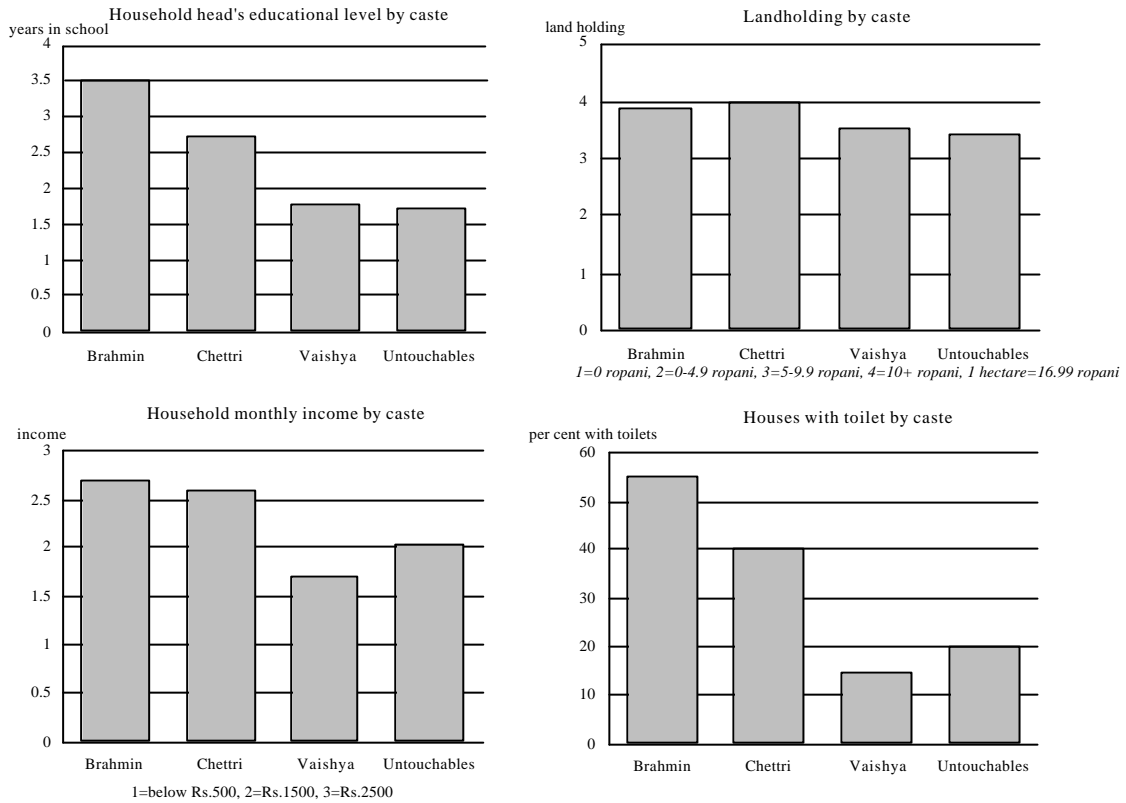


Figure 2 clearly shows, for example, that the Brahmins and Chettris perform significantly better than other groups in a number of important socioeconomic dimensions. In order to include an adequate number of women with schooling in our sample, mother-child dyads were selected exclusively from these two groups.

As Nepali-speaking patrilineal Hindus, Brahmins and Chettris live in joint families, organized by an age-sex hierarchy in which young women occupy the lowest rung. Relatively homogeneous, the Brahmins and Chettris of Godavari have a lifestyle characteristic of Nepali-speaking hill communities as described by Borgstrom (1980) and Bennett (1981, 1983). Indeed, they share some basic socio-cultural features with the larger rural populations of North India, particularly with regard to women's roles and the care of children. Thus, the results of this study are expected to provide findings of more than local significance.

Some of the basic socioeconomic and demographic characteristics of the subjects in the two sub-samples are presented in Table 3.

Table 3
Godavari: socioeconomic and demographic characteristics

Variables	Large sample (n=156)			Small sample (n=74)		
	mean	s.d.	range	mean	s.d.	range

Maternal age	25.1	4.6	16–38	24.6	3.9	16–35
Years of schooling	1.9	3.2	0–14	1.4	2.9	0–12
Husband's schooling	8.1	3.4	0–14	8.0	2.8	0–14
Age at marriage	17.0	3.3	7–30	16.9	3.0	10–30
Children ever born	2.6	1.6	1–9	2.4	1.5	1–9

The mean age of the mothers was about 25 years, with a range between 16 and 38 years. This is then the 'younger' cohort of daughters-in-law who are still bearing children. The mean age at marriage was about 17 years, or about two years higher than the age estimated by the WFS data for the Brahmin-Chettri group in 1976 (Tuladhar 1985). The rise may be attributed to, among other cultural factors, the influence of modern values and the spread of schooling in the last decade and a half. The average number of children ever born was 2.6 for the larger sample and 2.4 for the smaller, with a range between one and nine children. This figure is close to the 1971 national mean of 2.2 children for women aged 25–29 years (Tuladhar et al. 1977).

In terms of education, the mean number of years of schooling was 1.9 years for the larger sample and 1.4 years for the smaller sample; two mothers held college degrees. Since mass schooling started in Nepal only in the mid-1960s, these mothers were among the first rural women to receive formal education. The low average is caused by the subjects having no schooling at all. In the smaller sample, only 23 women out of 74 subjects had been to school. Similar to the Indian rural scene in the 1950s (Mandelbaum 1970), parents were sceptical about the effect of schooling on their daughters, and especially on their marriage prospects; daughters had to work in the house, supporting their mothers and learning the management of the household for the future.¹⁰

Husbands, on the other hand, had an average of eight years of schooling. Such attainment of higher education levels may be attributed largely to the early history of schooling in Godavari.¹¹

Fewer than five per cent of the sample mothers were employed outside their homes. There is a strong cultural pattern among the Brahmins and Chettris in Godavari which constrains women from working outside their homes unless it is absolutely necessary (Bennett 1981). There is a great need for domestic labour and the rate of outside employment reflects this demand.

Most husbands, on the other hand, were employed outside their homes. About 62 per cent were employed as 'office-workers',¹² 23 per cent as labourers in the local beer factory and marble quarry and the rest (15%) were 'non-employed' (worked only in their own fields). The proportion of men who were employed has increased in Godavari from only 60 per cent in the 1970s (Borgstrom 1980) to 85 per cent in the late 1980s. It is worth noting that even those who are employed frequently take time off to work their fields.

¹⁰ The low mean number of years of maternal schooling and the distribution of the variable may represent to some a problematic issue for statistical analyses because the variance may be seen as arising from only those who have been to school (i.e. in the smaller sample, variation in the variable is only found in the 23 cases of schooled mothers). However, the argument may just as well be that the results we get with this variable is a 'suppressed' one and is expected to be strengthened as more women attend schools.

¹¹ Several members of the local elites (primarily Brahmin and Chettri politicians) founded the Kitini school in 1947 and persuaded the people of the village to enroll their children. It is important to note, however, that the gender gap in schooling like this one is typical of South Asia.

¹² Mainly in the city, as peons and messengers.

The findings: the link between schooling and behavioural change

Before presenting the results of the analyses, mother's schooling must be delineated as a variable and the control variables must be identified.

Maternal schooling

Mother's schooling was measured in terms of the number of years a woman had attended school. Although few subjects had any schooling (about 35 per cent of both the large and small samples), the variable was kept 'continuous' for most analyses. The distribution of the variable has been presented in Table 3.

It is generally necessary to distinguish between the highest grade level achieved and the number of years of schooling. Nevertheless, only one mother in the sample had repeated a grade. Apparently, in a social environment that does not encourage the education of women, those who failed were rarely given a second chance.

In order not to confound the cognitive, attitudinal, and behavioural impacts of schooling with the influence of literacy,¹³ it was necessary to identify and re-classify those women who had learned to read and write without formal schooling. Six women who claimed initially that they were literate failed a decoding test¹⁴, thereby placing them in the illiterate category.

Control variables

Before exploring the links between maternal schooling and child health, it is necessary to establish the 'direct' (that is, not a proxy for other socioeconomic variables) relationship between maternal schooling and specific health behaviours. In order to establish such an impact, analyses must control for variables judged *a priori* to be relevant. Maternal age, socioeconomic variables and parents' education are especially pertinent to our study. Maternal age needs to be considered because, given the slow spread, and acceptance by parents, of mass schooling for Nepalese girls, younger women are more likely to have attended school than older women. Socioeconomic variables, comprising socioeconomic status, husband's education (level of schooling), and husband's occupational and employment status are important controls because they are generally correlated with maternal schooling, more educated women having been shown to be married to more educated and richer husbands; and because they have been shown to be powerful predictors of child survival (Mosley and Chen 1984).

Socioeconomic status was quantified by aggregating the following: *khet* or 'lowland'; number of cows, buffaloes, goats, and sheep, oxen, and dogs (an indicator of wealth because it shows first, that the owners are able to feed them, and secondly, that they are being kept as protectors of property); radio and television; and presence of toilet. These attributes and possessions were claimed by informants, and suggested by our own understanding of the area's economy to have a bearing on the socioeconomic status of villagers. Husband's occupational and employment status was categorized as working in 'official' positions in the city (these are the most educated, are most 'exposed' to modern ways, and usually have the highest income); not working outside their homes or fields through lack of education or because they own more property (these have less exposure and lower income); and working as a 'labourer' in the local beer factory and marble quarry for minimal wages (these are least educated, least 'exposed' and have the lowest income).

¹³ In a literate society like Nepal, there have always been people who know how to read and write, knowledge that has been transferred by family members within the household. If there were enough women who could read without having attended school, we could directly disentangle schooling from literacy effects. In our sample, this was not possible.

¹⁴ The ability automatically to recognize letters and words.

Parents' educational status is the sponsorship or background variable. Behrman and Wolfe (1987) for example have suggested that background characteristics such as parents' education must be included in analyses such as these because education may simply be a proxy for experience and health-related skills acquired during childhood from more 'exposed' and educated parents. In Godavari, where none of the parents of sample mothers had been to formal schools, simple 'literacy' (that is, literacy without schooling) is used as a background variable. Parents' education was calculated by summing the scores of each parent (0 unable to read and write; 1 able to read and write). The range for the variable was therefore between 0 (both parents illiterate) and 2 (both parents literate).

Table 4
Godavari: correlations between maternal schooling and socioeconomic variables

Variables	Pearson correlation coefficient	N
Maternal age	-0.20 ^a	156
Husband's schooling	0.47 ^c	156
Husband's occupation status	-0.08	70
Household's socioeconomic status	-0.005	74
Parents' literacy	-0.04	156

Note: ^ap<0.05 ^bp<0.01 ^cp<0.001

Table 4 shows that maternal schooling is correlated with age and husband's education but not with husband's occupational status (education of husbands is not yet associated with higher occupation-income levels), socioeconomic status of household (girls with schooling do not necessarily marry into wealthier households) or parental education.

All these variables will be used as controls in later analyses involving maternal schooling. Even though no significant association is evident between maternal schooling and household socioeconomic status, husband's employment, or parental education, they will continue to be treated as controls in order to arrive at a more accurate estimate of the impact of schooling.

The associations between maternal schooling and behaviours reflecting use of medical services and household child-care patterns are examined in the next set of tables. While these associations are in themselves interesting, they form the basis for the more fundamental question of why women with schooling behave as they do.

Use of medical services¹⁵

Use of modern health-care services is associated with reduced rates of mortality in the developing world (Cleland 1989). It has been shown, for example, that with increased schooling parents are more likely to bring sick children to health services, to follow suggested treatments properly and sufficiently long, and to report back to the health service when illness persists (Caldwell 1986).

Table 5 displays the results of logistic regressions of maternal schooling on prenatal care and hospital delivery during the last pregnancy for the larger sample. These analyses demonstrate the use of modern health-care services by the mothers of Godavari.

¹⁵ All further analyses involving mother's schooling will control for mother's age, husband's schooling, husband's occupational status, household's socioeconomic status, and parental literacy.

Fifty-two per cent of women received prenatal care during their last pregnancy. Godavari has one government-operated rotating health clinic that comes to two locations within the village on a weekly basis. One health assistant and two nurse practitioners recommend dietary measures and family planning, perform examinations and prescribe medications. Regression analysis shows that schooling was a significant predictor of prenatal care; thus, although antenatal care is freely available in the village, women with some schooling use it more than women with no schooling.

Only 30 per cent of all deliveries occur in a hospital. Nevertheless, this is a much higher rate than in the more remote areas of the country where most deliveries occur at home (JICA 1987). The nearest hospital from Godavari is the Patan hospital, about five miles distant on the main road to Kathmandu. Most of the hospital deliveries take place there or in the maternity hospital in Kathmandu. Going into town for a hospital delivery is clearly more difficult¹⁶ than making a prenatal visit to the clinic in the village. Yet the result shows that schooling continues to have an impact even under such complicated circumstances.¹⁷

Schooling is also positively correlated with current contraceptive use ($r=0.14$, $p<0.08$; although not significant at the 0.05 level) and negatively correlated with the duration of breastfeeding ($r=-0.49$, $p<0.001$). All of these associations are consistent with modern 'medicalized' patterns of behaviour (Caldwell 1986; LeVine et al. 1991) that are characteristic of women with schooling in different parts of the world, and involve a transformation of behaviour from more traditional to modern patterns of prevention and treatment.

¹⁶ In terms of the mothers and others in the household having to organize the extended trip.

¹⁷ Parental literacy is also a significant predictor of hospital delivery, showing that early experience (in an 'educated' household) also may influence the manner in which these health decisions are made later in life. Understandably, once controlled for other variables, household socioeconomic status is also a significant predictor. A detailed exploration of these variables and their association with maternal schooling is being explored elsewhere (Joshi, in preparation).

Table 5
Fitted logistic regression models predicting the probability that during her last pregnancy a woman had prenatal care (N=156), and that she delivered in hospital (N=151)

Intercept	Schooling	Age	Husband's school.	Husband's employ.	Socio-econ. status	Parents' literacy	Chi square	Differ. in df from model without predict.	Reduct. in Chi sq. from model without predict.
Prenatal care									
Intercept only							211.9		
0.03 (0.19)	0.21 ^c (0.06)						197.3 ^c	1	0.07
-0.33 (1.01)	0.21 ^c (0.06)	0.001 (0.04)					197.3 ^c	2	0.07
-0.82 (0.45)	0.17 ^c (0.22)		0.07 (0.06)				193.2 ^c	2	0.09
-0.66 (0.60)	0.21 ^c (0.06)			0.20 (0.29)			195.8 ^c	2	0.08
-0.80 (0.37)	0.21 ^c (0.06)				0.10 (0.06)		194.6 ^c	2	0.08
-0.74 (0.36)	0.19 ^c (0.06)					0.38 (0.29)	168.9 ^c	2	0.20
-2.24 (1.45)	0.17 ^b (0.07)	0.02 (0.04)	0.06 (0.06)	0.13 (0.31)	0.08 (0.07)	0.37 (0.30)	165.32 ^c	6	0.22
Hospital delivery									
Intercept only							185.7		
-1.32 (0.22)	0.24 ^c (0.06)						166.9 ^c	1	0.10
-1.62 (1.15)	0.24 ^c (0.06)	0.01 (0.04)					166.8 ^c	2	0.10
-1.45 (0.51)	0.22 ^a (0.06)		0.02 (0.06)				165.9 ^c	2	0.11
-2.06 (0.69)	0.23 ^c (0.06)			0.39 (0.33)			165.0 ^c	2	0.11
-1.91 (0.37)	0.29 ^c (0.07)				0.12 (0.06)		164.1 ^c	2	0.12
-2.74 (0.53)	0.35 ^c (0.09)					1.2 ^c (0.38)	128.90 ^c	2	0.30
-5.70 (1.86)	0.17 ^b (0.07)	0.47 (0.05)	-0.06 (0.07)	0.52 (0.38)	0.19 ^a (0.08)	1.43 ^c (0.41)	119.90 ^c	6	0.35

Note: ^ap<0.001 ^bp<0.01 ^cp<0.05

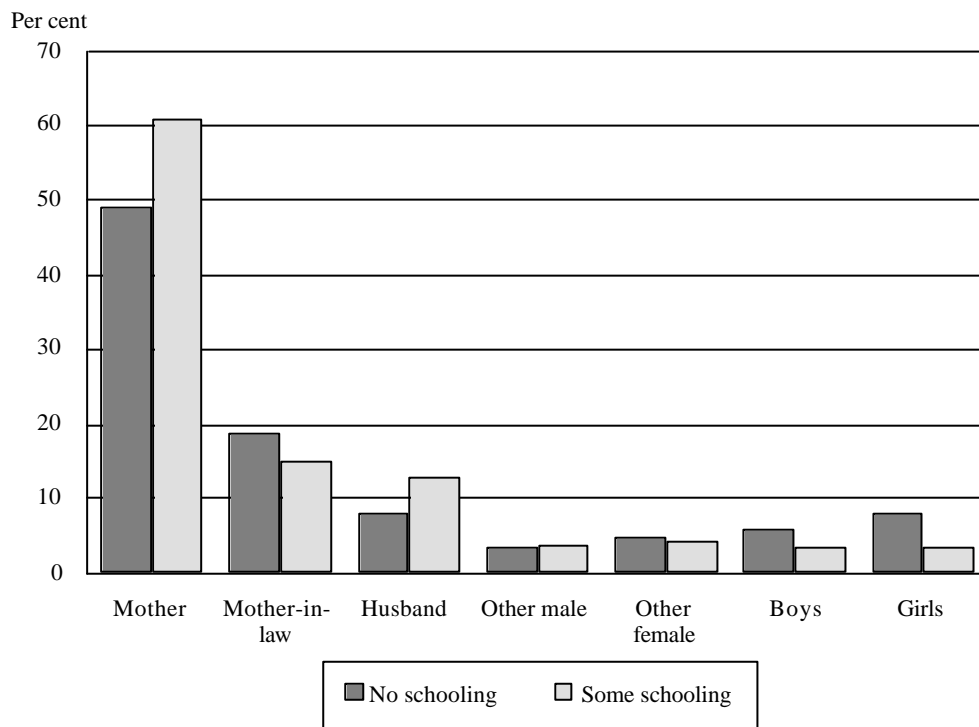
Household child care

Household behaviour patterns have also been shown to affect children's health. It has been found, for example, that 'education inculcates a greater sense of personal responsibility for, and control over the

welfare of children' (Cleland and van Ginneken 1988:1363). Figure 3 presents results concerning mothers' and household members' allocation of time on child care. These are based on one-year observational data obtained by applying Gross's (1984) spot observation method to a subgroup (N=74).¹⁸

For spot observations, 'caretaker' was defined as anyone who was 'responsible for or responsibly occupied' with the sample child at the moment of observation. Some of the frequently noted activities of caretakers included holding, carrying, playing, feeding, putting to sleep, washing, changing, talking, oiling, or simply 'looking after' while the child played or slept.

Figure 3
Time allocated to child care (April 1989 – March 1990)



In households where mothers had no schooling about 49 per cent of child-care time is spent by the mother;¹⁹ slightly more than half the remaining time is distributed among others in the household, including a large portion being handled by the mother-in-law (20%) and younger girls in the house (10%). In households where mothers had some schooling, however, over 60 per cent of child care is handled by the mother, and less than 40 per cent managed by others. It is interesting to note that

¹⁸ In order not to confound the results by the presence of other women with schooling, households with the subjects without schooling contained no other women with schooling. The educational level of mothers was treated dichotomously in this analysis in order to be able to present the findings more meaningfully.

¹⁹ The number of household members, a critical determinant of time allocation, was virtually the same when the mother had no schooling (6.31) and when she had some schooling (6.35).

husbands in the latter households do more child care (12%) than husbands in the former ones (9%). The difference between the time spent on child care by women with and without schooling is statistically significant (ANOVA: $p=0.0001$, $R^2=0.18$).

As in most other parts of Hindu Nepal and India, children in Godavari are born into a complex extended family. Although the child's natural mother is the primary caretaker, others in the house take a greater share of the responsibility for child care as the child grows older (Seymour 1976). Strong emotional bonds with the child are created and maintained by the elders in order to thwart the dissolution of the family structure that is often believed to be initiated by young mothers (Madan 1965; Bennett 1983). One possible explanation of the time-allocation data is that mothers with schooling may be reorganizing child-care patterns to 'reclaim' their child from collective ownership by the household.²⁰

Without a corresponding change in the quality of time spent on child care, the change in the amount of time spent on child care may have little impact on child health. Cleanliness of the child was used as a variable to assess the quality of care, a medical doctor having assessed the cleanliness of the 74 children brought by their mothers to the clinic.²¹

Results demonstrate that mothers with some schooling had children who were both cleaner and better dressed than those of mothers without schooling ($r=0.47$, $p=0.0001$). This suggests that schooling may be associated with greater (personal) maternal responsibility (Caldwell 1989) and a more intense pattern of child care involving more energy, attention or time (LeVine et al. 1991).

These results suggest a direct association between maternal schooling and use of health services and household health behaviour patterns, even after controlling for the relevant variables. As stated earlier, these results are confirmed by other studies. What is still not understood, however, are the actual mechanisms through which such behavioural changes occur. This is the focus of the present investigation.

The mechanisms²²

Skills acquisition

One of the hypotheses concerning changes in health behaviour is that schooling gives women skills and subsequently knowledge that make it easier to use health-care messages and health-care services more efficiently (Cleland and van Ginneken 1988; LeVine et al. 1991).

In order to investigate this skills acquisition hypothesis, some tests were administered to subjects in a quiet room, away from their homes. Three skills were examined.

Ability to read and comprehend written passages: One absolutely distinguishing feature of schooling is the 'children's encounters with text or their preparations for those encounters' (Olsen 1977:76). Literacy (reading and writing skills), is therefore, not only a primary goal of schooling, but essential for the achievement of all other educational goals, primarily knowledge acquisition (Gagne 1977).

²⁰ However, this is not to imply that women with schooling simply acquire and use more power within the household. While they certainly claim more informal power, they must continue to abide by the norms governing interaction patterns inside and outside the household (Bennett 1983).

²¹ The doctor, who was specifically hired for the purpose of the study, was unaware of the educational level of the mothers and assigned scores to children based on cleanliness of the clothes, body, face, and hair. The doctor also rated the mothers at the same time. The mothers were asked to come with their child to have him or her checked by the doctor. Nothing concerning cleanliness assessment was mentioned to them.

²² Unless otherwise indicated, all following analyses are based on the subgroup of 74 cases.

Dr. Patricia Velasco, a reading specialist trained at Harvard, developed the literacy test that was administered to women who had been to school. The resulting measure was based on Chall's (1983) model of reading development which treats reading development as a series of six stages. Each woman with some schooling was asked to read a simple passage from a first-grade textbook to test her ability to decode words, the ability to decode or associate letters with words being the first stage in the development of literacy. A failure to decode was defined as illiteracy. Those who passed the decoding test were asked to read a series of progressively more difficult passages from higher grades. After reading each passage, they were asked to describe what they understood and their response was coded into 'idea units.' Comprehension of at least half of the idea units contained in the text allowed passage to the next grade level. This process was repeated until the subject reached a level at which she understood less than half of the idea units contained in the passage. The highest grade level passed (with half the idea units understood) was judged to be the assessed reading level.

Ability to listen and comprehend: The ability to understand audio information needs to be studied because it is associated with both reading skills and the ability to assimilate information presented verbally by doctors and social workers (P. Velasco, personal communication). In addition, such information is also often broadcast by radio.

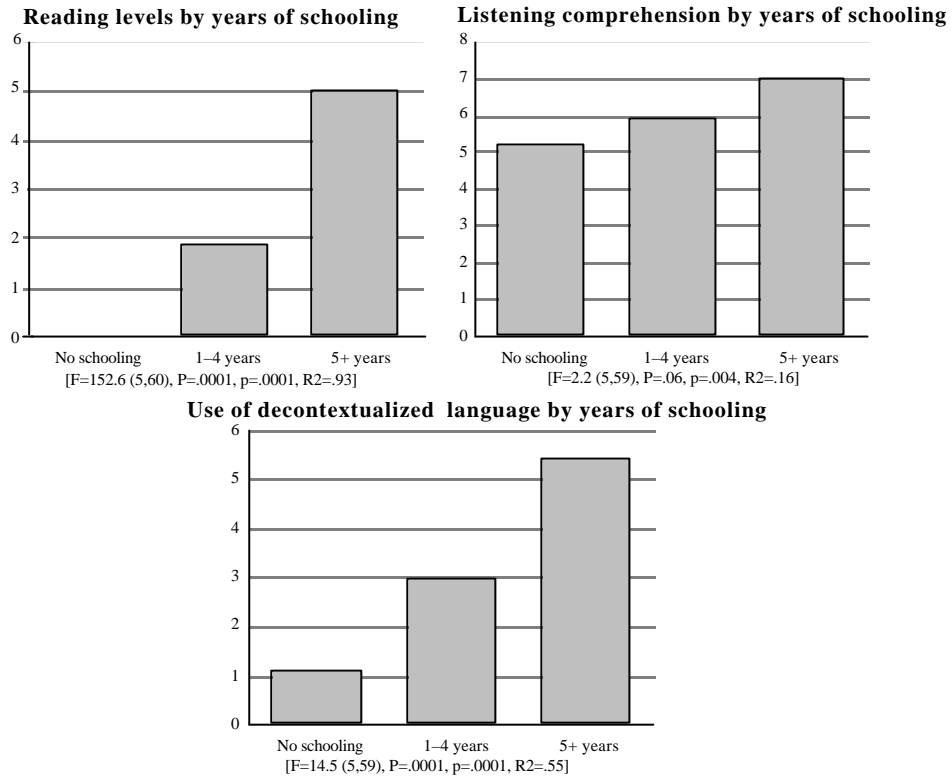
In our study, three radio advertisements concerning health-related topics, for example oral-rehydration therapy, were played to each mother, and she was then asked what she understood the advertisements to mean. The cumulative total number of idea units presented for all three advertisements made up the variable.

Ability to use decontextualized language: To acquire knowledge and to participate competently in classrooms in childhood and in organized bureaucracy in adulthood requires highly specialized uses of language. It has been claimed that schooling provides the instrument for the development of these skills (Olsen 1977). For example, it has been shown that schools use the 'language of formalized written prose' and are 'committed to the logical uses of language' (Olsen 1977:76). It has also been argued that schooling 'consists largely of training in decontextualized language use' (Snow 1983:183). Decontextualized language use (as opposed to contextualized language use) is characterized by an increasing freedom from physical-interactive and historical context with an ability to listen to, comprehend, and discuss the remote and the abstract (Snow 1983). The skill warrants attention here as it might provide a link between maternal schooling and the use of health-care services (LeVine et al. 1991). Perhaps fluency in decontextualized language would create a capacity to converse effectively in a range of settings, including clinics and other bureaucratic contexts.

In this study, the use of decontextualized language was measured through the ability to define nouns (Snow 1990). Ten common nouns (such as thief, dog, car) were presented to subjects, and they were asked to define each in turn to someone 'who doesn't know what the word means'. Definitions were coded in terms of whether they presented a contextualized (informal) definition—for example, many defined *dal* (a type of lentil soup) as *dal* and nothing more, assuming that the test administrator shared relevant background knowledge and therefore did not need to be told what it was—or a decontextualized (formal) definition—for example, one mother explained that *dal* was a type of proteinous 'soup' (a superordinate category) that is eaten with rice, assuming ignorance on the part of the administrator. The formal definitions were summed to create the variable for analysis.²³

²³ Even though the coding procedures for the skill variables listed above were fairly straightforward, the following measures were taken for reliability: (a) one Nepali coder (a Harvard undergraduate) was trained to do the coding: numerous example data sets were coded until the coder understood the nuances; and (b) since all data was taperecorded, the coder replayed and closely scrutinized problematic data before coding them.

Figure 4



The results summarized in Figure 4 show that schooling is a significant predictor of reading comprehension, listening comprehension, and the use of decontextualized language. There is little reading material in Godavari except for scraps of newspapers that men bring from their work in the city, and children’s textbooks; and women rarely have the time to read. These results show that even under these circumstances, women do not lose their reading-comprehension skills, although most read at a grade level that is one lower than the grade they had passed.

The findings also indicate that women with some schooling are better able to absorb information presented aurally. This is an important finding for those communicating health messages to rural populations. The fact that women who have been to school listen to and comprehend more of the messages than other women supports the ‘knowledge-gap’ hypothesis in the field of communication that posits that prior knowledge of the topic and higher-educational levels facilitate the assimilation of new knowledge of related topics (Donohue, Tichenor and Olien 1975). Similarly, schooling seems to facilitate the use of decontextualized language, confirming prior studies (Tapia-Uribe 1989).

As mentioned in the theoretical section, there are two possible links between these skills and the health behaviour of mothers. The first is knowledge acquisition. Reading and listening comprehension skills could help construct a knowledge base that could guide behaviour. The ability of educated women to absorb more information concerning the ‘outside’ world (that is, outside the village) was measured. This was done by asking them the name of the King of Nepal. During the time of the study,

the King's name was mentioned frequently on the radio and was a common topic of discussion. A categorical analysis showed that the odds of knowing the King's name was 4.8 times greater for those with schooling than those without schooling ($\chi^2=18.74$, $df=2$, $P<0.001$). Again, this facility with information among women with some schooling has been demonstrated by earlier studies (Bhuiya, Streatfield and Meyer 1990; LeVine et al. 1991).

The second link is context familiarity. The use of decontextualized language skills may confer a 'context-familiarity'. In other words, this competency probably allows women to feel more comfortable, efficient, and confident in modern bureaucratic settings (including hospitals, clinics, and pharmacies) where both written and aural messages are routinely given in decontextualized types of conversations (LeVine et al. 1991).

In order to test this 'context-familiarity' hypothesis, mothers were assessed on their ability to discuss their child's health with a doctor. Two variables were used. The first was an objective measure of the 'fluency' or 'efficiency' of the mother's report to the doctor about the health of her child. The fluency was assessed by dividing the number of idea units presented in the first minute and a half of conversation with the doctor by the number of prompts the doctor had to use in the same time. The assumption was that an efficient mother would be able to present more idea units per prompt while an inefficient mother would require more prompts from the doctor.

The second was a more subjective measure, whereby the doctor judged the mother's 'confidence in speech' (without prior knowledge of her educational level) as she spoke about her child's health. At the end of each conversation, the doctor rated the mother for confidence, overall 'urgency', and total communicative adequacy. All of these were added to develop an aggregate measure ranging in value from three to 15.

Table 6 shows that mothers with higher decontextualized language scores were indeed more 'efficient' in conversing with the doctor. This may be the 'efficiency' that allows women who have been to school to be 'self-sufficient' and 'brave and smart' (Lindenbaum et al. 1989). The result also supports the demonstration that schooling provides 'habits...essential for participation in a modern economy' (Mechanic 1992:52). These results indicate that the schooling effect observed in these studies may be mediated by school-acquired skills.

In addition, these skills also contribute to a compatible and more subtle doctor-patient relationship. Studies have shown that literate patients receive better treatment at government hospitals and health centres (Maclean 1974). One of the best examples of the 'provider's' inability to cater to the uneducated and those of lower socioeconomic status is a Nepalese experiment that found that the type of 'care' provided by family-planning clinic staff depended on the client's socioeconomic status (Schuler and Goldstein 1985). It was found that the clinic staff had a low estimation of the intelligence of uneducated clients; these clients were correspondingly submissive, and had a difficult time describing the clinic experience to the researchers.²⁴

Table 6
Correlations between noun definitions and 'context familiarity' indicators (N=74)

Variable	Pearson correlation coefficient
Fluency of conversation with doctor	0.46 ^c

²⁴ The experiment was conducted with simulated clients.

Doctor's assessment of confidence

0.42^c

 Note: ^ap<0.001 ^bp<0.01 ^cp<0.05

In our study, the fact that the doctor found more confidence in mothers who had been to school points to the type of rapport established. The 'harsh' experience Antonovsky (1980) described for the lower class as they tried to make use of Western health-care services may reflect the experience of women without schooling when they attempt to use health services in developing societies, an experience that is overwhelming and bewildering, alien and frightening. Women who have not gone to school are unfamiliar with the subtle verbal and non-verbal 'scripts' guiding behaviour in medical settings, and are probably similarly bewildered and therefore unable to make adequate use of health services.

Schooling thus seems to impart skills of basic literacy, listening comprehension, and decontextualized language use that are carried into adulthood and continue to influence, probably 'without conscious intent' (Cleland and van Ginneken 1988:1364) not only the amount of information but the type of services people feel comfortable and confident in using.

Identity acquisition

Schools have been shown to afford experiences structured by sanctions, rules, constraints, and methods of emotional expression that implicitly teach students the principles of independence (working independently and taking responsibility for their own actions), achievement (accepting the premise that to succeed it is necessary to perform one's tasks as well as one can), universalism (cooperating with others for specific tasks) and specificity (knowledge of and ability to interact with others and the particular roles they play) (Dreeben 1968). The learning of such subtle 'norms,' primarily in interaction with teachers, seems to furnish them with an identity different from that of people in the village who have not been to school. It has also been shown that such socialization patterns not only affect the social meanings of schooling and the status aspirations of pupils, but also modify consumption patterns and tastes (Bourdieu 1984).

Given the above, two prevailing models are explored.

The first is the sociologically oriented hypothesis according to which education 'induces a cluster of prestigious behaviours and attitudes' (Lindenbaum 1990:425).²⁵ The attainment of better health, by this model, is primarily an effect of cleanliness and other such 'modern' behaviour patterns. Lindenbaum claims that:

Educated women follow hygienic behaviours associated with the social standing of prestigious people. They keep their children, children's clothing and food free from dirt and contamination, and observe *bhadra lok* codes of personal behaviour; they refrain, for instance, from spitting inside houses, wipe mucus from their children's faces, and bathe in 'private' waters (Lindenbaum et al. 1989:125).

In order to test this hypothesis, the following questions were asked: are women with schooling neater and cleaner in their dress and overall appearance?²⁶ Do they 'carry' themselves differently from

²⁵ Identity acquisition through this perspective is essentially an adult phenomenon that reflects and supports the cultural capital school of sociology (Bourdieu 1984).

²⁶ The doctor without knowledge of the educational level of the mothers, rated their general facial appearance and overall cleanliness.

women without schooling?²⁷ These questions were specifically asked to investigate the changing aspects of their social identity in the village context. The detailed ethnographic data analysis of these changes is presented elsewhere (Joshi, in preparation).

Table 7 shows that women with schooling were rated by the doctor as being cleaner than women without schooling.²⁸ In the village, women with schooling were considered to wear their clothes *milaera*, that is, in a way that reflected some degree of 'modern sophistication'. Some informants mentioned that women with schooling do not necessarily wear new clothing; after all, they cannot afford it any more than the other high-caste villagers. The difference, they thought, lay more in the fact that they wore cleaner clothing, and the result above reflects the informants' judgement.

It also transpired that women with schooling carried themselves differently from women without schooling. The measure used was the way they sat on a chair: sitting *uper khutti* shows that they 'identified with' and felt more 'comfortable' on the chair than the women without schooling. In addition, most informants mentioned that women with schooling had a certain *lachkai* (sway) in their walk that lacked shyness. Our informants could easily tell whether women had been to school just by watching them walk. Overall, results suggest that women with schooling internalize a more 'modern' style of presenting themselves.

Table 7
Correlations between schooling and the 'identity' variables (N=74)

Variable	Pearson correlation coefficient
Maternal appearance	0.66 ^c
Maternal style of sitting	0.65 ^c

Note: ^ap<0.001 ^bp<0.01 ^cp<0.05

The second developmentally informed hypothesis posits that women with schooling learn to identify with the role of the teacher, a task that is facilitated by their youth and suggestibility when they attended school. LeVine suggests that the greater verbal responsiveness to their children of Mexican mothers who have been to school is an expression of their 'teaching role' (LeVine et al. 1991; Richman, Miller and LeVine 1992). Conversely, women with schooling may also take on a student role if they are confronted by an opportunity in the outside world to learn something new: examples are learning from health-care workers and the media. Thus from this perspective, better health results from the 'teacher-like' energy, attention and intensive care provided by parents with schooling who are continually absorbing modern messages.

²⁷ When mothers were called in for an extensive interview in the course of the study, the manner in which they sat on the chair was noted. They were divided into those who sat *uper khutti* and those who sat with both legs on the floor. *Uper khutti* is a cross-legged sitting style that is characteristic of Westerners and modern city-dwellers. Chairs are not very common in Godavari but most homes in Godavari do have a few chairs and everyone has had an opportunity to sit on one.

²⁸ No correlation, however, was seen between maternal schooling and the degree of cleanliness of home courtyard, kitchen, and cowshed, probably because many people without schooling lived in these extended households, and were less 'cleanliness driven' than women with schooling.

The hypothesis was tested by observing whether mothers with schooling respond more verbally, like teachers, to their children than mothers without schooling. The variable was generated by observing 74 mother-child pairs during two one-hour episodes, and coding for the proportion of maternal verbal responses to child-initiated acts.²⁹

Regression analysis shows no significant association ($r=-0.03$, $p=0.88$) between schooling and verbal response. The lack of strong association, that runs counter to LeVine et al.'s (1991) Mexican finding, may stem from community disapproval of young women talking a lot; such disapproval is characteristic of the Hindu Brahmin-Chettri society; but not of the Mexican community studied by Le Vine.

Alternatively, the weak association could also be caused by the small number of women with any schooling, the narrow range of school attainment, and the community's being at an early stage of the demographic transition. If the latter explanation were true, it would be expected that the verbal-responsiveness association would strengthen over time.

The findings: education and child health

The results to this point provide evidence of schooling-related changes in behaviour. The question remains of how these changes affect the health of children.

Among the most widely used measures for assessing child health and risks to survival are anthropometric measurements (Martorell and Ho 1984). Their popularity may be attributed to a growing body of evidence that suggests that these measures are 'as dependent on maternal health factors and infections as they are on the nutrient deficiency' (Mosley and Chen 1984:42).

The outcome variables studied are weight for height (body wasting) and height for age (stunting). The first compares the weight of the child to the weight of a reference child³⁰ of the same height. In assessing the adequacy of mass relative to length it bypasses the shortcomings of measuring height or weight for age. The method, however, does not identify those children who are stunted but otherwise well nourished.

Height for age, on the other hand, in which a child's height is compared to that of a reference child of the same age, does not reflect the current nutritional status of the child (as wasting does) but indicates past or chronic malnutrition (Martorell and Ho 1984). Low birth weight and long-term malnutrition are reflected by this variable.

The scores for both variables were calculated for sample children using the National Center for Health Statistics (NCHS) tables.

Given the fact that mothers with schooling were found to be more active seekers of health services, such as prenatal care and hospital delivery, and more competent providers of child care in that they spent more time on child care and were cleaner, a differential in the health status of children across levels of maternal schooling may be anticipated.

Table 8
Maternal schooling and anthropometric scores

	No schooling	0-4 years	5+ years
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²⁹ Reliability of the observations was ensured by having one female Nepali university graduate, who was carefully trained through numerous pilot observations to observe all episodes. Coding was done by the same Nepali student who coded the skill variables with similar reliability checks.

³⁰ Based on the NCHS standard, which is based on the mean weight and height of US children.

Weight/height	mean	91.41	91.29	93.37
	standard deviation	9.15	9.72	6.58
	N	51	13	10
[F=1.59 (6.61), p=0.17; p=0.53, R ² =0.14]				
Height/age	mean	91.63	94.01	97.17
	standard deviation	5.43	6.67	7.27
	N	51	13	10
[F=3.74 (6.61), p=0.003; p=0.01, R ² =0.28]				

Table 8 shows that maternal schooling is a predictor of height for age (stunting) but not weight for height (wasting). The mean height for age rises consistently by levels of schooling (with a significant p value and the variable with the controls explaining 28 per cent of the variance), but no association is evident for weight for height. This indicates that for the children of this community, and during the monsoon, long-term nutritional and health status is affected by maternal schooling, but not short-term growth patterns. These results in a small community are reminiscent of DHS findings in 17 countries that the association between maternal education and stunting is more pronounced in early life than the education-wasting relationship (Bicego and Boerma 1991; Hobcraft 1993).

The anthropometric findings also support results from studies indicating that maternal education is of limited effectiveness in protecting children where extensive sources of infection are present (Mustard 1990). Since our assessments were done during the monsoon (April and May), it may have been difficult even for mothers with schooling to protect their children from diarrhoea and other infections that strike during this season and which directly affect weight for height. Results show that for this period, diarrhoeal episodes over the previous twelve months were not correlated with schooling ($r=0.09$, $p=0.42$); but are almost significantly associated with wasting scores ($r=-0.22$, $p=0.06$). The results for other seasons of the year (for example, during winter) may have shown a different pattern of association between maternal schooling and weight for height. The height-for-age result was expected, given the various types of health-producing behaviours that mothers with schooling were seen to practise, beginning with prenatal care, although it is difficult to specify pathways without better longitudinal data.

Regression results also showed that husband's education was a significant predictor of weight for height ($p=0.05$) and husband's occupation and employment was a significant predictor of height for age ($p=0.05$). None of the other variables (mother's age, the household's socioeconomic status and parental literacy) influenced either outcome. It is plausible that husband's education and occupation might be important, not only because they are connected with modern exposure, knowledge, skills, and income, that affect the proximate determinants, but also because they are characteristics of a responsible adult male in a patriarchal household.³¹

Skills or identity?

Thus far, the influences of school-acquired skills and identity on specific maternal behaviours, like cleanliness and ability to converse effectively with a doctor, have been investigated. It has been shown

³¹ For a detailed discussion of the household issues relevant to this inquiry see Berman, Kendall and Bhattacharya (1989); Das Gupta (1990); Joshi (in preparation).

that the behaviour of women with schooling differed in many important ways from that of their unschooled counterparts. Changes in behaviour were assumed to have been engendered by skills (skills-acquisition hypothesis) or identity (identity-acquisition hypothesis). Yet there is always the possibility that the ascribed influences were spurious. For example, cleanliness behaviour was shown to be predicted by acquired identity, but it might simultaneously be predicted by acquired skills: for example, women with schooling may learn about cleanliness through the radio. The same may be true for other behaviours. The next step in the analysis, therefore, is to try to disassociate the influence of skills and identity.

A truly reliable test of the relative influence of skills and identity would involve creating meaningful 'composite' variables and performing more sophisticated analyses than could be reported in this paper. Such analyses must address difficult issues like multi collinearity which is expected given the nature of the exploration. Here a simpler set of partial correlations, which should reflect the expected trend, is attempted.³²

In order to reduce the number of variables for the analyses, an important consideration given limitations of sample size, three 'principal components' were created: a literacy component, consisting of the ability to define nouns (decontextualized language ability) and the ability to understand radio messages (listening comprehension)³³; an identity component, consisting of maternal appearance and sitting style; and a variable to control for exposure and experience, consisting of maternal age, husband's schooling and employment status, and parental literacy. Socioeconomic status was also used as a control.

Table 9 shows correlation coefficients between schooling and specific maternal behaviours with regular control and composite variables (either literacy or identity variables in addition to the regular controls). The results show that behaviour such as keeping a child clean remains significantly associated with schooling when controlled for literacy, but not when controlled for identity. This suggests that the influence of schooling on this sort of behaviour may be mediated through identity (Lindenbaum et al. 1989; Lindenbaum 1990). On the other hand, health-care utilization behaviour such as talking more effectively with a doctor loses all significance when controlled for literacy, which suggests a link through skills (LeVine et al. 1991).

It thus seems that acquired listening and language skills (literacy variable) and identity (identity variable) may independently influence specific types of behaviour. More studies are needed to increase our understanding of which types of behaviour are influenced by skills and which are influenced by identity. It may then also be possible to determine to what extent skills or identity affect child-health outcomes.

Table 9
Correlations between maternal schooling and health behaviours using literacy and identity as controls

	Child's appearance	Ability to converse with doctor
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³² In this paper it is assumed that any remaining effect of schooling on behaviours, after controlling for skills, is the effect of identity.

³³ Reading was not used as a control because of its very high correlation with schooling.

With regular controls only	0.50 ^c	0.52 ^c
With literacy and regular controls	0.39 ^b	0.18
With identity and regular controls	-0.003	0.47 ^c

Note: ^ap<0.5 ^bp<0.01 ^cp<0.001

Conclusion

The Godavari study has systematically investigated some important hypotheses concerning the links between maternal schooling and behaviour. Schooling provides basic literacy and language skills which are then used in 'modern' health settings. These skills also help women acquire and absorb new information through the media. It is not difficult to see how a widening base of practical knowledge concerning medical situations would give mothers more confidence as well as fluency or competence when interacting with modern health institutions. The acquisition of such skills and knowledge also acts synergistically with a new identity to help create 'psychologically modern' (Mechanic 1992) individuals. Such women identify with the whole modern system, including health centres and recommended treatments (Caldwell, Reddy and Caldwell 1989).

When villagers were asked their overall impression of the difference between educated and uneducated women, most said that they were simply *pharak* or different (identity), that they knew more (*badi aune* or had more knowledge) and that they were more *buddhiman* or intellectually and socially adept (skills). An educated mother has the potential to make use of her school-acquired skills, knowledge and identity. However, under household and familial constraints, such expressions may not always be possible.³⁴

The results presented in this paper demonstrate that school-acquired attributes mediate the impact of formal education on certain health behaviours. While the findings are interesting, they are still incomplete. More studies, especially longitudinal ones, are needed before these findings can be woven into a meaningful theory.

Meanwhile these findings have implications for health and educational policies in developing countries. They suggest, just as have some demographers, the need for rapidly expanding access to schooling for girls as a means to reduce fertility and mortality. They also demonstrate that even where the quality of schools is poor, more subtle 'structural' skills and dispositions are quickly acquired by young girls. Nevertheless, both the level of schooling and its quality are critical for better mastery of skills in childhood and more adaptive health behaviour in adulthood.

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³⁴ As noted earlier, the interaction of the changes brought about by schooling with cultural factors such as female autonomy is being presented elsewhere (Joshi, in preparation).

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Childhood immunization and pregnancy-related services in Guatemala*



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Abstract

In this paper we examine the experience of one poor country, Guatemala, that provided childhood immunization partly through a major national campaign, and provided pregnancy-related services through government health facilities, during the 1980s. Specifically, we compare the breadth of coverage of these two types of services using national sample survey data collected in 1987. We then draw upon results of previous qualitative studies to explore the social, cultural, and organizational factors that may account for differences between the use of immunization and the use of pregnancy-related health services.

Introduction

Child-survival programs, such as those sponsored by WHO, UNICEF, USAID and other international donors, dominated public-health activities in many developing countries during the 1980s. These programs generally focused on a limited number of simple strategies chosen to have the greatest impact on children's health for the lowest cost (Warren 1988; Grant 1993; Pebley 1993). Among the most successful components of these programs has been childhood immunization, administered through both mass campaigns and routine immunization in clinics (Gadomski and Black 1990; de Quadros et al. 1992; Kim-Farley et al. 1992). An important practical advantage of immunization programs, especially campaigns, is that, typically, they are not heavily dependent either on the efficacy of the public-health bureaucracy or on the existence or efficiency of local health facilities. Critics have argued, however, that circumvention of the extant health-care infrastructure is a disadvantage of this approach in the long run, because it diverts attention and funds away from institution-building essential for sustained long-term improvements in health (Habicht and Berman 1980; Rifkin and Walt 1986; Grodos and de Bethune 1988; Newell 1988; Unger 1991).

The success of immunization programs and concern about the limited range of health problems addressed in child-survival programs has led to a growing interest among international agencies and donors in using the experience and skills developed in these programs to tackle other maternal and child health issues (UNICEF 1990; Kim-Farley et al. 1992; Grant 1993). A major example is a new emphasis on improvement of care during pregnancy and childbirth which grew during the 1980s out of a focus on

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women's health (Mahler 1987; Kwast 1991), and increasing evidence of the importance of prenatal care and delivery assistance in affecting the health of both the mother and her child (Institute of Medicine 1985; Grant 1993). For example, the goals of the 1990 World Summit for Children, sponsored by the United Nations and UNICEF, add to the basic child-survival program a new effort to provide 'access to prenatal care, a trained attendant during childbirth and referral facilities for high-risk pregnancies and obstetrical emergencies' to all women (Grant 1993:59).

Aside from obvious differences in the administrative structure, in staff requirements and in cost, the equitable provision of pregnancy-related care in many poor countries is likely to involve operational, social, and cultural issues that are different and more complex than those faced in immunization campaigns and in most other interventions associated with child-survival programs. In this paper we examine the experience of one poor country, Guatemala, that provided childhood immunization partly through a major national campaign, and provided pregnancy-related services through government health facilities, during the 1980s. Specifically, we compare the breadth of coverage of these two types of services using national sample survey data collected in 1987. We then draw upon results of previous qualitative studies to explore the social, cultural, and organizational factors that may account for differences between the use of immunization and the use of pregnancy-related health services.

Childhood immunization and pregnancy-related services

Guatemala is among the poorest countries in Latin America, and has one of the highest mortality rates: the estimated $\text{}_5q_0$ in 1982-87 was 110 (MSPAS/INCAP 1989, Figure 2.1). Infectious and perinatal problems are the primary causes of death for children under age five. Adlakha and Arriaga (1990, Table 2) estimate that, in 1984, infectious and perinatal causes accounted for 37 per cent and 47 per cent of all deaths under the age of one year, and that infections accounted for 72 per cent of deaths to children aged one to four years.¹

Modern vaccination programs run by the Ministry of Public Health and Social Assistance (MSPAS) were begun in the 1970s. In 1971, the Ministry began a program of 'National Vaccination Crusades' directed toward immunizing children under five against measles and polio, during a two-month period, twice a year. However, during the late 1970s and early 1980s, as internal and external resources diminished, the activities of the crusades declined considerably. At the same time, epidemics of polio began to reappear in some of the regions of the country.

Partly in response to renewed polio outbreaks, the Guatemalan government, in collaboration with the Pan American Health Organization (PAHO) and other international agencies, developed an Expanded Program of Immunization in the department of Escuintla in 1983 and extended the program to six more departments in 1984. Shortly after the new civilian government took office in 1986, it decided to undertake a major immunization campaign targeted at children younger than five. The immunization days during 1986—May 17-18, July 5-6, and August 16-17—were chosen to provide three doses each of DPT and (oral) polio vaccine and one dose of measles vaccine. BCG was not a major component of the campaign, but was sometimes provided by campaign posts.

The 1986 immunization campaign involved social mobilization on a major scale. An evaluation of the campaign estimates that approximately 32,000 people, including 25,000 volunteers, were involved in carrying out campaign activities (MSPAS 1987). The popularity of the campaign and the support

¹ Of all deaths to infants, approximately 18 per cent were due to respiratory ailments and influenza, and 20 per cent to other infectious and parasitic diseases. Among children aged one to four years, 23 per cent of deaths were due to respiratory causes and influenza and 49 per cent to other infectious and parasitic diseases (Adlakha and Arriaga 1990).

from many public and private agencies was no doubt aided by a wave of public enthusiasm and optimism surrounding the first popularly-elected civilian government since the 1960s. The campaign apparently reached all parts of the country, with the exception of the relatively small Triangulo Ix'1 region in the department of Quich'Z in which political disruption interrupted campaign activities. A comparison of coverage levels achieved by routine public-health services with those obtained during campaigns (Goldman and Pebley 1993) shows that the vast majority of immunizations performed during 1986 were carried out as part of the immunization campaign. Immunizations during campaigns and in government and most private voluntary facilities have been provided free of charge.

No vaccination days were held in 1987 because of the nationwide political disruption caused by the election campaigns for mayoral positions. Immunization coverage increased dramatically in 1986 as a result of the campaign, but fell sharply in 1987, presumably because of the lack of immunization days. In subsequent years, immunization days have been held regularly. The MSPAS has also pursued a policy of 'channelization' of immunization, involving provision of immunization on a routine basis at health facilities and through visits by health personnel to the homes of unvaccinated children.

In the case of pregnancy-related services, both prenatal care and childbirth assistance are provided at government health facilities, primarily by physicians, nurses, and auxiliary nurses. The MSPAS has extended these services since the 1970s to the rural population through health posts and centres, and regional hospitals. Private physicians are another important source of pregnancy-related care, but are out of the reach of many poor women and rural residents, both because of their relatively high fees and because most practise in Guatemala City or departmental capitals. In contrast to immunization which is provided exclusively by biomedical practitioners, traditional midwives provide the majority of prenatal and delivery care, as is the case in many other countries (Isenalumbe 1990; Parra 1991). Despite governmental and private voluntary-agency programs to train traditional midwives, most do not have formal training (Bossert and Del Cid Peralta 1987).

Services provided at MSPAS health posts, centres, and hospitals at no or a nominal charge (five US cents per visit) are the cheapest alternative for prenatal care or delivery, although transportation to a hospital in the department capital can be expensive. Midwives, who often include the cost of prenatal visits in the price for delivery, are usually more expensive than MSPAS services, charging about 20 quetzals or \$US4 for a pregnancy, but considerably cheaper than private physicians and nurses. Unlike most private physicians, midwives are often willing to be paid in small instalments after the baby is delivered.

Non-biomedical health-belief systems and reliance on non-biomedical practitioners for treatment are common among both the indigenous and *ladino* populations² (Pebley and Goldman 1992), as in much of Latin America (Pedersen and Barauffati 1985). One obvious difference between prenatal care and assistance at delivery, on the one hand, and childhood immunization, on the other, is that pregnancy-related care is a recognized part of both traditional and biomedical Guatemalan health-belief systems,³ while immunization is exclusively associated with biomedical ideas of disease transmission and the immune system. The uneasy match between the ideas underlying immunization and local

² The indigenous or Indian population, i.e., descendants of Mayan and other pre-Spanish conquest groups, retain a separate identity and indigenous languages, and comprise approximately half the Guatemalan population. The other half, known as *ladinos*, speak Spanish exclusively, wear Western clothing, and identify themselves with the dominant Guatemalan culture.

³ Traditional midwives, who use techniques such as massage and herbal remedies to restore hot-cold imbalances, are probably the most numerous of traditional practitioners in Guatemala.

concepts of illness prevention and causation can be illustrated by the comments of a rural resident interviewed in the mid-1980s:

If one is sick and one gets an injection one gets cured fast. But the child is fine, and they give him a vaccination and he gets sick! Why give them a vaccination? It is a pity to prick them if they are not sick... (Rosenthal 1987:72)

As the above comment also indicates, therapeutic use of injections, for example, for administering antibiotics, is much more widely understood and accepted than immunization, as is true elsewhere (Reeler 1990; Wyatt 1992). Rosenthal (1987) reports, however, that in the village in which this informant lived, experience with childhood immunization eventually led to many parents accepting vaccination and believing in its value as a preventive measure.

In our previous research we found significant differences in the use of biomedical health services according to ethnicity and social and economic status (Pebly and Goldman 1992). The indigenous population is much less likely to use the services of physicians or the public health-care system when compared with *ladinos*, even those living in the same community. Both poor and rural Guatemalans, regardless of ethnic identification, are less likely to use biomedical services than middle- or upper-class urban dwellers. The fact that the indigenous population is more likely to live in rural areas and more remote parts of the country, and to be poorer and less educated than *ladinos*, contributes to the ethnic differentials.

Part of the existing variation in the use of biomedical health services is undoubtedly due to differential availability. For example, data for 1987 (not shown) indicate that the ratio of population to the number of government-run primary-care clinics⁴ was higher in municipalities⁵ located further from Guatemala City and in more highly indigenous areas, results which confirm a department-level analysis by von Hoegen (1986). However, variation in this ratio across geographic areas is relatively modest. Furthermore, MSPAS officials believe that the existing facilities of the rural health-care system in many areas are actually under-utilized by the local population (Vielman and Hurtado 1986; Villatoro and Hurtado 1986; Rosenthal 1987).

Use of immunization and pregnancy-related services

We use sample survey data to examine the use of biomedical pregnancy-related services and immunization in segments of the population that are typically more difficult to reach in Guatemala: the indigenous population (and especially those who do not speak Spanish), women with little or no formal education, the population living in more remote regions, and the population living at greater distances from government or private health clinics.

Data

Data for this analysis come from the National Survey of Maternal and Child Health (ENSMI) conducted in Guatemala in 1987 (MSPAS and INCAP 1989). It was based on a nationally representative sample of 5,160 women aged 15 to 44, interviewed between September and December of 1987. The survey included questions on prenatal care and delivery assistance for all 4,627 births in the five years before interview, and questions determining the immunization status of the 4,230 children who were born during this period and alive at the time of interview. The data do not allow us to distinguish midwives

⁴ Defined as MSPAS health posts and centres and IGSS (Social Security) clinics.

⁵ Guatemala is divided into 22 departments and each department is further subdivided into municipalities. There were 349 municipalities in 1987.

with formal training from others. However, as noted above, most midwives have no formal training and are not formally affiliated with government or private clinics. Only one (the 'most qualified') practitioner providing prenatal care and delivery assistance was coded for each pregnancy, regardless of how many different types of practitioners were consulted.

Data were collected for children alive at interview on eight childhood immunizations: three doses of DPT, three doses of polio vaccine, one dose of BCG (anti-tuberculosis), and one dose of measles vaccine. Information on immunization was copied from health cards and supplemented with maternal reports. Since previous research (Goldman and Pebley 1994) indicated that inclusion of maternal recall information in estimates of immunization coverage improved the accuracy of the estimates, the figures reported here rely on data of both types. Data from the ENSMI also include information on distance to the nearest 'clinic' (i.e., government health post or centre, a PVO facility, or private clinic) from about two-thirds of the clusters in which the survey was conducted. Results for these clusters do not differ substantially from those for all clusters (Pebley and Goldman 1992). The proportions of persons in each location who reported themselves to be indigenous come from municipality-level data in the 1981 census, and distance of the municipality centre from Guatemala City was measured as straight-line distance, using maps from the Guatemalan Geographic Institute.⁶

Unless otherwise indicated, the sample for this analysis consists of pregnancies leading to live births during the five years before the survey in the sample clusters for which information on clinic distance is available (n=3,467). All analyses involving immunization are based on the subsample of these children who were alive at time of interview and were at least one year of age (n=2,495). The restriction of immunization estimates to living children has probably resulted in a modest overestimate of immunization coverage, since results from other surveys suggest that children who died during infancy and childhood were less likely to have received immunizations than children still alive at the time of the survey (see, for example, Elo 1990). About seven per cent and eleven per cent of children born in the five-year period prior to the ENSMI are reported to have died before ages one and five respectively. To the extent that the subgroups with higher infant-mortality rates (e.g., women without schooling) experience lower immunization rates, the differentials by number of immunizations reported in Table 1 may be underestimated. Children under one were omitted from our sample because they had not yet reached the age of eligibility for some types of immunization, in contrast to children aged one and over, who were old enough to have received all the eight childhood immunizations specified above.⁷

Bivariate results

To determine how effectively the immunization program and pregnancy-related services reached a broad cross-section of the Guatemala population, we examine use of both types of services by the ethnicity of the family, maternal education, the ethnic composition of the community, the distance to the nearest primary-care clinic, and the remoteness of the municipality in which the child and mother

⁶ Whenever a municipality contained more than one sampling cluster, the value for the municipality was assigned to each sampling cluster within it.

⁷ The recommended ages of immunization in Guatemala are two, four and six months for the three doses respectively of polio and DPT; nine months for measles immunization; and at the time of birth for BCG. Estimates presented elsewhere (Pebley and Goldman 1992) indicate that there is virtually no difference in immunization coverage between the three cohorts aged two, three and four at the time of the DHS survey, but lower coverage for the cohort aged one. Although one-year olds were old enough to have received all the recommended vaccinations by the time of the survey, some were below the recommended ages at the time of the 1986 campaigns, when the majority of young Guatemalan children were immunized.

live from Guatemala City. The last variable is a combination of an urban-rural classification of the locality and, for rural localities, the distance between the municipal centre and Guatemala City.

In the first set of columns in Table 1, we show the distribution of the number of immunizations (0, 1-7, or 8) that children aged between one and four years received out of the full eight immunizations recommended by the MSPAS. Seven of the eight immunizations were offered in the 1986 immunization campaign, BCG being the exception. We estimate that approximately half of the immunizations for children in our sample were given during the 1986 campaign (Goldman and Pebley 1994).

Roughly half the *ladino* children, children whose mothers received some formal education, children living in predominantly *ladino* municipalities, children living within ten kilometres of the nearest clinic, and children living in urban areas had received all eight immunizations. Children in indigenous families were less likely to receive all eight immunizations, especially if their mothers did not speak Spanish. Levels of complete immunization were similarly low for children whose mothers received no formal education, and for children living in predominantly indigenous communities. Both the distance to the nearest clinic, and the remoteness of the municipality from urban life, are negatively related to the proportion of children who were fully immunized. Note, however, that the vast majority of each subgroup of children presented in Table 1 was at least partly immunized.

Comparison of the results for immunization with those for prenatal care and delivery assistance suggest that the observed differentials (e.g., by ethnicity or location) for complete immunization are much smaller than those for biomedical⁸ pregnancy-related care. For example, while children from indigenous, non-Spanish speaking families are about 0.60 (27.0/45.2) times as likely as *ladino* children to be fully immunized, they are less than one-quarter (10.2/43.9) as likely as *ladino* children to have received biomedical prenatal care while *in utero*, and less than one-tenth (2.7/38.1) as likely as *ladino* children to have been delivered by a physician or nurse. The immunization program seems to have been more successful in reaching the indigenous population and those living in more remote areas than were biomedically-based prenatal care and delivery services.

The results in Table 1 also show several important differences between prenatal care and delivery assistance. First, women in all ethnic, education, and geographic groups were less likely to rely on physicians and nurses for delivery assistance than for prenatal care. This result suggests, not surprisingly, that lack of immediate access to biomedical providers—which is more essential close to the time of delivery than for routine prenatal care—may account in part for the relatively low use of physicians and nurses during delivery, even among women who received biomedically-based prenatal care. Secondly, midwives delivered almost two-thirds of all births which occurred in this period, and more than half of all births to women in each ethnic, education, and geographic category in Table 1, except for women with a secondary education and women in urban areas. Midwives were also an important source of prenatal care in most groups, especially for indigenous women. Thirdly, women living furthest from clinics and in remote rural areas were somewhat less likely than women in moderately accessible locations to consult midwives (or any other practitioner), presumably because even midwives were difficult to locate in these areas. A related observation is that a substantial proportion of women living in more remote areas, and non-Spanish speaking indigenous women, received no professional assistance at all during childbirth, but relied on themselves, family members, or neighbours.

⁸ Doctors and nurses comprise a single category in this analysis because they both provide biomedical care in Guatemala, although doctors deliver far more services than nurses.

Table 1
Percentage distributions of number of immunizations and type of pregnancy-related care, by family ethnicity, woman's education, ethnic composition of municipality, distance to clinic and remoteness from Guatemala City

	N ^a	No. of immunizations			N ^b	Prenatal care			Delivery assistance		
		0	1-7	8		None/ other	Mid wife	Dr/ nurse	None/ other	Mid wife	Dr/ nurse
Total	2495	12.1	48.7	39.2	3467	28.3	39.2	32.5	11.1	63.2	25.8
Family ethnicity											
<i>Ladino</i>	1419	7.5	47.3	45.2	2000	27.9	28.3	43.9	10.8	51.2	38.1
Indigenous, Spanish	599	15.5	49.6	34.9	802	21.9	55.4	22.7	4.2	81.6	14.2
Indigenous, no Spanish	477	21.4	51.6	27.0	665	37.3	52.5	10.2	20.0	77.3	2.7
Woman's education											
Secondary +	151	1.3	43.1	55.6	195	5.1	11.3	83.6	0.5	14.9	55.6
Primary educat.	1062	7.2	47.4	45.5	1501	22.9	35.5	41.6	6.1	60.5	33.4
None	1282	17.5	50.4	32.1	1771	35.5	45.3	19.1	16.4	70.8	12.8
Ethnic composition of municipality											
<5% indigenous	427	4.2	41.0	54.8	617	18.6	23.8	57.5	2.6	51.2	46.2
5%–50% indigenous	708	6.8	50.1	43.1	982	30.9	29.9	39.2	10.2	53.0	36.9
³ 50% indigenous	1360	17.4	50.3	32.4	1868	30.2	49.1	20.7	14.3	72.5	13.2
Distance to clinic											
<10 km	1034	8.8	45.6	45.7	1393	23.1	30.3	46.7	1.9	54.5	43.7
10–60 km	1094	15.3	46.8	37.9	1533	25.4	48.1	26.5	9.0	74.1	16.9
³ 60 km	367	12.0	62.9	25.1	541	50.1	36.8	13.1	40.5	54.7	4.8
Remoteness from Guatemala City											
Urban	595	10.6	40.3	49.1	787	21.7	29.7	48.5	6.0	47.4	46.6
Rural, <100 km	997	10.2	49.0	40.8	1415	22.3	45.0	32.7	4.2	72.9	22.9
Rural, ³ 100 km	903	15.2	53.8	31.0	1265	39.2	38.5	22.3	21.9	62.1	16.0

^aDistributions for number of immunizations are based on living children aged 1-4.

^bDistributions for prenatal care and delivery assistance are based on births 0-4 years before the survey.

Multivariate results

As noted in the introduction, ethnicity, social status, remoteness from Guatemala City, and the availability of biomedical health services are likely to be interrelated. For example, the indigenous population is more likely than *ladinos* to be poorly educated, to live in more remote areas, and to have poor access to biomedical health services. We use multivariate logistic regression to determine the strength of the association between each characteristic and the use of childhood immunization and biomedical pregnancy-related services while holding constant other variables shown in Table 1. In addition to the variables presented in Table 1, the estimated models include other social, economic and demographic characteristics which may affect choices about whether or not children should be immunized, and about the nature of prenatal care and delivery assistance. These control variables are age of child at interview, age of mother at interview, birth order of child, mother's work status,

husband's education, husband's occupation, and possession and frequency of watching of television.⁹ The three outcome variables in these analyses are binary: whether or not a child is fully immunized, whether or not a woman received prenatal care from a physician or nurse, and whether or not she was assisted at delivery by a physician or nurse. Thus, no distinction is made in the multivariate analysis between midwives and non-practitioners, and between partial and no immunization.

Odds ratios obtained by exponentiating the respective coefficients in the logistic models are presented in Table 2. Each odds ratio is calculated relative to the omitted category for that variable. For example, the estimated odds ratio of 0.65 in the first column indicates that the odds of receiving a full set of immunizations for an indigenous child in a Spanish-speaking family is roughly two-thirds the corresponding odds for a *ladino* child (the omitted category). The first set of columns presents the odds ratios obtained by the inclusion of a single characteristic (e.g., ethnicity) in the absence of any other variables (equivalent to the observed odds ratios); the second set of columns presents the corresponding odds ratios when all of the specified characteristics as well as the control variables are incorporated into the logistic model.

The results on the left-hand side of Table 2 confirm the pattern noted earlier in Table 1, namely, that the differentials in the use of immunization are smaller (i.e., the odds ratios are closer to one) than those for pregnancy-related care. Nevertheless, with only one exception, each of the odds ratios for the three types of health care is significantly different from unity.

The considerably larger odds ratios on the right-hand side of Table 2 demonstrate that, when all other variables are held constant, the differences in the likelihoods of being fully immunized and of receiving biomedical pregnancy-related care according to ethnicity, education, and location, become much smaller. However, while only one difference for immunization remains statistically significant, large and statistically significant differences for four out of the five variables persist for prenatal care and delivery assistance. These results suggest that family characteristics have a much greater impact on the use of biomedical prenatal care and delivery assistance than on the use of immunization. This finding is supported by additional multivariate results (not shown) which indicate that other family-level characteristics such as the husband's occupation and education are strongly related to a woman's chances of obtaining care from doctors and nurses during pregnancy and delivery, but are only weakly related (if at all) to a child's likelihood of receiving a full course of immunizations (Pebley and Goldman 1992).

Table 2
Estimated odds ratios for logistic regressions^a of the probabilities of receiving full immunization, biomedical prenatal care, and biomedical delivery assistance

	Odds ratios (Bivariate)			Odds ratios (Multivariate ^b)		
	Full immunization	Prenatal care	Delivery assistance	Full immunization	Prenatal care	Delivery assistance
Family ethnicity						
<i>(Ladino)</i>						
Indigenous, Spanish	0.65 ^d	0.38 ^d	0.28 ^d	0.93	0.70 ^e	0.58 ^e
Indigenous, no Spanish	0.45 ^d	0.15 ^d	0.05 ^d	0.94	0.47 ^d	0.23 ^d

⁹ The possession and frequency of watching of television serves as an indicator of the strength of a family's ties with the predominant urban *ladino* culture, as well as of social and economic status.

Woman's education (Secondary+)						
Primary education	0.67 ^e	0.14 ^d	0.09 ^d	1.07	0.41 ^d	0.42 ^d
None	0.38 ^d	0.05 ^d	0.03 ^d	0.81	0.32 ^d	0.28 ^d
Ethnic composition of municipality (<5% indigenous)						
5%-50% indigenous	0.63 ^e	0.47 ^d	0.68	0.76	0.56 ^d	0.92
³ 50% indigenous	0.39 ^d	0.19 ^d	0.18 ^d	0.60 ^e	0.44 ^d	0.49 ^e
Distance to clinic (<10 km)						
10-60 km	0.72 ^e	0.41 ^d	0.26 ^d	0.90	0.66 ^e	0.47 ^d
³ 60 km	0.40 ^d	0.18 ^d	0.07 ^d	0.65	0.41 ^d	0.18 ^d
Remoteness from Guatemala City (Urban)						
Rural, <100 km	0.70 ^e	0.51 ^d	0.34 ^d	0.78	0.86	0.70
Rural, ³ 100 km	0.46 ^d	0.31 ^d	0.22 ^d	0.66	0.88	0.91
No. of children^c	2457	3409	3409	2457	3409	3409

Omitted categories are shown in parentheses.

^aHuber logistic regression which provides robust estimates of the standard errors and takes into account the clustered nature of the sample (Huber 1967).

^bMultivariate models include the five characteristics specified above, along with the following control variables: age of child, age of mother, birth order of child, mother's work status, husband's education, husband's occupation, and possession and frequency of watching of television.

^cThese numbers are slightly smaller than those in Table 1 because children of respondents with no husbands or with missing information on husbands are excluded from the regression analyses. Estimates of prenatal care and delivery assistance are based on births 0-4 years before the survey and estimates of immunization are based on living children ages 1-4.

^dp<0.01

^ep<0.05

Improving pregnancy-related care

The example of Guatemala in the 1980s highlights several important differences between childhood immunization campaigns and pregnancy-related services which public health officials face in moving beyond the typical components of child-survival programs into new areas such as pregnancy-related care. In this section, we draw on the results presented above and on previous research related to medical choice in Guatemala to explore several of these issues.

The first and most obvious point is that, unlike immunization campaigns or programs based on annual or tri-annual household visits, pregnancy-related services (and especially delivery assistance) must be provided by practitioners who are available in or near the community at all times. Despite the efforts of the Guatemalan government and private voluntary organizations to expand health services into rural areas since the early 1970s, the availability of clinic-based services and referral of emergencies to hospitals continues to vary substantially. The significant relationship (in the multivariate model) between the distance of the community from the nearest clinic and the proportion

of women who use physicians or nurses for prenatal care and delivery assistance suggests that variations in service availability have an important effect on the use of these services.

In rural communities, emergency transportation in the case of complicated deliveries to department capitals or to Guatemala City, where most hospitals are located, is expensive and often difficult to arrange. In fact, the following description of a village in predominantly indigenous Huehuetenango in the mid-1980s illustrates the virtual impossibility of obtaining emergency assistance at a government or private facility in some remote rural communities. The description also illustrates geographic differences in availability of immunization and other types of services.

The village has no institutionalized [biomedical] health service. When the village residents need or decide to use this type of service, they go to the [government] Health Post...which is 10 to 12 hours by foot...All persons interviewed or with whom we talked informally indicated the need to have a Health Post in the village or nearby... They indicated that frequently the patient would die on route to the health facility. Transport of a sick adult is very difficult because, if his/her state is serious, (s)he has to be carried in a chair tied on someone else's shoulders. Several men have to make the journey to take turns carrying the sick person on their shoulders.

The only institutionalized health program which has been developed is an immunization program. The Health Technician from the closest Health Post visits the community two times a year to give vaccinations (Villatoro and Hurtado 1986:9-10).¹⁰

While conditions in most rural communities are less extreme, it is often very difficult to reach a health center or hospital sufficiently quickly at the time of delivery, and particularly if complications develop.

Even when clinic-based services are nearby, some facilities may not provide pregnancy-related services, and many have very restricted hours (often limited to daytime and weekdays), short staffing, and limited supplies (Annis 1981; Bossert and Del Cid Peralta 1987; Villatoro and Hurtado 1986). Furthermore, many women report a preference for not delivering in a public hospital because of the poor care they receive (Rosenthal 1987; Vielman and Hurtado, 1986), and the belief that only those referred by private physicians (who must be paid) receive good care.

Several subtler but very important social and cultural issues make the delivery of pregnancy-related services far more complex than childhood immunization programs. The first is that the success of prenatal care and delivery assistance requires much more contact and trust between patient and service provider than immunization. For this reason, social class and ethnic differences between practitioners and patients are likely to be more important barriers to use of biomedical pregnancy-related services than in the case of immunization campaigns. Previous researchers frequently report that poor patients feel that they are not treated in a respectful manner by personnel in clinics. For example, with regard to formal health services, Cosminsky (1987:1169) writes that:

Many of the nurses and doctors act very condescendingly and assume the patient is ignorant. They tend to speak in an authoritarian tone, often scolding the patient... This type of attitude in turn increases people's ambivalence toward the facility and their reluctance to return in the future.

¹⁰ Translated from Spanish. The name of the village itself and the community in which the health post is located have been omitted.

Social barriers between predominantly *ladino* doctors and nurses and indigenous patients are usually even greater, and indigenous patients are sometimes subject to discriminatory behaviour, or overtly deprecating remarks by clinic staff (Rosenthal 1987). Facility staff (as well as private physicians) rarely speak any language other than Spanish, even in predominantly indigenous areas (Annis 1981; Bossert and Del Cid Peralta 1987), making communication with indigenous patients difficult. Thus, the indigenous population often perceives health facilities to be primarily *ladino* institutions (Tedlock 1992).

A more salient issue in the case of pregnancy-related care than immunization is that women and their families often have a choice both about whether to seek professional pregnancy-related care, and about which type of practitioner (midwife, government or private voluntary clinic, or private physician) to use.¹¹ Immunization is usually available only from government or private clinics. Even though immunization may make less sense in the context of traditional health beliefs than pregnancy-related care, parents may have relatively little choice about whether their children are vaccinated. The reason is that in immunization campaigns, village leaders or clinic personnel frequently assemble children in a central location for immunization, often with only tacit agreement (instead of active participation) of parents.¹² Similarly, during house-to-house visits during immunization programs, parents may find it difficult to refuse to have their children immunized.

On the other hand, in the case of prenatal care and assistance at childbirth, the mother or another family member must actively seek assistance. Traditional midwives provide an alternative source¹³ of prenatal care and delivery assistance to both *ladino* and indigenous women and they generally live within the community in which they practise. Physicians and other biomedically-trained personnel may be less acceptable to pregnant women because their practices do not conform with women's own beliefs about pregnancy and childbirth, they do not explain procedures and treatments in the context of these beliefs, and they are often community outsiders without any social ties to a local woman and her family (Quezada et al. 1988). For example, Tedlock (1992:38) reports that in a predominantly indigenous community:

Several indigenous midwives have received training in Western procedures for child delivery in a hospital in Huehuetenango, but...because they are rarely initiated curers¹⁴ they have few patients. It is the initiated indigenous Quich' *midwives (iyom)* who deliver most of the babies.

Vielman and Hurtado (1986:54) were told by their predominantly *ladino* respondents that many women prefer the traditional midwife because the doctor at the local clinic did not use massage (a traditional method of prenatal care and diagnosis) during prenatal visits. Furthermore, biomedical practice usually requires that a pregnant woman undress, at least partly, and undergo a pelvic examination, often by a male doctor, a practice which violates strong traditional standards of modesty

¹¹ In the case of private physicians, however, this choice may be constrained by lack of financial resources.

¹² In fact, in some areas, the Guatemalan Army actively participated in early regional immunization campaigns and in the 1986 national campaign. Their role was usually transport, but as Rosenthal (1987:71-72) reports, soldiers' responsibilities were sometimes more extensive: 'People still recount with horror and indignation how a few years before my first visit the army had been sent to force people to vaccinate their children. Previously, those who did not want their children vaccinated would hide them when the health post nurses came to their home. The soldiers, however, went into the houses and forcefully took the children out'.

¹³ Of course, in many remote locations, traditional midwives are the only readily available source of care.

¹⁴ That is, they did not enter the practice of midwifery through traditional forms of recruitment and training.

for women. Undressing is also thought by some patients to upset the hot-cold balance, and thus cause illness (Logan 1973; Hurtado and Esquivel 1986; Tedlock 1987). Women often report preferences for traditional midwives because they provide treatment while patients are clothed (Vielman and Hurtado 1986; Cosminsky 1987).¹⁵

The MSPAS has made a number of efforts to encourage women to visit health posts and centres for prenatal care visits. For example, midwives are required to register with the local health post and to bring their patients in for prenatal examinations (Hurtado and Esquivel 1986); compliance has varied considerably over the past several years by place, time period, and patients' preferences. A popular program in poor rural areas has been the distribution of food supplements to pregnant women and mothers with small children. Pregnant women are frequently required to participate in prenatal care in order to qualify for their food supplementation programs. However, Cosminsky (personal communication, 1992) suggests that women may visit the post or centre for prenatal care as a means of obtaining supplemental food, but may actually seek advice about their pregnancy and care from a local midwife in whom they have greater trust.

Because of the difficulty in expansion and improvement of clinic-based facilities, the high cost of private physicians' fees for most families, the frequent social barriers between physicians and patients, and the continuing importance of traditional health beliefs and traditional midwives, short-run improvements in pregnancy-related care for Guatemalan women are most likely to be achieved through a concerted effort to train and provide institutional support to traditional midwives rather than through efforts to expand physician and clinic-based pregnancy-related services. This situation is hardly limited to Guatemala (see WHO 1987; Isenalumbe 1990; Kwast 1991). For example, in neighbouring Mexico, Parra (1991) concludes that despite large investments and a major focus on extension of health services into rural areas, rural women and particularly poorer women continue to rely heavily on midwives.

In Guatemala, this reality has been recognized by agencies such as UNICEF which provided training kits and financial support to the Guatemalan government midwife training programs during the 1980s (Bossert and Del Cid Peralta 1987), and by the government itself in its current five year plan (SEGEPLAN 1991). However, the experience of midwife training in Guatemala (Cosminsky 1982) and Mexico (Jordan 1989; Parra 1991) suggests that standard methods of training traditional midwives in biomedical techniques have often been seriously inadequate and require considerable rethinking. Jordan (1989), for example, indicates that training programs generally rely on methods of classroom instruction (e.g., slide shows, schematic diagrams and verbal descriptions rather than hands-on apprenticeship-style instruction) that are alien to students, that the subject matter may not fit the practical realities facing midwives in practice, and that the form and content of instruction often denigrate years of practical knowledge that midwives have and denigrate all traditional methods, regardless of their merits. The barriers between instructors and midwives in Guatemala are sometimes further increased by the fact that the instruction is carried out in Spanish, or translated from Spanish as the class proceeds.

Our results also suggest that there were a substantial number of women living in relatively remote areas in 1987 who appear to have had inadequate access both to health posts and centres, and to traditional midwives. Providing pregnancy-related services to these women will be an even greater challenge.

¹⁵ The importance of female modesty is illustrated by Vielman and Hurtado's (1986:55) report that 'some informants specified that it embarrassed them for the midwife to see them [at the time of delivery] in this state (yelling, struggling, and with their "private parts" showing) and therefore they preferred to give birth alone'.

Conclusions

The worldwide experience of primary health-care programs suggests that the equitable provision of clinic-based services in many poor countries is likely to involve operational, social, and cultural issues that are different and more complex than those faced in immunization programs. For this reason, we anticipated that immunization services would reach a broader cross-section of the Guatemalan population than pregnancy-related services, even though immunization itself may be less compatible with traditional health beliefs than maternity care.

The results presented in this paper support this hypothesis. Specifically, estimates derived from a 1987 national survey indicate, first, that immunization is more likely to be used by hard-to-reach segments of the population, including those living in remote areas and at a distance from health facilities, the indigenous population, and poorly educated mothers; and secondly, that immunization is less strongly related to social, economic, ethnic, and geographic factors than is the use of physicians or nurses during pregnancy and delivery.

The comparison between childhood immunization programs and biomedical pregnancy-related services in Guatemala serves as an example of the challenges that public-health officials face in moving beyond child-survival programs into other areas of maternal and child health care in poor countries. Aside from the apparent organizational and financial differences, the equitable provision of pregnancy-related care poses social and cultural issues which are more complex than those faced in immunization campaigns and similar programs. Providing appropriate training for traditional midwives appears to be the first step in improving maternity services in many poor countries, but there must be adequate, ongoing institutional support and systems of referral.

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Childhood health-care practices among Italians and Jews in the United States, 1910–1940*



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Abstract

This paper examines attitudes toward childhood health-care practices among urban Italian and Jewish families in the United States in the first part of the twentieth century. Although women in both groups were concerned about their children's health, Italian and Jewish respondents differed in their attitudes toward home remedies, doctors, and medical advice literature. Jewish women were more likely to turn rapidly to professional medical assistance, typically from Jewish doctors, whereas Italian women were more likely to rely longer on common sense before eventually seeking professional medical intervention outside the family and ethnic group. These differences are evident both in the respondents' recollections of their mothers' and their own child-care practices, and suggest persistent ethnic cultures. That differences in child care are consistent with the mortality differences documented in other sources supports previous speculations about the importance of child care, and thus the role of culture in health transitions.

Introduction

Ethnic and racial differences in infant mortality and childhood health have been the subject of considerable attention. These differences are not only of concern to policy makers today, but were noted during the nineteenth and early twentieth centuries in both Europe and America. Speculation about the causes for the differences has been wide-ranging, but definitive answers have been elusive. At the turn of the century, this speculation included cultural explanations, although more recent demographic analyses typically seek explanations in individual-level social and economic characteristics such as education and income.

This paper uses lengthy interviews with a small number of elderly Italian and Jewish women to examine differences between the childhood health-care practices of Italian and Jewish families in the United States in the early decades of the twentieth century. We go beyond the use of ethnicity as an 'identifier' of cultural differences (Hammel 1990). Following Swidler (1986), we consider culture as a 'tool kit', a set of prefabricated strategies for action (see also Greenhalgh 1988, who uses the metaphor of a 'spice rack' rather than a 'tool kit'; Caldwell and Caldwell 1991). In this view, culture does not shape action by supplying ultimate ends or values; rather, it provides a collection of persistent, but not rigidly unchanging, ways of ordering action through time. This approach is particularly appropriate

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here, since the Italian and Jewish mothers we interviewed wanted healthy children, but had different recollections of how they went about achieving this outcome.

Our interest was initially provoked by research that identified differences between the infant and childhood mortality of different immigrant groups in the United States in the early decades of the twentieth century, and by the speculations of both contemporary observers and recent analysts that such differences might be related to child-care practices. In the early years of the immigration that swept into the United States between 1880 and 1920, ethnic differences in child-care practices were not apparent. Impressionistic accounts at the time categorized all the immigrants from Eastern, Central, and Southern Europe as less educated, less ambitious, and altogether less 'civilized' than the immigrants from Northwestern Europe; and, not surprisingly, contemporaries inferred that they were also less healthy. Not only were the 'new' immigrants poorer and thus more likely to live in crowded and unhygienic surroundings, but they were also thought to be less concerned with the cleanliness of their surroundings (see, for example, Riis 1892).

More systematic analyses, however, found that mortality was typically higher among Italians than among Jews. Both groups were similar in many ways: for example, they immigrated in massive numbers between 1880 and 1914; they were poor at their arrival; they generally settled in tenement areas of large cities in the northeast; and they had larger families, on average, than native whites of native parentage. Yet Woodbury (1925) found higher infant mortality among urban Italians than urban Jews, and recent analyses of the 1910 United States Census similarly show higher mortality among Italians than among Jews (Condran and Kramarow 1991; Preston, Ewbank and Hereward, forthcoming). Statistical controls for a wide range of social and economic factors reduced the differences between levels of mortality, but did not eliminate them; and Preston and his colleagues were led to speculate on the role of unobserved differences in child-care practices.

Neither the available quantitative sources nor the interviews reported here permit us to establish a causal relation between child-care practices and mortality: the former sources contain no information on child care; and the interviews do not provide appropriate information for calculating morbidity or mortality rates. Similarly, our interviews do not permit controlling for a wide range of social and economic factors to distinguish between values and opportunities: indeed, we consider them both to be interwoven, jointly shaping behaviour (Pollak and Watkins 1993). Our aim here is more modest—to learn what cultural 'tools' were available and how they were used, and thus to explore, through the filters of memory, how culture might influence the care of babies and children.

Differences in health and mortality

In the early decades of the twentieth century a number of studies documented that the mortality conditions of Jews were generally more favourable than those of other immigrant groups, including Italians. Using vital statistics, Billings (1890) showed that during 1885-1889, Jewish infant mortality levels of 85 per 1,000 births for males, and 77 for females, were 55 and 50 per cent lower than those for the comparable general population. Similarly, Woodbury's (1925) study conducted for the Children's Bureau in 1925 for eight eastern cities found that Jews had exceptionally low infant mortality. Other studies of mortality in New York also found that Jewish infant mortality was 30 to 40 per cent lower than that of the general white population (Schmelz 1971, Table 1). A study of infant mortality in 1915 in Baltimore also documented the Jewish advantage, especially at the lowest income levels: Jewish immigrants with incomes below \$650 had an infant mortality rate of only 49, compared to 106 among Italian immigrants with similar incomes. The differential narrowed very sharply among the higher-income populations (Schmelz 1971:47).

One of the most extensive early studies of ethnic health differentials was Davis's (1921) *Immigrant Health and the Community*. Italians and Jews were among the immigrant groups singled out for

particular attention. For most indicators of morbidity and mortality, Italians were found to have among the highest rates of illness of any immigrant group while Jews had among the lowest. For example, of the reported respiratory illnesses in one district of New York City in 1916, at all ages both the prevalence of cases and the mortality resulting from the illness was highest among Italians and lowest among Jews (Davis 1921:34-36). Similar differentials characterized deaths from infectious diseases such as measles, diphtheria, and whooping cough as reported in 1900 for the registration area for death statistics (Davis 1921:51).

Such differences between Jews and other populations in the United States continued patterns that had been found during the nineteenth and early twentieth centuries in various countries and cities of Europe.¹ For example, Jewish infant mortality in European Russia was about 50 per cent lower than that of the general population; in Poland it was 60 to 70 per cent lower (Schmelz 1971). Perhaps more relevant to the comparisons that are the focus of this paper, Jewish infant mortality in Florence in the 1840s was about 30 per cent lower than that of the total Italian population. Similar and even greater differentials characterized the experience of the populations of Rome, Turin, and Milan (Schmelz 1971).

Analyses of infant and child mortality rates using data from the 1910 Public Use Sample of the United States Census support these ethnic differentials and the advantageous position of Jews.² The 1910 Public Use Sample includes information on children-ever-born and children-surviving, as well as a large variety of indicators of social and economic circumstances, including place of birth and mother tongue of the individual and his or her parents, place of residence, literacy, female labour-force participation, and occupation. An analysis by Preston et al. (forthcoming) shows that the children of foreign-born Italians were considerably more likely to die before their fifth birthday than children in the general population; but that children of foreign-born Yiddish speakers were considerably less likely to die before age five than children in the general population.

A set of controls was introduced for social and economic circumstance; these included state-level measures of income as well as the individual-level characteristics available from the 1910 Public Use Sample. The controls reduced the excess mortality of most ethnic groups to such an extent that the infant and child mortality of the Italians did not then significantly exceed the average experience in the United States at the time. Taking social and economic circumstances into account also reduced the Jewish mortality advantage, but Jewish infant and child mortality remained substantially, and statistically significantly, lower than that of the total population. With all the variables controlled, the mortality of foreign-born Jews married in the United States was 43 per cent lower than that of native whites. A similar conclusion was reached by Condran and Kramarow (1991), who also used the 1910 Public Use Sample but focused on the infant and child mortality of Jews. Both analyses conclude that Jewish mortality was unusually low *within* particular social strata. Thus, although statistical controls diminished childhood-mortality differentials between Italians and Jews, they remained substantial.

Various reasons have been advanced to explain these differentials. Condran and Kramarow (1991) isolate six categories of explanation that were used at the time to account for lower Jewish mortality: racial and biological differences; specific Jewish religious practices; personal cleanliness and housekeeping; socioeconomic status; family and child-care practices; and better access to scientific care. Three of these—specific religious practices, personal cleanliness and housekeeping, and family and child care—have cultural overtones. Thus, for example, Fishberg (1911) mentions Jewish dietary restrictions, others note the Jewish rituals of hand washing (Schmelz 1971:78), and Woodbury (1925)

¹ For an extensive summary of the sources, see Condran and Kramarow (1991).

² For a discussion of the sample, see Strong, Preston and Hereward (1989).

found that Jewish women breastfed their children longer than many other ethnic groups. Child-care practices and general hygienic standards are also emphasized by Preston et al. (forthcoming) and Condran and Kramarow (1991). These are, of course, difficult to measure. If child-care practices are limited simply to breastfeeding, which is perhaps the easiest of such practices to measure, both Condran and Kramarow (1991) and Preston et al. (forthcoming) conclude that it can account for only part of the ethnic differentials in infant and child mortality.

Many of the speculations about the cultural causes of well-established ethnic differentials in mortality were derived from the observations of contemporaries. Unlike the turn-of-the-century view of culture as 'a body of autonomous tradition', the more recent view of culture interprets it as the 'commonality of perception that emerges between actors as they establish and conduct their social relations' (Hammel 1990:465-466; see also Keesing, 1974; Hannerz, 1992). Establishing a commonality of perception requires interviewing the actors themselves, a thing that contemporary observers rarely did. Rather the social workers, doctors, nurses, and others engaged in the Progressive projects often complained about the recalcitrance of the people they were trying to benefit (for example, Williams 1938), and appear rarely to have considered them adequate informants about their own behaviour. Our research, by interviewing elderly women about themselves and their foreign-born parents, seeks to address this omission.

The interview methodology

Selecting the respondents

Our respondents were 55 Jewish and 30 Italian women between ages 70 and 97, who were interviewed over the course of several months in 1990-91. We interviewed whomever we could. We asked friends for introductions to their relatives or friends, we went to senior citizen centres and nursing homes, and we contacted the Philadelphia association of Italian lawyers. The women are clearly not a representative sample. Women who survived to these ages would probably not statistically represent those who were born shortly after the turn of the century, many of whom have already died. This would be particularly true of those who lived in families with poor health care, or who were themselves in poor health. It is also likely that women who had more children were more likely to die at a younger age. A sample of survivors might therefore be selective of those who came from families with better health practices or medical care, and who had limited childbearing. It is thus not possible to generalize from these women to a larger population. Nonetheless, because so much of the information was repetitive, and because such clear differences appeared between the generations and the two groups, a larger, representative survey would probably have yielded similar patterns.

Our respondents were asked about the families in which they grew up, and about their own childbearing years. The women were easy to interview. They had agreed to the interview, most rather quickly understood the aims of our research, and talked easily; indeed, they seemed pleased to tell their stories. Some of the women were concerned about protecting their privacy, and asked in detail what would be done with the interviews. They were told that the interviews were part of a study of immigrant families, that we wanted to know about families 'back then'; we assured them that their names would not be used and that no one reading the study would be able to identify them (we have given them pseudonyms). Most of the interviews were not taped, but extensive notes were taken during the interview and written up immediately afterwards.³ Quotation marks indicate the women's exact words.

³ Transcripts of the interviews are available upon request from the senior author.

Most of the interviews were conducted by three interviewers, two in Philadelphia, Pennsylvania, and one in Providence, Rhode Island.⁴ The interviews lasted approximately an hour, varying with the amount of recall and detail. A wide range of topics was covered, including child-care practices, general health concerns, and family planning, in the households in which the women grew up and in those in which they raised their own children. Only issues related to health care are reported here.

The interview

The methodologies of interviewing are quite varied. At one extreme is the method typically used in large demographic surveys, where the questionnaire is fixed and, in principle, interviewers are interchangeable (Babbie 1986:224). At the other extreme is one in which each interviewer is expected to have his or her own style, and in which the interviews are expected to evolve in the course of the study (DeVault 1990). The present study modified the two approaches. The interviews were guided by a questionnaire that was based on our preconceptions. As we stumbled on the unexpected—which frequently happened—we revised the questionnaire. For example, being struck by the contrast between the women's reports that health care primarily comprised home remedies and doctors, and the literature, which emphasized public health initiatives, we revised the questionnaire to include questions about the use of clinics, and thereby uncovered differences in attitudes between the two groups with respect to their use. This led to a separate project (Watkins and Gerstel 1993 summarized below), to examine both the geographical and social access of immigrant Italians and Jews to health facilities in Philadelphia.

The interview began with questions about the women's parents. First, we asked when and where parents were born, when they immigrated, their education, religion, occupation, and names and birth-dates of their children. We then asked 'When you were a small child, how did your mother keep house? We're interested in things like diet, cleaning, rules for her children's safety and welfare. What were her practices regarding nursing? For how long? Why? Did she use a midwife?'. The respondents often had quite clear memories about their usual diet, whether their mother breastfed (almost all did), whether she used a midwife (almost all did), and how often they bathed, but were less certain about handwashing. We then asked, 'How often were the children sick? What did your mother do?', followed (in later revisions of the questionnaire) with a question about non-familial sources of care or advice—clinics, neighbourhood women, advice literature—and whether the family belonged to a benefit society. We then asked about their parents' family-planning practices and interactions with people of other ethnic groups (Spector, Watkins and Goldstein 1991; Watkins and Danzi 1991). To learn about continuity and change, we repeated our questions, this time referring to the women themselves, when they were raising their own children.

A distinct advantage of this semi-structured approach is that it allowed the women to speak discursively in their own words. Reading and re-reading the transcripts, we noted differences in the language they used. For example, Italian respondents often said that their mothers 'let nature take its course', or a similar phrase; the Jewish respondents almost never used this language. Similarly, when we asked about recourse to child-rearing literature by experts, the Italian women typically dismissed such literature, saying, 'What did I have to read about? It was easy in those days', or 'You just used common sense'; although a few Jewish women mentioned reliance on child-care manuals, a more typical response was 'I didn't read, I talked with my doctor'. Thus, although most women in both

⁴ Kitty Kraus participated in a few of the interviews in Philadelphia. In addition, several interviews took place in Harrisburg, Pennsylvania.

groups would have answered a short-answer survey question 'Did you use literature on child care by experts?' by saying 'No', their elaborations suggest that this was for quite different reasons. For this reason, we do not summarize the women's responses in tables; but have selected quotations that capture our understanding of the similarities and differences between the two ethnic groups.

Recalling the past

Research like ours, that requires participants to talk at length about behaviour that occurred in the past, 60, 75, or even 80 years ago, has disadvantages as well as advantages. We expected that much would be forgotten and that events that occurred in the women's childhood may not have been observable or comprehensible to them as children. At times women recalled incidents in childhood in vivid detail, and at other times we had a sense that the women were drawing on a 'feeling' memory, although they could not recall precisely what was said or done. Interviews with sisters (two sets done separately, one in tandem) provided an opportunity to check the accuracy of their descriptions of their childhood home. There was more agreement than disagreement, but events that were vivid to one sibling might not be known at all to another, or might be remembered differently. For example, one sister told us about the abortion their elder step-sister had, while her two other sisters did not mention it; all three, however, told us in detail about how one sister's abscess was treated.

In addition, and more problematically, many have filtered what they recalled through their idealization of the past, or in light of current concerns. In memoirs and novels, as among our respondents, immigrant fathers and mothers are almost invariably presented as labouring under incredible hardship to provide the best for their children. For example, Maria (Italian, b.1910), when asked about hand washing when she was growing up, said she didn't remember but added that all her mother's children were born alive and grew up healthy. Yet a little earlier in the interview, when listing her siblings in response to a less value-laden question, she had told us that of her eight siblings one had died at age six, another at age three, another at age one, and another at five days.

When we asked whether their mother's child care was similar to or different from that of other women, most answered that their mother or they themselves did pretty much the same as other women they knew: 'We all did the same thing'. Many women recalled their mothers' exchanging advice about treating sick children with other women, and many said that they themselves did the same thing as they chatted with other women in the playground, or in the card groups to which many of them belonged. Thus, some of their recollections no doubt reflect fairly well their particular slice of the ethnic world, the friends and neighbours who were primarily, but not always, in their own ethnic group.

Our respondents probably also drew on ethnic stereotypes, of their own group and others, created through decades of conversation. This would have the effect of reducing variation and increasing the appearance of cultural consensus. The women sometimes characterized their ethnic group for us. Thus, one Jewish woman, Beatrice (1907), dismissed the role of income in seeking medical attention by saying that when she was growing up 'Jews would dig ditches in order to take their children to the doctor'. Several others emphatically denied that their mothers used public-health services. When we said we understood that some women around that time did use public services, an Italian woman answered rather indignantly, 'I don't want to knock anyone but maybe they were on welfare. My father was a very proud man. We did with what we had. I never even knew of their existence' (Teresa, 1912). This may have been true, or they may have forgotten or not known that their mothers used clinics for their siblings. But we suspect that their image of public-health services is associated with a view of those services that they hold today, and thus they interpreted their mothers' not using public-health facilities in terms of their families being too proud to accept charity.

Respondent characteristics

Our Jewish and Italian respondents had similar personal characteristics in terms of age at interview, age at immigration and age at marriage (Table 1). In part, this is a function of our selection process; in part it reflects the many similarities among the two groups of immigrants and their children. In the discussion that follows we do not distinguish between women who were foreign-born and women born in the United States, because almost all the foreign-born immigrated as young children and thus their experiences were essentially similar to those of the native-born. For convenience, we refer to the parents of our respondents as the 'first generation', and to the respondents themselves as the 'second generation'.

The oldest respondent was 97 and the youngest 70; most respondents were in their 80s, and most of their children were born in the 1930s and the early 1940s. When the respondents are talking about their own childhood, they are typically referring to the period around World War I and the early 1920s; when they are referring to the children they raised, most are likely to be referring to the period from the mid-1930s to the 1940s. Since the aim of this paper is to understand ethnic differences in child-care practices, the absence of precise dates is a lesser problem than it would be for analyses of mortality differentials. To aid in locating the women in time, when we refer to the experience of an individual woman we give her date of birth in parentheses.

The major point of divergence between the respondents is in their educational profiles. A much higher percentage of Jewish than Italian respondents were educated beyond high school and a much smaller percentage had less than a high school education. Insofar as education is highly correlated with social status this finding points to class differences between the two groups. Other indicators, including occupation of both husbands and wives, also point to some class differences between Italians and Jews, especially in the second generation. The differences are less in the first generation. Few of our respondents' mothers had much education, and respondents in both groups indicated that they had been poor but never went hungry, although a few were quite poor. During the 1930s, when most of them were raising their own children, most lived quite modestly and some continue to do so (although some others were clearly well-off). We did not ask about income for either generation, but our impression was that the Jews were typically somewhat better off.

Table 1
Characteristics of respondents

	Jews	Italians
Age at interview (years)		
Mean	84	82
Range	70-97	75-93
Immigration		
United States-born (%) ^a	68.0	72.0
Foreign-born (%) ^b	32.0	28.0
Mean age at immigration (years)	6.6	8.0
Education at marriage (%)		
Eighth grade or less	35.0	74.0
Completed high school	20.0	21.0
More than high school	45.0	5.0
Age at marriage (years)		

Mean	24.4	23.6
Range	18–42	18–39
Number of cases	55	30

^aWith one exception all of those born in the United States had at least one immigrant parent.

^bAll foreign-born Jews were from Eastern Europe (most from Russia); all of the foreign-born Italians were from Italy.

We turn now to what we learned from our respondents about health-care behaviour. We begin with their recollections of their parents, and then turn to the years when they were raising their own children. In each instance, we seek to gain insights that will help to explain the wide differences between the mortality of the two groups as reported by contemporary sources and revealed by analyses of statistical data.

Health practices in the respondents' childhood

Both Italian and Jewish women reported that their mothers had been quite concerned about the health of their children. Our elderly respondents recalled their mothers as having been devoted to their children, this devotion taking the form of following what are today considered routine hygiene and health practices.

When we asked 'How often were the children sick?', most answered by recalling *serious* illnesses—a sister with polio, a brother who died of pleurisy. We had to probe for home remedies, asking 'What did your mother do when you had a cold or a stomach ache?'. Many respondents in both groups reported that their families resorted to a number of traditional home remedies for minor ailments. Common to both was recourse to chicken soup for colds, and flannel cloths, often permeated with Vicks or camphor (or goose fat among Jews) placed on the chest to relieve coughs. The Italian women often mentioned chamomile tea, *malva* (herb grasses brewed into tea), and bags of garlic suspended around the neck. Similarly, Jewish women mentioned *goggle moggle* (a drink of hot milk, egg, and honey), camphor bags, and *bankes* (hot cups applied to the skin to draw the infection from the body). Interestingly, however, although all the Italian women recalled that home remedies were used in their childhood, a number of Jewish women did not. One who said she did not remember them added that her cousin Frank was a doctor: 'If mother thought the kids were sick she'd call Frank' (Fannie, 1911).

Many in both groups did not remember precisely the regimes regarding hand washing. Although some said their mothers were quite careful, this may be hindsight coloured by current usage. Others were vague, and it is hard to know whether they simply did not remember or whether hand washing was not then seen as very important. Bathing seems to have been quite regular, typically once a week or sometimes twice, even though many homes lacked indoor plumbing. Most women remembered baths in tubs, or going to public baths. These reports of good hygiene contrast sharply with reports of conditions by social workers and government officials working with the immigrants (Riis 1892; Hapgood 1902; Gabaccia 1984:65-83). They suggest somewhat faulty memories among some of our respondents or that they were recalling practices instituted some years after their immigrant parents had arrived in the United States. It may also be that the social workers were unduly critical of the immigrants.

Despite the similar experiences reported by our respondents, some clear ethnic differences emerged from the interviews. Particularly striking were those that had to do with the role of medicine in general, and of doctors in particular. We do not claim here that doctors actually made a difference in infant and child mortality (see McKeown 1976): that can be established neither by analysis of statistical

data nor by the interviews. Indeed, in an analysis of the 1900 census, Preston and Haines (1991) show that the survival chances of doctors' children were no better than those of other children.

The differing attitudes toward doctors and medicine, however, do point to differing attitudes toward sickness and health. Doctors featured far more centrally in recollections about health-care practices of Jews than Italians. Although both groups of women typically recalled their mothers as beginning with home remedies and then calling the doctor if the illnesses were 'serious', Jewish mothers called the doctor for a wider range of illnesses and at an earlier stage. Italian mothers were more relaxed, treating more illnesses with home remedies and letting 'nature take its course' longer before calling a doctor. Only three Jewish women said their mothers relied primarily on home remedies, calling the doctor only if the illness were quite serious; conversely, only two Italian women said their mothers would not hesitate to call the doctor if they were sick.

These differences in attitude were expressed in a number of ways. Italian women recalled that doctors were called only for the most serious illnesses:

[What would your mother do when you and your brothers and sisters got sick?] Maria (1910) said that the doctor came when her sister died of flu, and that a brother died of pleurisy in the hospital. Otherwise, her mother would rub her chest with a mustard roll. 'She would give us medicine and we'd survive without doctors or anything. You'd go to the pharmacist and he'd tell you what to do... Everything was done at home, you had to be really sick to go to the doctor'.

Carmela (1905) reported, 'My mother would never call the doctor'. Her mother gave the children hot tea and rubbed them with olive oil. She recalled seeing a Dr. Henry from Pennsylvania Hospital, but added emphatically that there was no need to get a doctor, that she and her siblings were healthy and her mother knew what to do. For measles, she said, 'they knew what to do then, stay in bed, keeping the shades down'. [Did others in your neighbourhood do the same thing?] 'No one ever went to the doctor, I never saw no doctor around'.

Dorothy (1915) said that her mother called the doctor only if 'we had a high fever. Mostly she did her own doctoring, because we couldn't afford a doctor'.

Peggy (1909) recalled a Dr. Higby, who was free (from the company for which her father worked as a labourer): 'She [her mother] would never call the doctor right away, we'd have to be pretty sick. She'd wait a day, she didn't believe in calling the doctor right away. My mother didn't believe in doctors even when the doctor was free'. If they were sick, she would put her finger down their throat, wrap their feet and heat a brick, make chicken soup: 'She'd say "Oh, no, the medicines are no good"'.

The doctor was only for serious illnesses. Mother 'would try to keep us home first to see if the fever would go down' (Julie, 1913)

Several of the Italian women reported that when the doctor was consulted, it was at the hospital clinic. Similarly, most indicated that the immunizations they received were also given either at school or at clinics.

In contrast, Jewish women were much more likely to report that their mothers used doctors, both for immunizations and illnesses: typical was some version of ‘My mother always saw that we had a doctor’.

Sandra (1915) recalled a family doctor ‘for whatever was necessary’, for example regular checkups and immunizations. ‘There was never any stinging about doctors’.

Reba’s (1908) sister, who was fragile, was the only one of the three children who went to the doctors. ‘We were referred to Dr. Lowenberg—a very big doctor... He demanded \$25 up front. We always had a family doctor who came to the house. We never went to the hospital or the clinic’.

‘I remember once Dr. Jacobs came to see me, had me stand naked on the kitchen table’. [Why, what were you sick with?] ‘I had a cold, I wasn’t a sickly child’. (Lena, 1909)

[What did your mother do when you had colds?] Vera (1914) replied that they inhaled hot water or camphor for congestion, but if this didn’t work her mother readily called a doctor; her mother did not, she said, ‘let nature take its course’.

Ida (1912), who had no recollection of the use of home remedies, said her parents (who were socialists) ‘thought they were superstitious’. Her mother took her to a doctor or a clinic, but once her father started to make a ‘regular living’ they went to a private doctor, adding ‘If there was a vaccine we got it’.

‘Mother didn’t believe in *bubba meises* (old wives’ tales). She learned modern ways from father reading to her. She’d call the doctor for explanations’ (Edith, 1898)

‘Thank goodness we weren’t old fashioned and used doctors’ (Selma, 1916)

Unlike our Italian respondents, the Jewish women often mentioned their parents’ use of private doctors, both for illness and immunizations. Those who were less well off used the ‘lodge doctor’ or a pharmacist, who was often a relative. But even some who were quite poor called the doctor. For example, Dora (1921), who said her parents were very poor—‘we never had real money’—nonetheless said that her mother took her to a paediatrician who diagnosed her as anaemic and prescribed bacon. Ruth (1909), whose father was a grocer—‘not rich, he just got by’—said ‘If I was too pale or I wouldn’t eat, she’d take me to the doctor’. Rose (1910), who lived in a cold-water flat in South Philadelphia, said ‘My mother always called the doctor for everything’, although she remembers being immunized at school.

That doctors were used extensively and perhaps even excessively is documented by the recollections of the son of a Jewish paediatrician who served the immigrants of his community:

Morris operated his practice almost entirely through use of the telephone followed up by house calls. The phone rang at all hours and most of the questions were trivial. One memorable call at 7am (awarded the most-ridiculous-call-of-the-week prize!) was made by an anxious mother who asked the doctor to go outside to see how cold it was and then advise her on how to dress her child.

Two points emerge from a review of these differing sets of recollections of health practices in the childhoods of our respondents. First, the use of doctors was often equated with 'being modern'. Italian women emphasized that experts from outside the family were not usually necessary: for most childhood illnesses, their mother's lore of traditional remedies and her common sense sufficed. In contrast, Jewish women (who were much more likely than the Italians to originate in urban places) may have arrived in America with more 'modern' attitudes and values and therefore have been more receptive to change.⁵ Furthermore, the Jewish community already established in the United States made great efforts to encourage modernization through special classes, neighbourhood institutions and ethnic newspapers. Perhaps reflecting this, Lilian (1902) said that although her mother was illiterate, she 'learned about modern things because father read to her and she talked to the doctor whenever one of us was sick and had him explain matters'.

Secondly, the use of doctors seemed to be facilitated when they were members of personal networks (relatives, or relatives of friends) or the same ethnic group. Both Italian and Jewish women placed great stress on the importance of the extended family in their lives, and much of social organization for these two ethnic groups revolved about the family (see also, Sklare, 1958; Gans 1962; Gabaccia 1984). The familial relationship was clearly important in their relationship with doctors. One Italian woman, offered a tubal ligation by her doctor (after ten children) said 'I wasn't his sister, he didn't have to help me'. In contrast, many Jewish women spontaneously pointed out that the doctor was a brother, a cousin, or the brother of a friend. This allowed them to take advantage of modern medical care while remaining within the family.

If family members were not directly available, the Jewish network was nonetheless more likely to include a Jewish doctor⁶ than the Italian network was to include an Italian doctor. The testimony of the son of a Jewish doctor indicates, for example, that one Jewish paediatrician served almost the entire Jewish immigrant community in Boston in the early decades of the century and that two Jewish doctors covered most of the Jewish population of Providence, Rhode Island. These Harvard-trained, Yiddish-speaking doctors could be accepted as 'one of the family', and were therefore able to bridge the gap between traditional behaviour and modern medicine for the Jewish immigrants. Such doctor-patient relations were rarer within Italian communities. With one exception, the Jewish respondents who recalled a doctor by name mentioned one with a Jewish name; the exception was a woman who lived in an ethnically mixed neighbourhood and briefly used an Italian doctor recommended by her sister-in-law until she moved and switched to a Jewish doctor. In contrast, although some Italian women recalled doctors with Italian names, others pointed out spontaneously that the doctor was not Italian.

The apparently easier access Jews had to doctors within their own ethnic group is confirmed by information from the manuscript census for 1910. Geographical access to health facilities (hospitals, clinics, dispensaries) was rather similar for both groups, largely because they lived in the same wards of Philadelphia. But social access differed. There were far more doctors (and other medical practitioners) per capita for the Jewish immigrant population living in Philadelphia in 1910 than for the Italian immigrant population; indeed, there were nearly five times as many Jewish as Italian doctors (122 and

⁵ Glenn (1990) emphasizes the Jewish orientation toward modernity, although her study is not comparative.

⁶ Medicine has been a desirable occupation for Jews at least since the Middle Ages. Since the profession was one of high status not only within the Jewish community but in modern times, in the wider community, it became a valued path to social mobility (Goldscheider and Zuckerman 1984). Moreover, such an occupation not only permitted the individual practitioner considerable latitude in setting hours and meeting the particular ritual requirements of Judaism, but also enabled him to prescribe in ways acceptable to the patients and their families.

27, respectively), although the Jewish population was only about twice the size of the Italian (Watkins and Gerstel 1993).

The health-care practices of our respondents

The period between their mother's childrearing and that of our respondents was one in which a great deal of emphasis was placed on the mother's role in assuring the health of her children, albeit under the careful guidance of professional experts (Halpern 1988; Meckel, 1990; Litt, forthcoming). Our respondents were bearing their children primarily in the 1930s, although some of the higher-parity births occurred in the 1940s as by the time our respondents had their own households and families, both Italian and Jewish women were generally connected with the modern health-care sector. Both groups reported using doctors when children were ill, and a number of our Italian respondents made a point of indicating that their doctor was Italian. Many also reported giving their children regular check-ups and all recommended immunizations.

Even so, the Italians in this second generation also appear to have delayed more in resorting to medical professionals, while the Jews were quicker to seek expert guidance. For example, the Jewish woman (Sandra, 1915) who had described her mother as never 'stinging' about the doctor, told us about coming home from her brother's wedding because her daughter had a nosebleed, and sleeping across the daughter's bed fully dressed in case they had to go to the hospital. This led into a story about an aunt who put a thermometer in the baby's crib to make sure the sheets were warm enough. Another woman, May (1900), indicated that she was very conscientious about her family's nutrition and medical care and became quite aggressive if she thought a doctor was not providing the proper treatment:

'We went to New York to visit my husband's family when our first son was an infant. The child became ill and the family doctor prescribed some medicine. There wasn't any improvement, so I insisted my husband go with me in a taxi to Presbyterian Hospital to get better treatment'.

Beatrice (1907), who had noted that first generation Jews would 'dig ditches' to get the money to go to a doctor, said that she herself went to the doctor 'for the least little thing'.

Only a few Italian women were as relaxed as their mothers. Mary (1901), who recalled of her own childhood that 'We never got sick in those days... We never had a doctor', said that her own children never got injections, only vaccinations: 'I think they got them at school. They never went to hospitals in those days'. And Corlenda (1912): 'When I thought something was serious the doctor was the first one I called, but I didn't call the doctor every few minutes'; she went on to contrast her own behaviour with that of her daughter-in-law, who she said called the doctor a lot.

There was clearly a shift from one generation to another. Almost no Italian women mentioned using traditional remedies, other than bed rest and chicken soup, for her own children. Dorothy (1915) told us that although some of her friends used 'old fashioned remedies, and still do', she didn't, 'Because I never thought of it. If something is serious, that *malva* is not going to do any good'. For colds, she would give chicken soup, or call Dr. Giordano, a 'baby specialist': 'He'd prescribe over the phone. Maybe I'd take them in once in a while'.

The intergenerational shift is captured nicely in these comments from Connie (1907):

[What did you do when your children were sick?] 'First I would do is what my mother did, *malva*. And then I'd call the doctor right away'. [For a cough?] 'Yes, I'd call the doctor'. [Did you go for regular checkups?] 'Yes, I was afraid'. [Did you call the doctor more than your mother?] She answered yes, there were differences, but that it really wasn't different because neither her mother's children nor her own were sick very much.

Women in both groups occasionally characterized the differences between second generation Italians and Jews much as we have. One Jewish respondent, a doctor herself, implicitly compared Jewish women with others: 'The Jewish women would call doctors all the time. They were scared stiff something would happen to their children' (Ida, 1912). The most articulate was an Italian woman (Peggy, 1909) who lived in a neighbourhood of Jews while her children were growing up:

[Were Jewish women different about doctors?] 'Oh yes, the Jews called the doctors more. They'd say Peggy aren't you going to call the doctor? It looked like they had more fear about their children. I'd let nature take its course, but they wouldn't'.

In addition, our findings are consistent with those of Mechanic (1963), who found that Jews were likely to call the doctor for a lower degree of fever than were Italians. They are also consistent with Zborowski's (1958) finding that Italians and Jews differed in their reactions to pain: Italians expressed satisfaction when the pain disappeared; but Jews continued to worry that they might be sick even though the pain had disappeared.

The differences between Italian and Jewish approaches to child care in the period when our respondents were raising their own children is even more evident in what they say about the literature on childrearing by experts than in their comments on doctors. Some women in each group took this literature seriously. Bella (1902) a Jewish woman, called the doctor, who was a close friend, whenever her child had a fever. She also used all the government books on childcare: 'I always believed in listening to the experts'. Typically, the Italian women rejected the expert literature in favour of commonsense and Jewish women rejected the expert literature in favour of paediatricians:

Sarah (1913), whose cousin was 'a famous neurologist', said that many of her friends read books on the developmental tasks of childhood, but 'My husband and I laughed at that. Our paediatrician would tell us if anything was wrong'.

Emma (1900), whose brother was a doctor and whose cousin was a paediatrician, said that she received no information on child care from reading, 'only from my brother'.

Sandra (1915), who slept across her daughter's bed when she had a nosebleed, did have a child-care book, but didn't use it much: she took the children to a paediatrician for regular checkups, and early in their illness.

The second-generation Italian women's spontaneous comments about child-care advice literature sound quite different.

Dorothy (1915), whose mother did not even want to use the free doctor provided by her husband's employer, said she herself read *Ladies Home Journal* and *Good Housekeeping*, and another one which she couldn't remember. 'But a lot of them I didn't approve of. Some things I thought were ridiculous. Every child is different, you have to use common sense'.

Carmela (1905), who said that her mother never called the doctor—'They knew what to do then'—said she would read advice literature and would follow some of the advice but not all: 'You had to use your common sense'.

Many of our Jewish respondents told us that they considered caring for children 'hard work' to explain why they generally had only one, two or three children. In view of the comments they made about their concern with their children's health and their relatively extensive use of doctors, such an explanation becomes quite understandable.

The Jews' more extensive use of formal medical care, already obvious among the first generation, clearly persisted into the second generation, even though a considerable amount of convergence between Italians and Jews had taken place. The desire for Americanization, of which 'modern' medical practices was a part, no longer seems to have been a factor for the second generation as it was for the immigrant families, yet patterns of behaviour with regard to health care persisted among, and to some extent differentiated, Italians and Jews. An important distinguishing factor here, not documented by our respondents, but clearly evident in the findings of Gans (1962:136-141), is the persistence among the Italian population of a sense that doctors were outsiders to the community and not to be trusted.

Discussion

This research was stimulated by provocative speculations that cultural differences in child-care practices might account for at least some of the differences between the mortality of Italian and Jewish immigrant groups living in the United States at the turn of the century. Analyses of available quantitative sources cannot resolve this issue since the census did not ask about child-care practices. Rather the issue was explored in interviews with elderly Italian and Jewish women who were either part of the immigrant generation, or the children of immigrants.

We believe that these interviews contribute important insights into similarities and differences in health-care practices, and the ways these can be shaped by culture. In both groups, our respondents and their mothers are seen to be concerned about their children's health. And the contents of their cultural tool kits are similar. When our respondents' mothers were faced with a child's illness, they began with home remedies and then, if the illness was considered serious, called on a doctor. But Jewish mothers were more likely to define an ailment as requiring early professional attention, whereas the Italian mothers were more likely to 'let nature take its course' and to wait longer before calling on professional assistance. It was more likely for Jewish than Italian women that such assistance came from a doctor who was not only a member of their ethnic network, but also within the family network. Although both Italian and Jewish families were poor, and although the mothers in both groups had little education, neither Italian nor Jewish respondents recall their mothers making much use of public-health facilities.

In the second generation, that of our respondents themselves, the women in both groups turned to doctors more readily, not only for illnesses they judged to be serious, but also for routine immunizations and check-ups by paediatricians. Again, there appears to have been rather little use of public-health facilities. By this time their cultural tool kits included the plentiful advice literature on childrearing. But again, the Jewish women were more likely to reject such literature in favour of seeking advice from their paediatrician, whereas the Italian women continued to emphasize 'commonsense' rather than literature. The contents of the tool kit changed from one generation to another, but preferences for one tool over another remained rather persistent, and were apparently shared by relatives and friends in their own ethnic group.

In their attitudes and behaviours toward professional health care, Jewish immigrants in the United States resembled Jews living in other countries (Marks 1991; Ransel 1991). The same differences are evident in their family-planning practices as well: Jewish women in the 1930s were more likely to receive abortions and contraception from medical professionals: Italian women were more likely to use condoms and withdrawal and to refer to abortions as either self-induced or aided by a neighbourhood woman (Spector et al. 1991). In the 1920s and 1930s Jewish women preceded Italian women in the medicalization of childbirth, switching earlier from home to hospital births (Danzi 1993).

In this paper we have described different cultural approaches to child care. By culture, we mean here not only 'culture as autonomous tradition', expressed in symbolic forms such as ritual practices (which indeed did not seem to be important in the health care of our respondents) but also, and primarily, shared and persistent interpretations of sickness and health, and shared and persistent strategies of action (Swidler 1986; see also Hannerz 1969). The cultural boundary between the two groups was not firm: some Italian mothers as described by their daughters would be nearly indistinguishable in our transcripts from Jewish mothers as described by their daughters. Yet for most, what they did and, perhaps more importantly, the way they talked about what they had done, and the moral justification they gave, were sufficiently different to indicate distinctive cultures.

All our respondents understood that there had been a great shift in child-care practices between their mother's generation and their own: 'We're different now, there's a different environment around, we wanted to better ourselves'. Those who remembered their mother's frequently calling the doctor emphasized that she had wanted only the best medical care for her children, and would go to great lengths to achieve it, even when the family was poor. But those who recalled their mother's use of doctors as infrequent did not criticize her. Rather, after saying that their mothers did not use doctors much, they pointed out that there was no need to do so because 'we were healthy children', or because their mothers were skilful in the use of home remedies. One Italian woman, Carmela (1905), whose mother did not use doctors for these reasons, herself took the children regularly to a private doctor. When asked why she differed from her mother, she said that her mother was dead, and she didn't remember what her mother's remedies were—a morally acceptable explanation.

Our qualitative data thus allow us to fill an important gap in our understanding of cultural differences in health care. Both Italian and Jewish respondents live in the present; their recollections of the past are filtered not only by memory but also by their current understanding of good health-care practices. Yet differing attitudes toward home remedies, doctors, and the medical-advice literature are voiced so repeatedly by the respondents, in such a variety of contexts, and in distinctive language, that we can have confidence in the conclusions. Our sample is too small and too selective to permit the direct linkage of child-care practices and mortality in individual families. Nevertheless, that the differences in child-care practices are consistent with mortality differences supports earlier speculations about the importance of these patterns. In addition, and perhaps more importantly, the nature of the differences that we have uncovered suggests directions that research could take in other situations, such as in developing countries today, where it would be possible to gather data on both child mortality and child-care practices, and thus to elucidate the role that culture plays in health transitions.

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The focus group as a tool for health research: issues in design and analysis*



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Abstract

The focus group is a technique for eliciting information from specific population subgroups. Issues addressed may be little known or relatively well known to the researcher. The method is most effectively used when the objective of the investigation is to elicit points of view of client or consumer groups which may differ from those of providers. Despite the frequency with which focus groups are used, few published materials describe the practical application of the method. This paper presents a detailed methodology for the conduct of focus groups and analysis of focus-group data with the intention of improving its use among researchers and health-care professionals. Data from two studies, immunization compliance in West Africa, and barriers to use of prenatal-care services in Bolivia, are used as illustrative examples.

Introduction

The focus group is a qualitative research method for eliciting descriptive data from population subgroups. Usually, a group of eight to twelve persons are gathered together for a group interview or discussion on a focused topic. The technique is often used to explore themes that are not well-known to the investigator, such as locally held beliefs on the value of immunization or traditional practices preferred by an ethnic subgroup concerning pregnancy and childbirth. Focus groups may also be used to elicit opinions on known topics, in order to develop an understanding of client or user perspectives on the topics. For example, when there is a need to identify points of view of clients or patients that differ from those of providers, such as in the case of compliance with a specific preventive-health recommendation, the recommendation itself can be tested with a focus group in an attempt to validate its appropriateness to a particular population. In either case, local cultural practices may differ from, or conflict with, standards of medical practice. A knowledge of differences in perspectives can assist in designing alternative standards which take into account local practice (Bender et al. 1988-89; Carey 1993).

Focus groups are widely used in the investigation of applied-research problems and are recognized as a distinct research method. The method enables researchers to generate new hypotheses; to explore intermediate variables as a means of explaining certain relationships found in survey data; or to validate findings gathered through other methods using triangulation for comparison of different perspectives

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(Stycos 1981). In focus-group research, as in qualitative methods, reasoning proceeds from observation of a series of particular facts to a general statement or hypothesis (the inductive method). The strength of qualitative methods are that they generate rich, detailed, valid process data that usually leave the study participants' perspectives intact (Steckler et al. 1992). The starting point of the focus-group research method is distinctly different from that of quantitative methods, which begin with the statement of an hypothesis and reason from the statement of that general hypothesis to particular facts (the deductive method).

The focus-group method of data collection has its roots in the group interview (Banks 1956; Goldman 1962), but was brought into prominence by market researchers during the past decade and a half (Bellinger, Bernhardt and Goldstucker 1976; Calder 1977; Linda 1982). Focus groups have been defended as a valid tool in social research (Stycos 1981; Morgan and Spanish 1984; Basch 1987) and are widely used as a research method in health (Tsu 1980; Bender and Macauley 1988-89; Willms and Lange 1992) and family-planning research (Folch-Lyons, de la Macorray and Schearer 1981; Suyono et al. 1981; Knodel and Pramualratana 1987). However, despite the widespread use of focus groups in applied research (Folch-Lyons and Trost 1981; Stewart and Shamdasani 1990), relatively little has been written that specifically directs program planners, evaluators, or health researchers trained in epidemiology or related methods, in the planning and conduct of focus groups and the analysis of focus-group findings.

The purpose of this paper is to present a rationale and methodology for the conduct and analysis of focus groups and focus-group data that is detailed enough to be used as a research guide. Two illustrative examples are presented from health research conducted in developing countries: a community-based investigation of reasons for vaccination non-compliance in two counties in Liberia, West Africa (Bender and Macauley 1988-89; Macauley and Bender 1990-91); and programmatic research designed to determine perceived barriers to use of prenatal-care services in Bolivia (Bender et al. 1988-89).

Key considerations in focus-group design

There are several key considerations in conducting a focus group (Morgan and Spanish 1984; Scrimshaw and Hurtado 1987). First, the focus group should examine a narrowly focused topic. Secondly, the topic should be of interest to both investigators and respondents. When the interest level is high, participants are more likely to provide concrete answers and highly detailed accounts of events (Merton, Fiske and Kendall 1956). Thirdly, in conducting the focus group, the emphasis should be placed on the interaction between or among group members, rather than on the interaction between the interviewer and group members. The objective is to give the researcher an understanding of the participants' perspective on the topic of interest (Merton, Fiske and Kendall 1956). The size of the budget and time available for conduct of the study are two practical constraints which will also affect the overall plan (Morgan 1988).

Two particular points of this definition bear re-emphasis. The first is that the topic be narrowly focused. Asking a group of respondents all there is to know about health or illness or health-service use in their community is not an effective strategy since neither respondents nor interviewers would have a clear sense of the key point or points of interest. The resultant data are diffuse and unfocused, difficult to analyse, and rarely contribute new knowledge to the field. In contrast, a narrowly focused question encourages focus-group participants to give specific and detailed answers about names and locally recognized symptoms of common childhood communicable diseases, commonly used language terms for those symptoms or diseases (which may be different from those known to health professionals), or mothers' reasons why prenatal care is underutilized in a periurban environment although medical care during the post-partum period in the same environment is highly valued.

Secondly, the emphasis in a focus group should be on the interaction among the group members, so as to elicit the most detailed, vivid, and valid responses from the participants (Morgan 1988; Stewart and Shamdasani 1990). Participants who discuss, debate or clarify one another's given reasons for not returning to the health post for a second or third series of childhood immunizations are considerably more likely to be concerned with the validity of their answers than with providing the interviewer with socially correct (and possible invalid) responses. Ideally, the focus group is an interaction among participants, where the investigator, while facilitating that interaction, blends quietly into the background. Except for posing guiding questions, and occasionally probing, asking an additional question or making a refocusing statement in order to sustain the group's interaction, the focus-group facilitator should be a listener and a learner.

Focus groups have numerous applications in health research. First, they are frequently used to gather exploratory data: to discover locally used linguistic labels for communicable diseases, for example; or to identify typical patterns of health-related behaviours, such as the use of childhood immunizations or of typical practices surrounding pregnancy. Secondly, focus groups can be used to develop a testable hypothesis, such as the positive relationship expected between the use of prenatal care and improved birth outcomes. Thirdly, focus groups can be nested in a large-area survey to assist in developing a detailed contextual explanation of its results. This is particularly useful when the findings are unexpected, contrary to the expected hypothesis, or apparently contradictory.

Method of design, conduct and analysis of focus groups

Design

The design structure selected for a focus-group study or sub-study will influence the character, quality and reliability of the resulting data. The researcher or research team must make reasoned and explicit judgements about a number of specific considerations. First, one may choose smaller or larger-sized groups. Groups of six to ten people are usually recommended (Morgan 1988), although focus groups held in developing countries tend to be larger (8-15 people). Small groups allow a greater contribution from each individual participant; but larger groups permit more people to participate, and thus avoid potentially uncomfortable exclusions. The ultimate decision will depend on the local culture and norms as well as on the objectives of the study. Generally, the more narrowly defined the research question is, the more effective will be fewer, rather than more, respondents. Yet if one is interviewing groups of women in their own community about a topic of concern to all of them (such as childhood illnesses or pregnancy and childbirth) it may be difficult to limit the group size without insulting the group members, and thus jeopardizing essential rapport. If these same women tend to be shy and inhibited in conversations with outsiders, as has occurred in several focus groups held in rural communities where barriers to use of prenatal care were being investigated, then a group of 20 people still may work quite well. If, on the other hand, one is interviewing village chiefs (as was done in the immunization compliance study) who are known to be loquacious or persistent in their desire to be heard, then groups of four or five people may yield the better results. The group members, when chosen, should be able to sit facing one another, in order to encourage their maximum interaction (Stewart and Shamdasani 1990).

Secondly, the sample may be selected using either random or convenience strategies (Scrimshaw and Hurtado 1987; Morgan 1988). In a health-services usage study, for instance, one may want to arrange a meeting of every tenth person who arrives at the clinic or of every tenth household in a neighbouring village. Such a strategy may be ideal in its rigour, but may be impractical. In many settings it may be unreasonable to expect a majority of the people selected to return at the requested time. If people live far away, are unfamiliar with the purpose of the questions, or are suspicious of

outsiders, they may simulate agreement with a request to return, but not appear at the expected time. In some settings, a convenience sample may be the only feasible method of gathering potential respondents, that is, one may be able to interview only those individuals who arrive on an appointed day to have their children vaccinated. When time is essential, a focus group may even be assembled before the arrival of the investigator. Then, as occurred in the case of the study of barriers to prenatal care, there may be more women and more older women than desired, waiting to share their thoughts. To turn some away puts the willingness of the others to respond frankly at risk; a careful judgement must be made. Good examples of convenience sampling include focus groups which are conducted with women's clubs, church groups, clients at a family-planning clinic, or other naturally occurring groups.

Thirdly, participants may be selected to have homogeneous or heterogeneous backgrounds. For example, if one is interested in contraceptive beliefs and practices, one may want to interview younger women separately from older women. On the other hand, holding focus groups of women of all ages in recently settled periurban areas may provide an opportunity to discuss the effects of migration and modernization on patterns of breastfeeding, since these changes may be more tied to recent of migration than to maternal age. While the criteria for grouping participants will vary from one setting to another, it is necessary to select participants who will have something to say to one another, and who will be comfortable talking with one another (Morgan 1988). It is also important to develop strategies which will facilitate the expression of diverse points of view among participants, particularly when the group is heterogeneous.

Fourthly, focus groups may be designed to include participants who are known or not known to one another. When participants know one another, they will usually prod one another to tell their own stories: in one sense, the prodders become the assistants to the facilitator. However, if the subject matter being discussed is particularly sensitive, respondents may feel more comfortable sharing their points of view among relative strangers. At times, people are more willing to reveal personal behaviours, or events that have occurred to them, if no one present can repeat the story back to neighbours or friends.

It is advisable to seek advice of local residents or individuals who have worked with members of the target group on how best to make this particular decision. Whatever decision is made, it is important to remember that the choices one makes in the design of focus groups should depend on the objective of the study. The decisions should be guided by one's knowledge of the particular preferences of the people with whom one is working. The decisions should also be explicit (rather than accidental), because they will influence the extent and depth of the information collected.

In conducting a focus group, the initial job of the facilitator is to create a non-evaluative environment in which group members feel free to express their opinions without concern for the agreement or disagreement of others in the group (Morgan and Spanish 1984; Stewart and Shamdasani 1990). The effective facilitator encourages interaction between participants rather than between facilitator and participants. This allows the facilitator, as a quasi-observer, to assume a posture of 'sophisticated naiveté', and to raise probing questions: 'Well, why is that?'; or 'Can you tell me more about why that is so?'. Developing a one-page focus-group set of questions is recommended as a means of guiding and directing the discussion. For example, the guide in Appendix I was developed to assist in directing the discussion of reasons for immunization drop-out in rural Liberian communities. The four statements listed under 'I: Introduction' show the objectives of the study. They are listed above the focus-group questions to provide a ready reference for the facilitator during the conduct of each focus group. The 12 guiding questions are listed under 'II: Focus-group guide questions for mothers'. The first three questions are designed to elicit a list of diseases that most concern the respondents, and thus to check on the congruence between respondents' priorities and the list of immunizable diseases of

concern to health workers. Questions 4 to 6 ask respondents to report on their behaviours with respect to immunization, and also serve to identify respondent knowledge of available services. Questions 7 to 10, are intended to elicit problems, and alternative solutions, related to the delivery of vaccines and the health-service system. Finally, the last two questions are intended as reinforcement to health-education lessons, or to evaluate levels of knowledge regarding immunization benefit. A focus-group guide should guide, not limit, the questions that can be asked. A facilitator should follow up leads offered by participants with additional questions: after all, the purpose of conducting a focus group is to explore unknown or somewhat unfamiliar territory.

Appendix 2 is an example of a similar question set for guiding a discussion of practices related to pregnancy. The investigators were concerned to discover perceived barriers to use of health services for prenatal care and delivery in a semi-rural Bolivian population in which home births are still quite common. Was distance, cost, tradition, or some other factor primarily responsible for non-use of prenatal care? These questions were addressed in a series of focus groups, and new information emerged as the women discussed the question among themselves. It emerged that women in this environment did not perceive pregnancy to be a time of particular risk; they openly wondered, on the other hand, why the health post did not offer post-natal services, a time which they considered to pose the greatest risk to the health of the mother.¹ Births were traditionally a family, not a medical, event; husbands assisted at the delivery as frequently as birth attendants (CIAES 1991); and, because it was an area of migration, mothers-in-law did not attend births nearly as commonly as they had in the past (Bender et al. 1988-89). Cost, too, was a factor in home deliveries: although a sliding scale was available, not everyone was aware of that fact, and a hospital birth was considered to be too costly, while a home birth was free.

Health professionals may believe that they know the answers to the questions posed because they have grown up in the same general society, yet listening to women's responses and to their discussion among themselves—spoken in their own words and in their preferred idiom—reveals the cultural distance between the two. It is less important to determine whether the chasm of understanding exists because of differences in socioeconomic background, or has been created through medical or other educational training, than it is to bridge the gap by establishing a common basis of understanding, a common language, and a common set of objectives for development of culturally appropriate, medically sound health services.

Conduct

After developing the study design and a focus-group question guide, interest logically turns to the conduct of the actual focus groups and to data collection. In the actual conduct of a focus group, there are additional decisions to be considered. While the primary emphasis is on stimulating interaction among the participants, the facilitator's other responsibility is to guide the direction of the respondent's comments so that the discussion does not wander too far from the interviewer's established focus.

It is recommended that each focus group have both a facilitator and a recorder. The facilitator is responsible for conducting the groups, for encouraging quieter respondents to speak up, and for quieting garrulous talkers. If not addressed directly, the opinionated individual can redirect the group's discussion. Asking participants to respond to such a person is often an effective way of balancing the group and eliciting responses from the majority.

Although the facilitator may choose a non-directive or a directive approach in leading the focus group, caution must be exercised lest the too-involved facilitator obtain results that reflect the

¹ Recently published research on puerperal maternal tetanus confirms the validity of the concerns of these peasant women (Faveau et al. 1993).

facilitator's own interests rather than those of the participants (Knodel and Pramualratana 1987; Morgan 1988). The recorder is responsible for recording the discussion with a hand-held tape recorder; for observing the process of the focus group in detail; and for making notes on those observations complete with key phrases which place those observations in their proper context. Although there is little concern that taping will alter responses of members in the group because of the public nature of the responses, some courtesies and cautions are warranted. It is usual to inform participants that the recording is taking place, to assure group members that all recordings will remain confidential, and to explain the purpose of the discussion (Stewart and Shamdasani 1990). The importance of the recorder's role should not be underestimated; indeed, in qualitative interviews, the informant's language is data (Steckler et al. 1992). Observations made by the recorder are also important, because neither tones of voice nor rapid-fire responses can readily be captured by transcription of verbal statements.

The facilitator must be skilled at using probing techniques and pacing the group. It is not reasonable to expect a full and detailed answer from a simple question. Rather, to elicit high-quality information one must be willing to wait, to encourage and cajole. In addition, an effective facilitator should not move the group too rapidly nor dwell on a subject for too long. The facilitator assumes the responsibility for creating a non-threatening, supportive climate, interjecting probing comments and transitional questions, and encouraging the involvement of all members (Basch 1987). One should not expect to be able to discuss every topic in equal depth in each group. Instead, the emphasis in a focus group should be placed on eliciting the maximum detail in response to each question, not on standardizing responses. Finally, offering lunch, a snack, or a group photograph to participants is a way of thanking them for their involvement, and reminds the investigators that the time of respondents is valuable, too.

Finally, some equipment is needed: a hand-held tape recorder; an adequate number of cassette tapes, pre-labelled with the date and number of each focus group; additional fresh batteries; pads of paper; and pencils or pens. Such additional requisites tend to be taken for granted, but too many otherwise well-planned data-collection sessions have been compromised for lack of attention to these apparently routine details.

Analysis

The most challenging part of focus-group research is the transcription and analysis of the focus-group interviews—the data (Miles and Huberman 1984; Scrimshaw and Hurtado 1987; Morgan 1988). The analysis of focus-group interviews requires judgement and skill. It is in this aspect that the focus group, as one among several qualitative methods, differs most from quantitative research. The two basic approaches to analysing focus groups are systematic coding using content analysis, and ethnographic summarization. The narrative provided by each group of participants can be summarized numerically, and often is. However, the rich context in which the words of the respondents are embedded offers a unique opportunity to search the text, and the context, for additional meaning, for a previously unknown clue explanatory of behaviour, or a nuance which yields a different interpretation of previous knowledge.

The first step in the analysis of focus-group data is the transcription of the individual, pre-labelled tapes. If the focus group has been recorded in a language different from the language in which the analysis will take place, then the transcription must also be translated. Standard rules for back-translation should be followed. The completed transcription should be compared with hand-written notes to fill in inaudible phrases or gaps in the tapes. In addition, hand-written notes, taken by the recorder during the focus-group interview, assist in describing the context and the flow of the interview. These notes identify long pauses between replies, nervous laughter in response to a sensitive question, or angry or frustrated tones of voice. When describing the interviews as 'contextualized data' (data in

their context) it is invaluable to be able to include these more descriptive indicators in addition to more straightforward reporting of content (Miles and Huberman 1984).

The investigators are then ready for the formal process of analysis. This is not to suggest that insights into preferred patterns and preferences do not occur during the conduct of a focus group: they do. In fact, if several field workers are collecting data at more than one site, they should meet periodically to discuss alternative explanations, disagreements, emerging hypotheses, and potential revisions to the data-collection guides (Scrimshaw and Hurtado 1987). Checks, either with other investigators or with notes which clearly lay out the objectives of the study, can prevent an investigator from being side-tracked from the task of making coherent sense of what is happening by small but poignant details—the emotions expressed by a particular informant, a key phrase, or an explanatory aside made after a focus group (Miles and Huberman 1984).

The analysis of the transcription can be conducted manually or by computer, using word-processing programs such as *Nota Bene* or *Ethnograph*, which were developed to assist in qualitative analysis, or *Word Perfect* or *Microsoft Word* using the 'search' feature. While computer programs enforce consistency, they do nothing that cannot be done by hand. Conversely, computer analysis poses a risk of performing an oversimplified analysis through too-early identification of core text as key to the 'answer'. Excessive reliance on computers may yield results that are flat and oversimplified; it is shortsighted to assume that computers are capable of gleaning the meaning embedded in the narrative data (Becker 1993).

Investigators will want to conduct a content analysis of the responses and construct representative tables to organize and display the data. Next, they will want to develop an ethnographic summary of the data using direct quotes, with narrative explanation. The balance between these analytic approaches will depend on the research question and the nature of the audience for whom the research is being conducted. If the research question is exploratory, then the analysis should focus on developing alternative possibilities; if the research question tests an hypothesis, then the analysis should try to determine the best answer to the problem.

If one is addressing an audience which is accustomed to viewing tables and graphs in order to interpret the data, then it is wise to start with data tables, showing percentages, which organize focus-group data in an easily interpreted format. Then, having established a foundation for discussion, the investigator can move to presentation of patterns of narrative, demonstrating the identification of themes important to the analysis. If, on the other hand, one is preparing to hold a follow-up meeting with village chiefs (who, in the immunization compliance study, had received training as health-team-extendors), the preferable format is to present a short set of straightforward graphs, using numbers and percentages, which illustrate the two or three points of most interest to them: better that they ask for more than leave quietly halfway through your lengthy presentation.

Methods of analysis

The three steps of analysis described above will be discussed below. The two common methods in content analysis are identification of themes, and incidence density. In theme identification, the researcher is looking for particular patterns, themes, concerns or responses which are posed repeatedly by the focus-group respondents. The group (rather than the individual) is the unit of analysis (Knodel and Pramualratana 1987; Morgan 1988). For example, in Appendix 3 the names of diseases which groups of mothers regard as major health problems for children are listed as transcribed.

Table 1

Diseases mentioned by numbers of groups of mothers as frequent health problems for children in Bomi and Cape Mount

Disease	Bomi	Cape Mount	All groups mentioning item (%)
Measles	10	10	100
Diarrhoea	9	7	80
Tetanus	9	5	70
Scabies	7	5	60
Malaria	5	5	50
Fever	4	6	50
Polio	5	5	50
Whooping cough	7	2	45
Pneumonia	3	3	30
Vomiting	4	3	35
Thrush	5	–	25
N	10	10	

When constructing tables to classify data or identify themes, a disease is listed in the table if it is mentioned by a group; however, it is listed only once, no matter how many times respondents in a particular group mention it. The number of groups, not the number of individuals, is used as the denominator. The results of such an analysis of themes, with the number of groups constituting the denominator for each county separately and the two counties (20 groups) together are displayed in tabular form in Table 1. The maximum number for each county is ten, irrespective of how many times the theme was mentioned by a group. These results can be represented as numbers or percentages. Measles is clearly recognized as a priority health problem by mothers in all of the focus groups. Scabies, an important although non-immunizable disease, is mentioned by seven of the groups in Bomi County and by five of the groups in Cape Mount County; overall 60 per cent of groups mentioned scabies as a priority health concern.

Using the group as the unit of analysis is the most common method of data analysis. Simple statistical frequencies are most effective in depicting the more important characteristics of the problem being investigated.²

The same data could also be represented in pie charts, to provide a visual representation of the relative importance of different diseases (not pictured). A graphic representation is particularly appropriate if the findings are being interpreted for community members themselves, who may be more accustomed to thinking visually than numerically. Graphs can also be used effectively to compare responses of two groups, for instance, mothers' perceptions of common diseases *versus* those of health providers. More complex statistical analyses are not feasible because of the limited, and primarily qualitative, nature of the data.

In Appendix 4 a second example of coding themes using the group as the unit of analysis is displayed. In this instance, the investigators have used large and small letters to code narrative responses. This sample of text gives examples of narrative responses of illnesses which are believed to befall women in the post-partum period. The two traditional illnesses named are *sobre-parto* and *pasmó*, coded 'A' and 'B', respectively. The one instance of haemorrhage discussed is coded 'C'. Where the narrative text is especially rich, as in Groups 2 and 4, the investigators have also coded symptoms, each circled, said to be characteristic of a *sobre-parto* (coded 'a' to 'h'). In this way, one

² If the number of focus groups is sufficiently large, the chi-squared test of significance can be applied, preferably a Fisher-exact test which is more accurate with small samples.

can begin to identify inclusion and exclusion criteria which are useful in deriving a functional definition of a previously unrecognized illness category.

The ethnographic summary is developed through repeated reading of the narratives for their underlying meaning—something bigger, more abstract, and more elusive than a count of words. When the investigator has a clear sense of what the respondents are trying to convey, quotations illustrative of key points are selected from the transcript and woven together with an accompanying narrative explanation.

Themes identified in the analyses are of two types. 'Sought information' refers to expected themes, such as recognition of measles as a major health problem. However, investigators should also be attentive to the occurrence of 'emergent themes', that is, unexpected insights offered by respondents. In the case of childhood immunization in West Africa, the mention of scabies and malaria, two diseases for which no vaccinations are available, is an example of an emergent theme. These diseases appear to have been of greater priority to groups of mothers than polio or whooping cough for which immunizations are available (Table 1). Women also suggested several strategies for change in the protocol of the program. There were the expected themes, such as changing the dates or times of the immunization offerings, and providing more frequent opportunities to seek immunizations. In one group, one woman made the comment 'Don't ask us [these questions]; we're not in charge here'. A second woman picked up the theme several comments later: 'If you want us to come, you be working with the chief. He be in charge'. A third woman retorted, 'If he tells us to be there; we be there'. In one sense, the women were not answering the questions raised by the interviewer. In another more important way, however, they were making a critical suggestion that would have been lost in a survey, or, at best, grouped into a catch-all 'other' category. Use of the focus-group methodology not only permits, but encourages the investigator to listen for such unexpected responses as clues for the solution of the problem. A further refinement of the women's comments, which was eventually developed into the intervention strategy, resulted during a discussion of the data with Liberian counterparts.

'Working with the chief', said one interviewer, 'we already do that. We ask his permission when we arrive at the village. . .'

'But the women are already in the field many times, and he cannot call them back', responded another.

'It doesn't seem like we're really working with the chief, if we only ask his permission when we arrive. Maybe he should be part of our health team. Maybe if we asked him ahead of time, checked for a convenient day or time, he would ask the women to stay home', the first interviewer thought aloud.

This example demonstrates the occurrence of an emergent theme, and the emergence of its fullest meaning through the process of analysis by the research team of investigators.

In the Bolivian study of barriers to use of prenatal care, women unexpectedly, and repeatedly, referred to post-partum health problems. Based on their experiences, the time around the birth and during the days immediately following the birth was the period of highest risk.

'For three days we must be very careful; we cannot drink or wash in cold water, because it will give us *sobre- parto*'.

'I got *sobre-parto* because I got out of bed too soon; I swelled up so completely, I couldn't even see'.

'If a woman doesn't take care of herself and gets *sobre-parto*, we take her to the hospital, if she doesn't get care quickly, she can die'.

It was after giving birth that women died. It was then that they needed medical care. Although the women knew to go directly to the hospital in the case of haemorrhage after birth, they expressed surprise that the doctors did not offer routine post-natal care in addition to pre-natal care. This preference is clearly related to the recognition of *sobre-parto* as well as *pasmo* and *escalofrios* as serious illnesses that occur during the post-partum period. At the same time, however, the women do not see the potential for preventing many of the risky moments by means of pre-natal care.

A logical and compelling argument for why women consider themselves to be at greater risk after than before birth emerges from the analysis of the focus-group narratives concerning reproductive-health conditions (frequency of home delivery, poor hygienic conditions in some hospitals, high rates of maternal mortality, and women's traditional explanations of post-partum illnesses). In both examples, the respondents' conversation provides a perspective on health-services planners and providers that may otherwise be unavailable. In the West African immunization example, Ministry of Health officials adopted a new strategy for improving compliance. Village chiefs and traditional midwives were invited to participate in an immunization-training workshop and their assistance was sought to achieve full compliance in their villages (Macauley and Bender 1990-91). In the example of Bolivian pre-natal care, a post-natal visit within two weeks of the birth was added to the standard protocol in the service-delivery area where the research was conducted. In addition, through a subsequently funded WHO Safe Motherhood Project, training in prevention of post-natal risk was added to the non-formal educational intervention offered in community centres to all women of reproductive age (Bender, Santander and McCann 1993). These two distinctive understandings of client perspective were useful, if not essential, in determining responses that are responsive to user priorities and that may thus improve utilization, compliance and health outcomes.

The second method of analysis is incidence density, which is defined as the number of times a theme is mentioned within each group.³ To establish incidence density, the transcribed narrative text is coded using the procedures for identifying sought and emergent themes discussed above. Then the number of times a particular theme is mentioned within a group, or across all groups (irrespective of the number of groups) is tallied. In recording incidence-density data, it is more effective to choose as the content to be counted a particular reaction to a theme rather than simply counting repetitions of the occurrence of the theme itself.

Incidence-density data are helpful in comparing the relative importance of identified themes to respondents. For example, in Appendix 4, the seriousness of *sobre-parto* is emphasized by repeated mention of its dangerousness and the risk of death. In the narrative for Group 2 alone, words to that effect occur six times (see underlining). Frequent mention of *sobre-parto* in other groups is a clear indication of generalized concern.

It is also important that the investigator decides which words should be grouped as synonyms. For example, in Appendix 3 Group 10, the words 'dehydration' and 'diarrhoea' are grouped as one category; in Group 4 'scabies' and 'craw craw' are regarded as synonyms. The decision on how to group depends on the meaning of the terms, and whether the investigator is interested in sets of related symptoms, or in making subtle distinctions between terms.

Before completing the analysis, the text as a whole should be re-read for additional clues that will assist in the fullest interpretation of the data. This re-reading is different from poring over pages of

³ This differs from the epidemiologist's use of the term.

cross-tabulations because the answer is not on the written page, but rather the interpretation emerges from the page as the reader ponders the words, combining and recombining phrases and themes. In a sense, the re-reading is similar to a clinical interview in which the symptoms given do not lead to a clear-cut diagnosis and the clinician must review the symptoms, sorting and re-ordering their priority to arrive at a probable diagnosis. Returning to Group 2 in Appendix 4, the references to the use of boiled water and use of medical care establish a possible link between the traditional illness called *sobre-parto* and the medical concept of a post-partum infection. Further in-depth research with selected women who have had this experience and with physicians or nurses who had cared for women coming to the hospital during the immediate post-partum period would establish the degree of overlap or congruence between the two conditions.

Other insights derived from re-reading the data may lead to a revised set of priorities (such as the recognition of common disease problems for which there are no immunizations) or recognition of an additional need (such as a preference for post-natal rather than pre-natal care) as well as a completely new piece of information (such as *sobre-parto* and *pasmo* being disease categories not recognized by Western medicine). The focus group, like other qualitative methods, permits the investigator to reason empirically, moving from particular facts to a broader generalization.

Reliability and validity

Focus-group data can be tested for reliability by comparing the responses of focus groups. For instance, if most groups mention measles as a major health problem, then one can be confident of the reliability of reporting. However, if no two groups give the same response as an explanation of the cause of measles, one should not place too much faith in the reliability of the responses. Secondly, one can also compare focus-group findings with those from other methods of data collection, such as structured questionnaires, clinical histories or medical records, or immunization records on Road to Health Cards.

The narrative statements in Appendix 4 demonstrate another example of reliability testing across groups. Each of the six groups gave similar answers with respect to precautions to be taken during the post-partum period, even though each group's answers were expressed in different ways.

In order to avoid jeopardizing the validity of focus-group data, every precaution must be taken to avoid finishing participants' responses, or asking leading questions that can hinder validity. Finally, the health-education lecture must be saved for another occasion. The purpose of a focus group is to gather data relevant to the respondents' point of view, not to provide them with 'correct' textbook responses. This, of course, does not preclude the appropriateness of giving information in response to questions raised by those being interviewed. Ideally, such a question-and-answer session should be separated from data collection by a clear break in the proceedings, perhaps after refreshments.

Focus-group limitations

While focus groups are an effective research method in many situations, their applicability is not universal (Morgan and Spanish 1984; Morgan 1988). A researcher has less control over the direction of the discussion in a focus group than a one-to-one setting, whether it be an in-depth interview or the application of a survey. An uninterested or otherwise determined group may require a strong hand. The necessity of preserving the context of the data gained through focus groups may make the data more difficult to analyse, unless a researcher is very familiar with the setting. Because of the contextual nature of the data, it is also more difficult than in a survey setting to train a team of interviewers to assist in the data collection (Willms and Lange 1992). Well-trained interviewers must know not only the instrument, but also the cultural context in which they are to work. Because focus-group participants are rarely selected randomly, some responses may be non-representative.

Finally the sheer logistics of conduct and analysis of focus-group research, including the selection and assembly of representative groups of respondents, taping and transcription of the narrative, and, sometimes, translation to the dominant language, require more time, money, and energy than one initially expects (Knodel and Pramualratana 1987). Selective analysis of two or three of the most revealing responses can be helpful, but will involve trade-offs. Selecting a narrowly focused topic at the outset is still the most effective safeguard.

When using focus-group findings to illustrate a health problem or a specific group's understanding of the causes and preferred treatments of a health problem, it is also important to remember not to ask more of the data than they can give. The primary purpose of the focus-group method is to illuminate, to describe, and to explain narrow categories of inquiry within the context used by the respondents.

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Appendix 1

Immunization drop-outs and maternal behaviour: focus-group question guide

Questions for use in the development of focus groups for evaluation of drop-out rates in immunization campaign in Liberia, West Africa.

I Introduction

The question set focuses on gathering information on four levels:

- A. Understanding the health and illness reality as perceived by the group being interviewed.
- B. Identification of problems in the current delivery system according to each of the groups being interviewed.
- C. Recommendations for changes or improvements as suggested by each of the three groups.
- D. Educational reinforcement of the importance of vaccinations to the health status of children under five.

II Focus-group guiding questions for mothers

1. What are the major health problems for children in this part of the country?
- 2a. (If vaccine preventable diseases are not mentioned, ask 2a before 2b). Are any of the diseases for which there are immunizations a problem among your children?
- 2b. (Use 2b only if vaccine preventable diseases are mentioned). Can some of these diseases be prevented by vaccination?
3. Which ones? Can you name them?
4. Have you received vaccinations for any of these diseases for your own children?
5. Where do you get these vaccinations? Any other places? How far do you have to walk (ride in taxi) to reach the vaccination post? How long does that take? (In case of the taxi ride) How much does that cost?
6. When do you get these vaccinations? Any other times during the year?
7. Are there any problems in getting these vaccinations for your children?
8. Can you describe any of these problems which you or your co-workers have had, especially those at the health post or the site of vaccinations in greater detail?
9. What changes would you like to see made in the vaccination program?
10. Have other health workers with whom you have talked made suggestions for improvements in the vaccination program? What are those suggestions?
11. How would these changes make it easier for you to reach the goal of full immunization for 80 to 100 per cent of children under three years of age in this area?
12. Why is it so important that we continue to try to find better ways to administer vaccinations? What is it that is important about these vaccinations?

Appendix 2

Practices during pregnancy and childbirth and barriers to use of health-care services

Selected questions from Guide for focus group discussions with mothers' clubs in periurban Bolivia.

I. Pregnancy-related questions

1. When a women realizes that she is pregnant, what things does she do to take care of herself?
2. Do traditional birth attendants visit women during their pregnancy here? What things do they do?
3. What problems have you heard that women have sometimes during pregnancy? What do the women here do when then they have these problems?
4. Where do you prefer to give birth (at home or at the hospital/health post)? Why do you go (or not go) to the hospital or health post to give birth?
5. Who ought to be with the woman during the birth? What things do each of those persons do to help her?

II. Barriers to use of health services

6. When a woman is pregnant, do you think that she ought to go to a doctor or the health post for prenatal care?
7. What does the doctor do during the visits? Why are these things done? What do you think of the things the doctor does?
8. How far is the health post from you home? How long does it take you to get there? How do you travel (vehicle or on foot)?
9. Do you know the health services offered by the health post? What are they? What do you think of these services?
10. Do you know the vaccination that is given to pregnant women? What does this vaccination do? Is it good or not?
11. Have you ever used the services offered by the health post in your locale?
12. What suggestions do you have for improving those services?

Appendix 3

Responses to village mothers participating in focus groups in Bomi County, Liberia, West Africa

Focus: understanding the health and illness reality as perceived by the group being interviewed.

Question 1: What are the major health problems for children in this part of the country? ... or in Liberian English ... 'What kind of sicknesses give your children a hard time here'?

- G1. (Tarkpoima) pneumonia, tetanus, chicken pox, fever, malaria, running stomach, measles, polio, convulsions.
- G2. (Beh Salee) pneumonia, fever, measles, vomiting, running stomach, jerking disease, malaria, polio.
- G3. (Beh Town) diarrhoea, scabies, open mole, measles, thrush, tetanus.
- G4. (Bopalu) thrush, measles, open mole, malaria, whooping cough, craw craw, scabies, diarrhoea.
- G5. (Gbama Town) diarrhoea, cough, craw craw, thrush, measles, tetanus, whooping cough, polio.
- G6. (Gohgan Town) fever, cough, open mole (dehydration), vomiting, diarrhoea, tetanus, measles, scabies, whooping cough, polio.
- G7. (Mlay Town) measles, scabies, cough, thrush, measles, whooping cough, tetanus.
- G8. (Malema Town) malaria, vomiting, diarrhoea, fever, whooping cough, cough, pneumonia, measles, tetanus.
- G9. (Mecca Town) malaria, vomiting, diarrhoea, fever, whooping cough, cough, pneumonia, measles, tetanus.
- G10. (Suehn Town) measles, chicken pox, thrush, scabies, polio, diarrhoea, dehydration, vomiting, cough, fever, whooping cough, tetanus.

Appendix 4

Barriers to use of pre-natal care services in highland Bolivia. Examples of 'emergent themes'

Question string: (a) What do you do, what special precautions do you take, during pregnancy ... (b) ...during the delivery... (c) during the post-partum period?

- G1. The only problem that we know in this community is the *sobre-parto* (post-partum infection). This is when the mother doesn't take care of herself well, like she gets in contact with the cold or cold water; *sobre-parto* is a type of paralysis...your feet swell...you get very sick...and this is the reason many women are taken to the hospital, because if you don't get attended to rapidly you die.
- G2. After the delivery you can have several problems such as the woman swells up; she gets *sobre-parto*...this is because she doesn't take care of herself...she comes in contact with the cold or she drinks cold water...when we have a problem after delivery, we go directly to the doctor, because it is very dangerous and we could die. If we get haemorrhage, we go directly to the hospital. The other thing that can happen to us *pasmo*...that's when our hair and teeth fall out, when we drink cold water...for that reason we always drink boiled water...*sobre-parto* is this...the mother is yellow she swells up...she can't walk; she becomes very cold as though she had taken a bath in cold water...and afterwards she can die if she doesn't get rapid medical attention. Sometimes the mother with *sobre-parto* can be saved, if they take her quickly to the hospital...other times not even the doctor can save her...if it is very serious.
- G3. The only problem that she can have after delivery is *sobre-parto*...that is when the mother doesn't take care of herself well...she comes in contact with the cold...or after a day she begins to wash with cold water. When she gets sick with *sobre-parto* she should go straight to the hospital, because if she doesn't she can die.
- G4. We only know *sobre-parto*. That's when the mother gets up very quickly from the bed, and she comes in contact with the cold or a lot of heat, then she swells up, she has chills and a fever, and she suffers more than during the delivery. It has happened to me...my stomach started to hurt again after the delivery. My head hurt. I swelled up from my feet to my head...they had to take me to the hospital in Quillaquolla where they gave me lots of medicines and injections...I was so sick that I could not even open my eyes. Before we had the health post here we saw many cases of *sobre-parto* here, now that we have the post, we are well taken care of and nothing happens to us.
- G5. *sobre-parto*, *pasmo*, blood loss, and retained placenta.
- G6. One of the problems we know about is *sobre-parto*...that's when the mother swells up...she has chills...because she got up before she was healthy and strong...I got it because I got up too soon from the bed...the wind hit me...I swelled up all over...I couldn't even see, but I got better without any medicines.

Forum: Focus groups for health research



The value of focus-group research in targeting communication strategies: an immunization case study

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Introduction

What is the value of focus groups: what happens when focus groups are used in conjunction with other research techniques? How can focus groups identify key problems: what happens when the main communication channel is, in large part, responsible for creating these problems? How can focus-group results be used: what is their role in developing strategic approaches to problems?

This article describes a case study that addresses these questions within the context of immunization in three African countries. We explain the project objectives and approach; describe the focus-group methodologies; present key focus-group results which revealed that health-worker behaviour was a key barrier to improving immunization coverage; outline strategic solutions developed from focus-group and other research findings; and discuss the relationship between focus-group and other research results in developing communication strategies.

Background

In 1992 and 1993, the United States Agency for International Development's HEALTHCOM Project, implemented by the Academy for Educational Development, participated in the Measles Initiative, a project designed to assist the Ministries of Health in three African countries to develop ways to increase and sustain immunization coverage. Vaccination coverage had been falling from the high levels reached in the late 1980s through costly, intensive 'vaccination day' campaigns.

In each country, the project team conducted a combined vaccination coverage and quantitative Knowledge, Attitude and Practices (KAP) survey. The results in Kenya and Burkina Faso revealed high rates of dropout, many mothers beginning the vaccination cycle for their children but not completing the series. These mothers had demonstrable access to services as they came for the first immunization, but were not returning for the full series. The results in Niger showed that even families with access to immunization services were not using them at all.

Additionally, a situation analysis was carried out including facilities assessment, observations of vaccination sessions, and exit interviews with mothers to evaluate their knowledge and recall of key information as well as their satisfaction with the contact. As part of this situation analysis, a series of focus-group discussions was conducted in each country to investigate why vaccination coverage was declining. The main focus-group research objectives were to understand why parents who begin their

child's immunization series fail to complete it and why people in areas with access to vaccination services fail to use such services.

Focus-group methodology

Participant profiles

The sample characteristics and number of focus groups varied by country, because of different country priorities, fathers being interviewed in Burkina Faso and Niger, and health workers being interviewed in Niger and Kenya. Separate interviews were conducted with the parents of non- or 'less'-vaccinated children and the parents of fully or 'more'-vaccinated children in order to investigate the difference between them. Definitions of degree of vaccination coverage and age of children for screening varied by country, and were based on recommendations of the local vaccination staff.

Burkina Faso

Eleven focus groups, six in BoulkiemdŽ province and five in PassorŽ province, were conducted in public buildings and under trees in July 1992 by moderators employed by the vaccination program. Three groups were conducted with parents of children with one vaccination contact, and eight with parents of children with more than one vaccination contact. While some groups were conducted near fixed vaccination centres, most were conducted in outlying areas as most of the population of these provinces are vaccinated by outreach teams some distance from the fixed centre. Six were conducted with mothers and five with fathers, all parents having at least one child aged nine to 18 months.

Kenya

Fifteen focus groups were conducted in July 1992, six in Kisumu district and nine in Siaya district, five with mothers of completely vaccinated children under 15 months interviewed at health facilities, five with mothers of incompletely vaccinated children under 15 months interviewed at markets, shopping centres and chief's camps, and five with community health workers. Six in-depth interviews were also conducted with vaccinators, three in each district. The research was conducted by Kenyan national staff and consultants.

Niger

Thirty-six focus groups were conducted in Tahoua and Maradi Departments by the immunization specialist of the Health Education Unit during March and April 1992. In each of three vaccination centres per department, an interview was conducted with the vaccination program manager and three groups were conducted in a village with a vaccination centre. Then three more groups were conducted in a village located from three to eight kilometres from the vaccination centre. For each set of three groups, one was of fathers, one of mothers whose children had at least one DPT (Diphtheria-Pertussis-Tetanus) or measles immunization, and one of mothers whose children had no vaccinations. All parents had children aged six to 18 months.

Procedure

The procedure varied between countries. Usually, after the introduction, the moderator started by asking questions about children's health in general. This was followed by specific questions on measles, which is normally the last vaccine in the series. Then knowledge, attitudes and practices related to immunization in general, and reasons for completion and non-completion of vaccination were probed, including experience with and attitudes toward vaccination services. Other topics covered in one or more of the three countries included the value and use of vaccination cards, how to improve accessibility to vaccination services, and the awareness and behaviour of women *vis-à-vis* tetanus toxoid vaccination. Discussion of current and preferred sources and channels of information was also

encouraged in all three countries. In Burkina Faso, two or three of six pre-messages were reviewed by participants, using a concept-testing approach to see whether the messages were already known, understood, or salient to parents.

Findings of the focus-group research

The findings showed a similar dichotomy in all three countries: while health workers were seen as the most credible source about vaccination and children's health in general, their job performance and attitudes presented a major barrier to mothers' continuation and completion of their children's vaccination series.

However, the factors causing this problem differed between countries. This implied that the program strategy should also differ by country. We next describe the principal problem for each country revealed by the research results, and the programmatic solution developed to surmount it.

Burkina Faso

Problem: Focus groups revealed relatively low levels of knowledge about how often or when a child should be vaccinated, and that people depend on the health worker to tell them what to do. Observations indicated that health workers did not give essential information to mothers during outreach vaccination sessions in villages, which were chaotic and disorganized and only allowed 15 seconds of contact per shot between vaccinator and mother.

Solution: The project team worked with health workers to identify feasible, realistic performance standards for their special outreach communication situation, and developed in-service training and a training video to illustrate how the essential information could be provided in a real life, noisy, confusing field setting. The skills were presented as new tools to tackle the low coverage rates rather than simply as new tasks. Since the interaction time between health workers and mothers is limited, the project also developed illustrated print materials, a song and a radio soap opera to provide directly to parents more detailed information, and motivation to complete the vaccination series.

Kenya

Problem: Health workers had mastered communication skills and content, and scored well on communication skills when their behaviour was observed by the project team, but mothers reported in focus groups that the health workers rarely talked to them. The focus-group setting also allowed mothers to discuss poor treatment by workers.

Solution: Focus-group research conducted with health workers indicated that appealing to their own need for respect could be an effective motivator to behaviour change, and that they wanted detailed and specific 'scientific information' to assure them that it was safe to give DPT to a feverish child, and that the Oral Polio Vaccine given to a child with diarrhoea would be effective. Health workers received official technical briefs created by senior staff to reinforce the technical need to immunize sick children, and the importance of good communication with mothers by health workers. The project also developed methods for health workers to monitor dropout levels from one vaccination to the next in order to provide feedback, reinforce new behaviour, and better target their continuing efforts.

Niger

Problem: Health workers had not been trained in interpersonal communication and did not know how to communicate information to mothers. They also did not show mothers respect. In focus groups, mothers said that negative behaviour of health workers in other health services, particularly maternity services, was a major barrier to their seeking health services of any kind, including children's vaccinations.

Solution: The project team worked with health workers to determine priority communication behaviours and key vaccination messages. These discussions resulted in the development and implementation of a training methodology and message content. This health-worker-based training concentrated on personally communicating key messages to the mother during the vaccination, and on using storytelling to make the group health talks more compelling. Through this training workshop, health workers learned how much the mothers rely on them for correct health information, and the experimental exercises encouraged health workers to be respectful to mothers. The trained health workers appreciated and have implemented the approach, and health workers from other parts of the country have requested similar training.

Value of the focus groups and synergy with other research results

The results of the focus groups were valuable to the project primarily because they provided an understanding of why the mothers in each country were not completely immunizing their children. While the results provided insight into the overall situation and enabled the project to develop country-specific strategies, the depth of insight would have been greater if the research had been executed more professionally: if screening criteria had been consistently applied; if moderators had been better at probing and facilitating group interactions; and if the transcriptions and translations of tapes had been done by more experienced people. Experience with training novices to do focus-group research shows that it is extremely difficult to select, train, and develop skilled researchers in a short time, particularly when focus groups are conducted in a language not understood by the trainer.

While the focus groups contributed significantly to an understanding of the reasons for poor vaccination coverage, focus-group research alone did not yield all the necessary data. Other research for the situation analysis included facilities assessments, observations of vaccination sessions, exit interviews with mothers, vaccination coverage and KAP studies. It is the combination of results from all these studies that enabled each country's project team to identify and rank in importance the information and communication techniques that were the key to improving health-worker communication with the parents, with the objective of motivating them to complete the vaccination schedules of their children.

It was the synergism of the multiple sources of information that provided the key to solving the multi-dimensional puzzle. Each filled in different information gaps and added richness, depth and completeness to understanding the problem. For example, in Kenya, observations alone would have suggested that health workers provided the necessary information to mothers and it would have remained unclear why mothers were not completing the vaccination series. On the other hand, if focus groups alone had been conducted, since mothers declared that health workers did not provide necessary information, the proposed solution might have been to implement technical training for the health workers on the assumption that the reason they did not provide information was because they did not know how. This approach would not necessarily have worked, given that the obstacle was due more to attitude or a lack of motivation, than to a lack of knowledge.

If sessions had not been observed in Burkina Faso, the constraints of the chaotic outreach vaccination sessions, which allow 15 seconds for the health worker to communicate with each mother, would not have been revealed. The focus groups showed that the mothers respected what the health workers said, and the exit interviews showed that they remembered what the health workers told them. The combination of these findings from different methodologies led to the development of two key messages that the health worker could deliver in 15 seconds.

If focus groups had not been conducted in Niger, the conclusion would have been, based on the exit interviews, that mothers were satisfied with health-worker behaviour. But in focus groups, when mothers were away from the watchful eye of the health workers and were encouraged to express their

opinions in a non-direct fashion, the main reason they gave for not vaccinating their children, or for incompletely vaccinating them, was poor treatment by health workers in general.

The quantitative survey research and observations in each country revealed the relative importance of the causes of the problems; the focus-group research results, in explaining why the problems existed, proved invaluable by leading to solutions. In sum, the returns to qualitative research can be enhanced by conducting it in conjunction with pertinent quantitative survey or observational research.

Aren't sexual issues supposed to be sensitive?*

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Introduction

Social researchers have commonly assumed that asking people about sexual matters, especially their own sexual behaviour, beliefs or preferences, requires treading on very personal ground and involves a high risk of offending and alienating respondents. Thus it was with some apprehension that we began our qualitative study of male extramarital sexual behaviour in Thailand a few months ago.

Our aim in the project is to explore the influence of wives and close friends on married Thai men's attitudes and behaviour with respect to commercial and non-commercial extramarital sex. We are using focus groups to identify prevailing norms, attitudes and general observations regarding this topic, and in-depth interviews to explore personal behavioural patterns and their cognitive justifications. Our study design includes 14 focus groups and approximately 50 in-depth interviews in Bangkok, two provincial towns, and two rural areas within a 30-kilometre radius of the towns. Focus groups were held separately for men and women. Both focus groups and in-depth interviews were equally divided by gender.

Our choice of qualitative data-collection methods was based on some of our earlier work which suggested that these issues were too subtle and complicated to be adequately explored using standard survey techniques. Our current project seems to confirm this. For example, several of our male respondents at first denied having extramarital sex but acknowledged it later during an interview. We are not attempting to determine precise population prevalences of particular attitudes and behaviours, but rather to delve into them in some depth. We have tried to allow the participants to explain matters from their own perspective by adapting probes to the particular line of conversation rather than using a predetermined format.

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During the planning phase of the project we discussed at length how best to promote focus-group discussion on this topic, including building rapport at the beginning of the session, carefully introducing and phrasing potentially delicate topics, and screening candidates to bring together a group of participants with similar sexual experiences. However, as our data-collection phase nears completion, we find that there has been surprisingly little resistance to the discussion topic. Since we have not yet begun systematic data analysis, our commentary is limited to observations made during the data-collection process along with some *post hoc* interpretations. Our discussion is necessarily impressionistic and tentative at this point. Nevertheless, we feel confident in stating that most participants appear to have been open about their views during the focus groups, and quite frank about their own sexual experiences during the in-depth interviews. In line with the theme of this Forum, we concentrate on our experiences with the focus-group method, limiting comments on the in-depth interviews to ones that shed light on the focus groups.

Some observations

We anticipated that some individuals would have little trouble expressing their views on the topic, since we had all met Thais who were quite comfortable discussing sexuality with relative strangers. What was surprising was that so few of the participants expressed any discomfort, and that women as well as men appeared at ease with the discussion. The men's and women's groups were conducted separately and covered a broad socioeconomic range, but background differences appear to have had little impact on willingness to express personal opinions on the issue of male extramarital sex.

Another surprise was that differences between the sexual experience of group participants did not appear to inhibit discussion. We had originally planned to screen for commercial sex patronage by the male participant (or by the female participant's husband) in order to ensure that group members would have a common experience base that would minimize intra-group conflict and stimulate interaction. However, for a variety of practical reasons, we decided to forgo this aspect of the design. As it soon became clear that experiential differences did not appear to dampen the focus-group discussions, we abandoned this requirement, saving considerable time and effort.

We saw very little condemnation or judgement even when strong and quite contrary views were aired. Opinions within the men's groups were quite heterogeneous on many issues, but the participants were quite careful not to condemn when disagreeing. This was also the case in the private individual interviews where there was no-one else present to disagree. One male in-depth participant who had never visited a prostitute was asked if he felt that going was 'ugly' (*nagliat*). Not at all, he insisted; it simply was not right for *him*. Differences of opinion that arose in the focus-group sessions did not seem to inhibit discussion, given the generally congenial atmosphere fostered by the moderator and participants alike. Opinions were more homogeneous for the women, the vast majority of whom were strongly against male extramarital sex. However, when the occasional woman participant mentioned that she was indifferent to her husband's patronizing commercial sex workers, other women did not strongly rebuke her but at most questioned how she was able to tolerate it. In one instance she was referred to as being too 'good-hearted'.

We anticipated another problem if curious onlookers attempted to observe the focus-group proceedings. We did post a sentry at the entrance to try to distract intruders, but not all could be prevented from entering the site. Some sites had several entrances, and most intruders did not seem to understand our need for privacy. We were surprised to find that the effect of most uninvited observers was by and large quite benign. Generally they were ignored by participants. A few would have their say, but virtually all left after a relatively short time.

In one rural male focus group, an elderly man wandered onto the site and, to the delight of the young men comprising the group, provided a number of interesting insights on male extramarital

behaviour; eventually he wandered off. Some time later, a second uninvited man came in with a young child and sat at the edge of the group. He also offered an occasional contribution that was well received by the group, and likewise eventually went away.

One of the women's groups was visited by the daughter-in-law of our local contact. The moderator politely told her that she was not supposed to be in the group but she stayed on anyway, sitting at the edge of the circle of participants. Given that her father-in-law had helped us so much, it would have been awkward to insist that she leave. At first she just listened quietly but ultimately she could not resist joining in the discussion, illustrating the interest of the topic to married women in Thailand. As it turned out, she simply became another participant whose views were compatible with those of the group and who seemed to have no more influence than anyone else present.

Some intruders were disruptive. At an urban slum site, one young man appeared at the window and began heckling the participants, whom he knew, implying that he now had confidential information regarding their behaviour that he was going to make public. His assertion was largely untrue since we were discussing mainly attitudes, not behaviour, but could still have inhibited the participants. We were eventually able to persuade him to leave. Later, a second individual (this one intoxicated) entered the room with a belligerent air. He believed that one of the observers (a foreigner) was there to recruit young girls from the community into prostitution, such a situation having recently been reported in the media. Only with considerable help from a Thai colleague was he convinced otherwise and persuaded to leave. Even though the group continued during the disruption, his presence was certainly an unwelcome intrusion and clearly annoyed several of the participants. Although these disruptions interrupted the flow of the discussion, the effects quickly wore off after the intruders left.

Another concern that arose during the planning phase was the need to make it clear that participants were not expected to reveal personal experiences during the focus groups. We anticipated that some of the group members might know each other and could therefore incriminate themselves, but we also wanted to maximize group interaction and were afraid that discussion would be hindered if participants felt that they were required to reveal their personal histories. We believe that placing an emphasis on opinions rather than personal behaviour helped relax the participants and open up the discussion, but we were surprised that many were still so candid about their own experiences. In fact, on a few occasions some of the participants became so involved in the discussion that we felt compelled to remind them that they need not reveal personal information.

Since our expectation was that participants might be reluctant to express even their opinions on the central topic of extramarital sex, we built into the guidelines an extensive warm-up period during which we discussed a number of issues, such as the characteristics of a good or ideal spouse, the importance of virginity at marriage, and premarital sexual behaviour. We found instead that there was such keen interest in the overall subject that we could easily have spent the entire session on these earlier topics, and especially premarital sex. In fact, because of difficulty closing the discussion of the warm-up topics, in the first few male groups we were unable to cover the main subject as thoroughly as we wished. In order to ensure more complete coverage, we decided to introduce the primary topic earlier in the session after only a brief introduction.

The women's groups also warmed quickly to the theme of male extramarital sexual behaviour and seemed quite comfortable presenting their views. Many women seemed to welcome the opportunity to share their views on a topic that was obviously quite troubling for them. They particularly seemed to appreciate hearing how others coped with this problem. In some cases, the experience may have even been therapeutic since it enabled the women to vent their anxieties in a supportive setting.

Possible explanations

What accounts for this degree of openness on a topic that is generally assumed to be sensitive? First, many of the participants seem to view sexual behaviour as part of day-to-day life rather than as a confidential matter. This is true especially for commercial-sex patronage which in Thailand frequently occurs with groups of close friends. Few unmarried men take precautions to hide the activity, but married men do express more concern about public exposure, and especially about their wives finding out.

The fact that there seems to be much discussion among friends of the same sex on the issue of male extramarital sexual behaviour indicates that the topic is not off-limits. Both male and female participants were able to provide detailed examples of acquaintances' extramarital sexual behaviour, and had clearly given these issues much thought before entering the session. This was probably facilitated by the fact that most participants were frankly told during screening and recruitment what topics would be discussed. In this respect, various intermediaries who helped us recruit, and who were in general well-known to the participants, were particularly helpful.

Another factor that undoubtedly promoted openness was the focus on male sexual behaviour. Both men and women indicated that while having multiple partners was unremarkable for a man, it would certainly be noteworthy for a woman, and would definitely jeopardize her marriage. Many female participants described multiple partners as 'natural' for men but not for women. Most men clearly enjoyed talking about various sexual relations and providing their opinions. The women generally seemed to appreciate having the opportunity to discuss an issue that was of interest and indeed a major concern for most of them. The female moderator emphasized the common experience of married women, which may have fostered an atmosphere of camaraderie and empathy.

A third factor that may have promoted openness is the general tolerance for differences of opinion in Thai society. While there appeared to be no strong sense that sex is a private issue, there was a feeling that each individual is entitled to his or her own opinion, whether or not it conforms to a group consensus. In fact, this feature allowed a broader range of opinions to emerge than would have been the case had there been strong pressure to conform to the majority opinion.

A fourth factor is that the central concern of the focus-group discussions was opinions and not behaviour (although, as noted above, many participants chose to reveal their own experiences anyway). Stressing that personal revelations were unnecessary seemed to put the participants at ease, and perhaps to create a sense of free participation and good will.

All this is not to say that the focus-group experience was entirely stress-free. Some participants, who initially agreed to attend, later cancelled or did not appear for the session. Perhaps they had reservations about the discussion topic. One husband followed his wife to the meeting site, clearly concerned about what would be discussed. Some participants (both male and female) left before the focus group ended, but this seemed to be because of pressures on their time or some urgent need for their presence elsewhere rather than unease about the discussion topic.

Establishing rapport was very important for some individuals. A few were initially reserved but had very thoughtful answers when they were queried directly. Some groups had one or two participants who seemed uncomfortable and never appeared to relax. It is possible that the topic could have contributed to their unease, but so could have a number of other factors, for example, shyness, presence of foreigners, poor personal relations with another group member, and so on. It is noteworthy, however, that our experience in this respect does not seem to differ from our focus-group research on other supposedly less sensitive topics.

Conclusions

Collecting data on sexual issues, and especially on attitudes, opinions and general perceptions as distinct from personal behaviour, does not necessarily have to be a delicate operation. Getting respondents in in-depth interviews to discuss their own extramarital sexual activities often requires particular interviewer skill, but may be surprisingly feasible if it is attempted in an appropriate manner. The participants in our study have been remarkably open about their opinions, and quite often their experiences, regarding male extramarital sexual relations. We attribute this to the fact that our questions addressed an area that most Thais do not find especially embarrassing, and to a number of general cultural features of Thai society. Having participants who are relatively articulate is desirable, and can be achieved by proper screening. An attractive feature of focus-group methodology that served us well in the current project is its adaptability to unanticipated findings in the field. In this case we were able to adapt the design and modify the presentation of our guidelines more closely to match the realities of the fieldwork situation with respect to our particular research topic.

As a final comment, we believe that the focus-group method can be used effectively in Thailand on a variety of topics, not just on sexual matters. Most of the authors of this commentary have extensive experience with focus-group research on other topics, such as issues related to the elderly, education of children, and reduction in family size. One likely reason for the general suitability of the method is that group discussions are a rather natural mode of interaction for Thais. One very common form of socializing, particularly for men, is the *wong lao* (drinking circle) where friends sit on the ground in a circle and drink whisky. Activities such as card playing and other forms of gambling are also common and follow the same formation. Most importantly, eating meals, the most common setting for social interaction, usually follows this pattern of sitting in a circle. That group discussions are a commonplace occurrence in all these situations probably helps to account for the ease with which most focus-group sessions proceeded. Of course, the more salient and interesting the topic is to the participants, the more lively and sustained will be the discussion. And here sexual issues have an edge.

Using focus-group discussions to explore the role of women's groups (tontines) in family-planning information dissemination in Yaoundé, Cameroon*

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Background

In Cameroon, women operate a unique community network known as tontines. Formed by solidarity and common interests, the tontine is a voluntary credit and thrift association that traditionally serves both economic and social functions. Tontines assemble regularly to discuss women's issues and for the members to contribute money (Rouchy 1983; Essombe-Edimo 1985). Tontines provide a unique opportunity for women to discuss health and family-planning-related issues in an environment they control. As family planning acceptors, women can advocate family planning, and the group as a whole can support new and faltering acceptors.

Study objectives

Two complementary research activities—a social network survey and focus-group discussions—were conducted in late 1993, to develop appropriate information, education and communication (IEC) interventions to increase the use of modern family planning methods among the members of urban women's tontines.¹ This study of women's tontines was limited to Yaoundé, Cameroon where family-planning services are more accessible. However, by conducting the research among ten groups selected to represent the provincial and ethnic diversity of Cameroon, a range of attitudes and use of family planning could be explored.

Advantages of focus-group discussions

Focus-group discussions proved to be socially appropriate methods, and were particularly effective in collecting information about sensitive issues such as family planning. Moreover, by using focus-group discussions we could rapidly generate results from which programmatic decisions could be taken (see Baron et al. 1993). Finally, focus groups should be viewed as a process, a means of gathering context-rich information which go beyond the discussion session themselves.

Focus-group research provides quick results

Results of the focus-group discussions were available in a very short period of time. The planning, implementation, data transcription and analysis were completed and presented in a preliminary report in less than six weeks. Study results which confirmed women's groups as critical and viable channels for disseminating family-planning information were immediately used by decision makers to negotiate for another project. In contrast, it took two months for data collection, entry and cleaning for the social-network survey conducted at the same time with the same groups.

Socially appropriate means for data collection

The liveliness and animation expressed by participants confirmed that focus-group discussions are socially enjoyable and an appropriate means for data collection. Participants were eager to talk about sexuality and family-planning practices, topics considered too sensitive for open discussion in most Cameroonian communities. Participants interacted and influenced each other. It was not uncommon for participants to change their views during the course of a session.

Discussions reinforced the friendliness that existed among group members. Participants spoke freely, joked, teased each other and often wanted to continue the discussion beyond the allotted time.

¹ This research is part of The Cameroon Child Spacing Promotion Project, a collaboration between the Directorate of Family and Mental Health of the Ministry of Public Health (MOPH/DFMH) and the Johns Hopkins University School of Hygiene/Population Communication Services (JHU/PCS).

After the initial introductory period, participants generally seemed to forget that it was a study, a good indication of the degree of their involvement in the discussion.

Focus-group research is a process

The focus group should not be considered as a time-bound activity, but as a process that goes beyond the discussion session itself. Important insights and information were gained during the organization of the research and by observing, listening to, and participating in discussions that occurred around and beyond the focus group. For example, during an informal conversation that followed the focus-group discussion one participant mentioned that the association could provide financial assistance to members to purchase family-planning methods.

While some groups were not very dynamic, others were highly efficient in organizing or facilitating the research activities. Thus, the organizational aspect of the research itself provided insight into the varying levels of structure, mobilization capability and communication efficiency of each tontine.

Difficulties encountered and solutions implemented

Coordination of the focus groups' discussions

To facilitate the flow of research activities in a relatively short time period, one or two members in each group volunteered as Study Coordinators. They were specifically responsible for selecting the time and place for the focus-group discussions, contacting the participants, and facilitating the work of the interviewers for the network survey. This also gave groups the opportunity to become actively involved in the organization of the research.

Because participants spoke in different languages, and made specific requests it was important to plan and coordinate the teams' activities. Even with such planning and coordination, however, all the focus-group discussions started between 20 minutes and one hour late. Although this tardiness did not hamper the effectiveness of the focus-group discussions for this particular study, it is a problem that should be addressed before discussion sessions. It should be noted that in Cameroon it is acceptable to come an hour or more late to a meeting.

It is socially acceptable for the host to offer food and drinks to guests, and guests are expected to accept such favours. It was sometimes very difficult for the research teams to honour these hospitable behaviours because of prior research commitments. In some cases researchers felt that the women went to too much trouble to prepare food, especially since everywhere women seemed poor.

Natural setting is not always the ideal situation

The focus-group discussions took place in familiar settings such as the group headquarters or in the home of a member. While the natural setting was ideal for free discussions, noise and lack of privacy were common problems.

For example, three couples lived in the house where one focus-group discussion was conducted. During the session radios were inadvertently turned on in the bedrooms, making the discussion difficult to follow. Sometimes children played loudly or peeped into the room where the focus group was being held.

Group composition and self-selection of participants

Attention should be paid to the composition of the focus group as it may influence the outcome of the discussion. All focus-group participants were self-selected women. The rationale in allowing self-selection was to avoid imposing a decision from the outside and to leave the decision-making in the hands of the women themselves. This may have introduced a bias towards more active and outspoken individuals. In addition, higher-status members were heavily represented in the focus groups. This

might have biased responses toward an apparent consensus (the leader's opinion) and cultural norms, but provided some interesting information on the structure and social organization of the groups. In most cases, the group president or other members of the executive committee participated in the discussions. While this might have constrained expression by some of the participants, it also provided a valuable insight into the existing hierarchy and dynamics of the groups. Women preferred that information transmission should follow the existing hierarchy in their groups.

Familiarity of participants heightened the discussions

Focus groups were organized among members of the same tontine. Since members in each tontine meet weekly or monthly, they were familiar with each other. Despite our original concerns, we found no indications that the participants' familiarity with each other was hindering expression on sensitive topics, or limiting self-disclosure. Rather, familiarity of focus-group participants heightened their participation and enriched the data obtained.

Often during the discussions, participants cited personal experiences to support ideas advanced by the group. For example, to support women's determination to use effective contraceptives, one woman who has had ten children revealed that she uses modern contraception without the knowledge of her husband.

Effects of homogeneity and heterogeneity of groups

Although the members of each tontine come from the same ethnic group or belong to an interest group, their education, age, profession, and socioeconomic status are different. This socio-demographic diversity was apparent in the composition of the focus groups. For example, a mother and her daughter were participants in the same group. Another focus group counted a senior official from the Ministry of Health and a petty trader.

Rather than limiting the discussions, this heterogeneity provided a more complete picture of women's views and concerns. While some of the more educated women expressed broader ideas, the less educated ones were more practical. As usual, in some groups some participants said very little and others talked too much.

Consensus versus divergent views

Depending on the topic discussed, divergent opinions were more or less frequent among participants. For example, most women had similar views on gender roles. In contrast, while certain participants in the same group felt couples discussed sex, others held contrary views. Interestingly, questions on sex communication often brought drastic changes in the rhythm of the discussion as many participants started interjecting and simultaneously talking among themselves. Although moderators sometimes tried to achieve consensus, participants often wanted to maintain their individual perspectives.

Sometimes, apparent consensus was eroded by further probing by the moderator. In one Moslem group, there was initially a strong consensus for large family size. However, after probing, women started talking among themselves and individual opinions emerged beyond the norm for large families. Strikingly, one of the participants who had ten children told us she wished she had only two.

Moderators observed that where differences of opinion existed it was rewarding to participants when positions were acknowledged. It was even better if the moderator stated openly that the differences of opinion were acceptable and appreciated.

Language

English, French and Pidgin English languages are widely spoken in Cameroon so the participants and researchers spoke at least one or two of these languages. Sometimes, the conversations shifted from English to French and *vice versa*, a common occurrence in bilingual Cameroon.

Some participants could not express themselves very well in the three predominant languages. For example, some Moslem women were fluent only in Hausa. In this case, the moderator and the note-takers who were fluent in Hausa worked with the group.

Other problems occurred when some participants started talking in their dialect. Cameroon has over 200 dialects so it was impossible adequately to prepare for this problem. Participants were asked to repeat their comments in another language more familiar to the moderator and note-takers. In some instances, a member of the group served as an interpreter.

Effective analysis requires planning

Planning for the analysis was necessary but time consuming. Analysis was systematized. It began immediately after each session with a review of the session by the moderator and note-takers. These discussions highlighted the atmosphere of the discussions and identified striking statements made by participants. These observations and the participants' interactions were later used to explain, understand and interpret the data.

The next steps consisted of listening to taped discussions and completing notes taken during discussions, typing the notes using a word processor, reviewing the notes using the questions from the focus-group guide, identifying themes and trends, selecting quotations to support the themes, and interpreting the findings.

Transcribing is difficult and requires skills

Transcribing focus-group discussions is difficult and should be done by people with a higher level of education.

The accuracy and rapidity of transcribing was a matter of time, group work, education, experience and participation in the discussion. Transcribers who were note-takers and had the opportunity to work together presented the best transcripts. Their transcripts were accurate, well written, complete, and had more notes on non-verbal behaviours which occurred during the discussions.

Our experience showed that the best transcriptions were those obtained by note-takers with prior experience, who have at least some university experience; if possible they should work in pairs. As discussed by Bashin and Jato (1990), transcribing in groups compensates adequately for the need for a higher level of education.

Validation of focus-group results

Although the data collected through focus-group discussion were appropriate for decision-making, the results could have been validated through other methods such as in-depth interviews with one key informant from each tontine. Additionally, individual interviews could have been conducted on a sample of about 50 people with questions focusing on the key themes and trends identified with the focus groups.

Focus-group discussions and the social-network survey were designed as two complementary activities revealing a different aspect in the nature of contraceptive attitudes and use among urban members of women's groups in Cameroon. While one goal of the network survey was to quantify results obtained in the focus groups, conversely, qualitative information gathered from focus groups will help to contextualize the findings of the social-network analysis (see Valente et al. 1994).

Focus-group discussions also provided an open forum for these women to speak. By doing so, they have become active contributors to the development of a context-sensitive family-planning program, building on the existing social structure of the tontines and responding to their needs as expressed by them.

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Focus-group research for family planning: lessons learned in sub-Saharan Africa

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Focus-group discussions provide unique insights into how people think and feel—insights that are critical to health communication. Over the past decade, focus-group discussions have proved invaluable in the efforts of the Johns Hopkins University Population Communication Services (JHU/PCS) to promote modern family planning in sub-Saharan Africa.

JHU/PCS projects in Africa regularly use focus-group discussions for three purposes: Message and materials design: focus-group discussions can reveal concerns of a particular group of people and can thus help in the design of messages that will appeal to them. Pretesting materials: presenting newly created radio, print, and video materials to focus groups can help ensure that messages are appealing, appropriate, and acceptable to their intended audiences. Training-needs assessment: focus-group discussions involving health-care providers can reveal weak areas in services as well as in skills and knowledge.

A major strength of focus-group research is its ability to gather data quickly and inexpensively. Too often, however, the process goes out of control, which results in time-consuming and costly studies. Drawing on extensive experience in sub-Saharan Africa, PCS has learned how to keep the process quick and responsive to programmatic needs. The most important lessons learned concern the number and composition of focus groups, recruitment and training of moderators, the length and content of the discussion guide, and the analysis of results.

Limit the number of focus groups

When the right groups of people are assembled, relatively few focus groups may be needed. Unlike quantitative studies, focus-group research is not meant to measure statistically significant trends or effects. Two groups may be enough. If results from the two groups differ greatly, additional focus groups should be conducted. Once the results become repetitive, however, there is no point in

continuing. In Burkina Faso, for example, more than 70 focus groups were conducted in 1989 to help design materials for a national family-planning campaign. The excess groups did not enrich the results, but merely prolonged the collection and analysis of the data. There is an important tradeoff, however: the smaller the number of focus-group discussions planned, the more careful must be the composition of the groups.

It is important to sample any geographical and socio-cultural groups that the project is meant to reach. Thus, 1992 research for the Uganda Family Planning Promotion Project was limited to just ten focus groups—a men's and women's group from each of five regions—and the research went much more quickly. The focus groups found no regional variations in attitudes and beliefs concerning family planning in Uganda. In the future, focus-group research in Uganda can be even more streamlined. Instead of sampling all five regions, groups need be held only in one rural and one urban area.

Assemble homogeneous groups

The composition of focus groups is important. Differences in sex, age, socioeconomic background, and ethnicity may inhibit some participants from speaking candidly, if at all. Experience indicates that when men are present, women are reluctant to talk, especially about personal subjects such as family planning. For example, when both men and women attended a series of focus groups sponsored by the Gambia Family Planning Association and Radio Gambia in 1990, the men dominated the discussions to the virtual exclusion of the women. The solution is separate women's and men's groups.

Less obvious but equally potent are differences in status. If one participant holds some kind of leadership position, whether formal or informal, the others may defer to his or her opinions. Thus, in focus groups held with clinic staff in the Gambia, the head of the clinic often dominated the discussion. No one was willing to contradict the boss!

Sometimes, it is impossible in practice to assemble a homogeneous group because people with similar traits are too few or too scattered. In the Gambia, community-based distributors lived so far apart that they had to walk long distances to participate in focus groups' discussions. It was only natural that they complained, especially when the moderator drove right past them in an official van on the way to the site. It would have been better to interview the community-based distributors individually at their homes. The Uganda Family Planning Promotion Project faced a similar problem of too few current users of family planning to form focus groups, and so in-depth interviews had to be substituted.

Recruit and train moderators carefully

The success of a focus group depends largely on the moderator's performance, which, in turn, hinges on a combination of education, personality, and training. A successful moderator, who should be of the same sex as the participants, has the interpersonal skills to draw out participants, the confidence and sensitivity to guide a conversation, the intelligence to process what people are saying, the flexibility to seize opportunities that arise, and the commitment to complete the more tedious parts of the job, such as transcribing tapes. In addition, moderators must be fluent in the language of the participants as well as the national language. Age can also be an issue, especially for adolescents.

Even the most talented candidates need thorough training in interpersonal communication skills and group dynamics, the mechanics of running a focus group, and the purpose of the research. Even more important than theory is practice, beginning with role plays in a safe environment and later involving focus groups in the community. The Madagascar Young Adults Sexual Responsibility Project took an innovative and highly successful approach to training. Two trainers led the moderators during classroom instruction, role plays, and practice focus groups in the community, revising the

discussion guide twice in the process. Then the trainers accompanied the moderators into the field, observing the focus groups and giving feedback to the moderators so they could continue to improve.

Keep the discussion guide brief

Focus groups should last no longer than one hour: any longer and participants become bored, restless, even angry, and moderators may also find themselves running out of tape. This means strictly limiting the topics covered. The watchword at PCS is 'sacrifice is essential to focus'. Focus groups are not a fishing expedition: they must concentrate on the information needed for the project and not collect superfluous data. If trial focus-group discussions go on too long, the moderators should revise the discussion guide or, when pretesting materials, reduce the number of materials to be tested.

A discussion guide is not a questionnaire. While the principal investigator may be understandably concerned that moderators will overlook critical information, the solution is not a lengthy series of 'sample' questions for moderators to read in order, whether or not the topic has already been covered. Instead, the focus should be on training moderators about the purpose of the research and the information needed. Then they will need just a list of topics and can guide the conversation in their own words.

The exception is pretesting materials. Detailed instructions and questions are needed to ensure that each picture and piece of text in print materials and each radio or video piece is thoroughly examined. Unfortunately, this can mean that pretests can last too long if too many materials are pretested in one group session. In Kenya, for example, family-planning clients were trapped in a focus group for more than two hours while pretesting a 23-page flip chart. When one participant excused herself to go to the toilet and used the opportunity to leave the building, the over-conscientious moderator chased her down the street and dragged her back to complete the discussion. Clearly, the flip chart should have been subdivided, with each focus group given only a portion to review.

People can become uncomfortable or defensive if questioned directly about their own behaviour and motivations. They respond more honestly when questions are less personal. Thus, moderators should ask why 'some people' in the community do not use family planning, not 'why don't you?'. For this same reason, the Ghana Family Planning and Health Project plans to use a video in focus groups assessing the training needs of service providers. The video will show a typical counselling session to illustrate providers' common mistakes. Focus-group participants can then comment on the behaviour of the videotaped provider without feeling defensive about their own counselling practices.

Be prepared to analyse and report results quickly

Without a timely and readable report, the results of focus-group research may never be applied. Planning is the key. Keep the number of focus groups to the minimum necessary, and make sure moderators transcribe each tape immediately after the discussion. Even with only ten focus groups in Uganda, transcribing and translating the field-work tapes created a major delay. If possible, omit transcripts entirely. When the Kenya Provider and Client Information, Education, and Communication Project conducted four focus groups to determine the contents of a reference handbook for community-based distributors, the moderators worked directly from the tapes to analyse the results and quickly prepare a final report.

Ideally, focus-group results should be analysed by the people who conduct the field work, namely, the moderators and supervisors. Unfortunately, while they have the most intimate knowledge of what occurred, they often lack the skills needed to analyse the results. In Cameroon, however, moderators were trained to summarize the results of each focus group immediately afterwards. The analyst worked from these summaries and was able to draft a report quickly, despite the large number of focus groups conducted. In Madagascar, the moderators joined the trainer or supervisors to analyse the data. Their

speedy analysis contributed to the efficiency of the whole project, which took only one month from design to final report.

When the moderators and supervisors lack the skills to analyse the results, the principal investigator should produce the report. The worst situation occurs when an outsider, who was not present during the field work, is brought in to do the analysis, as happened in Tanzania. Transcripts do not tell the whole story of what happens during a focus group, nor do tape recordings. A reader or a listener cannot tell whether an emphatic opinion represents consensus, with heads nodding around the circle, or is a dissenting statement by a local iconoclast. In Tanzania, a supervisor helped with the analysis to provide this extra insight.

Conclusion

Focus-group discussions offer planners a wealth of knowledge about people's attitudes, motivations, and rationales. When planned and executed efficiently, they also offer substantial practical benefits: good data, gathered quickly, at low cost. More than a decade of experience with focus groups in sub-Saharan Africa shows that the process can be made most productive and efficient by limiting the number of groups and discussions, assembling homogeneous groups of participants, recruiting and training moderators carefully, keeping the discussion guide brief and focused, and quickly analysing the data and producing an easy-to-read final report.

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Conducting comparative focus-group research: cautionary comments from a coordinator*

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Although focus-group methodology has been used for quite some time for less demanding purposes, only recently is it starting to gain popularity as an approach for conducting basic research within the social and health sciences. As far as I am aware, the only major effort to apply the methodology in a cross-culturally comparative design has been as part of the Comparative Study of the Elderly in Asia, an on-going project coordinated by the University of Michigan that incorporates both quantitative and qualitative data and methods. A series of focus groups was conducted in the Philippines, Singapore, Taiwan and Thailand during 1990 and 1991 with elderly persons and with adult children of elderly parents. The total number of groups ranged from 16 to 26 per country. Coordinating the focus-group component of the broader project was primarily my responsibility.

In this short commentary I describe how comparative focus-group research might ideally be conducted, and report some of the difficulties encountered when trying to implement these steps in our attempt to use focus groups for cross-cultural comparative research on ageing. Problems are typically glossed over and rarely, if ever, highlighted in most published accounts of research projects. Thus errors are left to be replicated by others who enter the same territory unwarned. I hope that others can learn from both the positive and negative aspects of our pioneering experience. Some of the problems we encountered are specific to the circumstances of our particular project, while others are probably more endemic to the application of focus-group methodology in a comparative research design. Although the themes of our project revolved around issues of inter-generational exchanges related to the support and care of elderly family members, the difficulties encountered are probably largely independent of the subject matter.

How comparative focus-group research might ideally be done

Only recently has focus-group methodology begun to be widely applied as a basic research tool. Hence, the received wisdom is mainly intuitive; and in the area of comparative research it is non-existent. Thus the steps I propose here to maximize the quality and comparability of data collection and analysis in comparative focus-group research largely reflect my own preferences, intuitions, beliefs and biases. They are derived from my reading of the not particularly useful literature and, more importantly, from my experience in earlier projects in Thailand, and in the current four-country comparative study on ageing. As with most social-research methods, and particularly qualitative ones, there is unlikely to be any single best way to proceed.

A first requirement is that the study design, specific topics covered, and moderator guidelines for conducting the sessions, should maximize common features while remaining sensitive to the cultures of the specific societies under study. Achieving this is best done collaboratively, allowing sufficient time

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for thorough discussion among the country investigators. Unless the same issues are addressed in studies with parallel designs, meaningful comparisons across countries will not be feasible.

Secondly, similar procedures for field work and data processing should be followed. It is particularly important that country principal investigators be actively involved in the field work, including supervising recruitment and attending or, better yet, moderating the focus-group discussions. Typically, these are the only people who have been part of the collaborative process recommended in step 1, and who have participated in any project-wide training. They are therefore the ones who most fully understand what has been agreed, with respect both to the substantive issues to be explored and to the procedures to be followed in the field, which renders indispensable their active participation in the data-collection process. In addition, all focus-group sessions should be taped and fully transcribed, and the transcription carefully monitored by the country investigator. The transcripts should be word processed in preparation for computer-assisted analysis. If translation is involved, either from dialects to a common national language, or to a foreign language, its accuracy needs careful checking.

Thirdly, to maximize comparability of results across participating countries it is equally critical in a comparative study that common procedures be followed during analysis as during field work. Such procedures should aim to increase the reliability of the analysis and to ensure its accountability to the data. I recommend several interrelated procedures for achieving this: code-mapping the transcripts and using special computer software for retrieval of coded segments of text; constructing overview grids; using a team approach when interpreting transcripts; and comparing results with external evidence. Since some of the procedures listed above may be unfamiliar to readers of *Health Transition Review*, I describe them briefly below. These procedures should not be seen as substituting for careful multiple readings of the transcripts by the analyst, which is indeed the indispensable prerequisite for carrying out the key procedures in a meaningful way.

Code-mapping is the process of reading through the transcripts and marking segments of text that correspond to the issues of interest and any related concepts. By use of appropriate software, such as the Ethnograph program, these codes can be attached to the appropriate lines of the computerized transcript. Once this is done, the program permits easy retrieval of segments corresponding to any code or combination of codes across any number of specified transcripts. This is useful when the analyst wishes to re-read segments on particular topics, such as during the construction of an overview grid, or later when writing up the results. Codes can also identify segments for some practical purpose, such as direct quotation.

An overview grid summarizes relevant information about each issue for each group. Topic headings, or a list of particular opinions, are typically on one axis and focus-group session identifiers on the other. The cells contain indicators of the content and perhaps nature of the discussion of each group on each issue. The grid provides a basis for judging the generality of particular views, or for comparing views among subsets of sessions.

To increase the reliability of the analysis, two or more researchers in each country team should read each transcript and compare impressions of its content. This is facilitated considerably if each prepares an overview grid. Any differences that arise should be resolved by examining the relevant segments of the transcripts together.

External sources of information bearing on the topic, such as ethnographic material or survey results, should also be sought where possible to check the plausibility of the focus-group findings.

These specific procedures apply to analysis of focus-group data at the country level. When results are to be incorporated into a comparative analysis, the detailed topics to be covered must be decided before the country-level analyses are performed so that results will be available for each topic for each country. Even so, it will be necessary to return to the original transcripts to verify or revise apparent

differences and similarities that emerge from initial comparisons of reports. The verification process is greatly facilitated by code-mapping and retrieval.

Comparative analysis is best undertaken as a collaborative effort that actively involves at least one member of each country team. It would normally be difficult for one researcher or even representatives from only a subset of the countries to do this because of possible language barriers in reading transcripts, the need for country-specific knowledge for proper interpretation of transcripts, and the sheer volume of transcript text to digest. As a result, comparative focus-group research is not very amenable to 'analyst substitution', although it may be more so than other qualitative research techniques. Success is thus dependent on each team's carrying through its part, not only in data collection and processing, but also in the actual analysis stage. This contrasts with comparative analysis of surveys where, once comparable data sets have been computerized, an individual can create all needed tabulations and write up results with only minimal help from country investigators. Thus, in the case of comparative focus-group research, 'the chain is only as strong as its weakest link'.

Comparative focus-group research in practice

Well, how did we fare in our attempt at comparative focus-group research? To answer this, I compare what we actually did to the 'ideal' procedures described above. However, before doing so, it is useful to describe an important feature of our project that conditioned our experience.

As noted above, our focus-group research was only one part of a more comprehensive study that primarily employed quantitative data from surveys and censuses. Thus, country investigators were recruited largely from the ranks of social demographers with quantitative research backgrounds. Only one member of the four country teams had experience with focus groups and two others, who were recruited by one country investigator, had social-work backgrounds. Moreover, except for these two, the country teams were situated in demographic institutes with quantitatively-oriented staff.

This situation meant, first, that most of the country investigators responsible for the focus-group approach needed extensive training in the method. Secondly, their quantitative research backgrounds had conditioned several of the investigators in ways of conducting research that were not necessarily appropriate for qualitative work. Thirdly, associates in the home institutions were generally neither familiar with, nor very supportive of, qualitative approaches such as focus groups.

The need for training, and the fact that many basic decisions at different stages of our project were best made collectively, meant that it was necessary for the separate country investigators to meet. This constituted a significant extra drain on funds, as well as expenditure of effort in organizing workshops. So far, we have met on seven different occasions: two were exclusively devoted to the focus-group component; and the other five were project-wide workshops, during which several days were reserved for focus-group matters. Even meeting does not necessarily ensure full agreement on all matters. Differences of opinion inevitably emerge, especially when the procedures at issue are unfamiliar. Not all differences can necessarily be resolved satisfactorily, particularly within the limited time of a workshop. In the end, remaining differences can detract from the comparability of research results.

Study design and research instruments

We spent a great deal of workshop time on the study designs, topics to be addressed, and development of discussion guidelines. We succeeded reasonably well. Our study designs remained sensitive to the specific conditions of the individual countries but were parallel in most important respects. We were probably somewhat too ambitious in the number of topics to be covered, but not seriously so. Perhaps the most serious deficiency in these efforts was that the country teams insisted on structuring their discussion guidelines, and posing the questions, in different ways. It is hard to judge the extent to which this affected comparability of the data collected. I attribute the relative success of these efforts to

the considerable workshop time we were able to devote to them, and to the fact that their successful development did not require much advance preparation by the individual country teams.

Field work and data processing

It is more difficult to judge the extent to which similar procedures were followed in field work and data processing. To try to facilitate training, as well as to help standardize our efforts, a practical manual describing how to conduct focus-group research was developed with the specific subject matter of the project in mind (Knodel, Sittitrai and Brown 1990). Some training was done at the workshops. There is no substitute for field practice, however, and this was not undertaken on a project-wide basis. Although I participated extensively in the Thai fieldwork, I was able to make only one short visit to one other country team to help them develop their field-work procedures. Some country teams clearly took short cuts in some of the recommended field-work procedures, particularly in recruiting participants for the focus-group sessions. Principal country investigators were reasonably involved in the field work, at least one being present at most or all sessions in the four countries. Ultimately, we simply do not know how much the different field procedures affected the comparability of our data.

Sessions were taped in all countries, and full transcripts were presumably made. The extent to which the transcriptions were monitored for completeness probably varied. In the case of Thailand, it was discovered relatively late in the process that many transcriptions left out ten to 20 per cent of the discussion. Conversations that were especially vulnerable to omission involved several participants talking at the same time, or ones that were part of occasional side discussions. Considerable time was lost correcting this error as the transcripts had already been typed in Thai, translated into English, and typed in English. Even if similar errors were not caught elsewhere, however, this degree of omission is unlikely to affect results very much. The recovered conversations in the Thai material do not seem to include points that were not already evident in the incomplete transcriptions.

Different procedures for translation were followed. In Thailand, both Thai and English transcripts were made. Even the Thai transcripts, however, involved some 'translation' when regional dialects were spoken in the sessions. This was done simultaneously with transcription. In the case of the Philippines, the focus groups were held in Tagalog and Cebuano, transcribed as such, and then translated into English. However, since only the English transcripts were word-processed, they were the only basis for the analysis. In Singapore, the focus groups were held in various languages (Chinese, Indian dialects, and Malay) with English often interspersed. Transcription and translation into English was done simultaneously so that only English-language transcripts resulted. In the case of Taiwan, while different spoken dialects existed, their written form uses a common set of Chinese characters, which eliminates the need for translation. Nevertheless, to facilitate use of the transcripts for non-Chinese-reading scholars in the future, some are being translated into English.

Analysis

The data-analysis stage, with respect to both writing country reports and now the comparative analysis stage, is presenting the greatest difficulties. In part, this is because most country team members had underestimated how demanding the data analysis would be of their own time, and in part because of unfamiliarity with the procedures that should ideally be involved.

Coming from quantitative research backgrounds, they were unprepared for the more extensive role required of the principal investigator when conducting qualitative research. In survey research, the coding of questionnaires is a routine matter of data processing to be relegated to assistants, and tabulations can be run by a programmer. In contrast, in focus-group research, code-mapping and overview grid construction are essential parts of the analysis process itself. It is exactly through these time-consuming and somewhat tedious tasks that the researcher comes to understand what the data are

revealing. They can only be relegated to an assistant at the cost of detracting from the quality of the analysis, a point unfortunately not fully appreciated by some country investigators. Moreover, although all the research teams in our project attempted to use the Ethnograph program, most did not use it effectively.

Perhaps the situation would have been better if more workshop time had been spent on training in the procedures outlined above, but this would have added to the already substantial demands on cost and time. As it was, two workshops were held for the specific purpose of furthering both country-level and comparative analyses. While time was used very effectively during these workshops, in one case it was spent mainly on tasks that should have been completed in preparation for the meeting; in the other, the workshop had to be postponed for eight months because of one team's delay in completing the necessary prior step, without which the workshop would have been pointless.

The extent to which a team approach was used to increase reliability of interpretation during the analysis of transcripts in preparing country-level reports also varied. While more than one person was involved in analysis and writing for each country, the practice of having more than one person read each transcript and compare their impressions was not universally followed. Clearly such a procedure adds to the time and effort required for completing the analysis. Apparently, this was asking more of some country investigators than they were willing or able to give.

The rather lengthy duration of our project, in part necessitated by the stepwise approach we followed which allowed all country teams to finish one step before moving to the next, also contributed to problems at the analysis stage. The longer a project's duration, the greater the chance of losing participating researchers. Several who played key roles earlier have already left their positions with the participating country institute. Thus, we either lost their participation entirely, or their involvement has become much more tenuous. Even sustaining cooperation and interest over a long duration among those who have remained in their original positions has posed a challenge. In part, the extended duration of our focus-group research was a function of its being only one component of a broader project whose pace was also affected by the other components. Yet even if the focus-group part had been totally independent, the cross-national comparative aspect would have clearly contributed to the time needed, given that comparative analysis can be performed only once all country teams have completed their part.

An important potential complication for comparative focus-group analysis is that each country's findings are necessarily associated with different research teams whose varying styles and procedures will have affected their results. Our attempts to minimize such effects by following roughly parallel designs and similar field-work and analysis procedures were only partly successful. The problem is exacerbated when a comparative analysis is based on reports prepared by individual country teams, rather than on direct reading of the actual transcripts by the comparative analyst. Moderators may have varied in the extent to which they probed; and country analysts are likely to differ in how critically they read their transcripts. While using country reports as input is a convenient approach, different perspectives and styles of the country analysts who write the reports could create a false appearance of differences or similarities that do not exist, or obscure ones that do. The safest way to avoid this is for the comparative analysts to read all transcripts themselves but, as mentioned above, this may be impracticable.

Conclusions

It is not very useful to answer in simple dichotomous terms whether or not successful comparative focus-group research is possible or, for that matter, whether our own effort should be judged a success or a failure. Rather, we need to be concerned with the degree of success that is possible and with the circumstances under which it can be achieved. While I retain hope for comparative focus-group

research, I find very sobering the amounts of time, thoughtful effort, specific skills, cooperative spirit, coordination and funding that appear to be required to carry it out satisfactorily. Perhaps most telling is the fact that, as we enter the sixth year of the Comparative Study of the Elderly in Asia project, we are only now making serious progress writing the first comparative paper.² While it is true that the focus-group data have been used at the country level, no actual comparative analysis has yet been completed. Clearly focus groups should not be added as a mere sideline to a comparative basic research project simply because it has become fashionable to include a qualitative data-collection component.

Reference

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² A special issue of the *Journal of Cross Cultural Gerontology* to be published this year will be devoted to articles from the focus-group component of our project, one being a comparative analysis.

Book Reviews



Ageing and Public Policy in Australia. By Sidney Sax. Allen and Unwin, 1993. xii + 179pp. Paperback A\$21.95

The 1980s were a period of rapid development in gerontology and ageing policy studies around the world. In writing about Australian developments Dr Sax describes his purposes: 'This book is not meant to be a technical document, but one designed to raise awareness and stimulate critical debate about the circumstances of older Australians and the policies that affect their wellbeing' [p xi].

The book reviews and synthesizes the Australian policy developments and academic research on ageing of the last two decades, as well as some of its international influences. It is a book that can be read easily cover-to-cover as well as used as a reference by dipping into it for themes or areas of interest.

The book is exceptional for another reason. Unlike women's studies where men rarely write, ageing studies are dominated by the young and middle-aged career academics and bureaucrats rather than by writers of mature years. Sax notes the 'genteel' and 'polite' character of reports on conditions of the aged as a consequence of the fact that 'They have been prepared principally by middle-aged people looking toward the threshold of old age' [p. 10]. International readers will already have a hint that Sax is a rare example of a writer of mature years writing about his own age group. His background is that of a medical doctor, who played a central role in the development of community health and welfare policy throughout his career in Australia. Sax notes the gap between people like himself and the popular images of the elderly: 'Such old persons come from a world seemingly different from that peopled by many of the elderly subjects reported in the popular press' [p. 4].

The book covers health, long-term care and welfare policies for Australian elderly. The material synthesized shows a strong influence of Sax's central position in policy development and a post-retirement career at the Australian National University (ANU) and the Australian Institute of Health and Welfare (AIHW). He reports much of the work from the ANU Ageing and the Family Project and his health and demographic statistics reflect his exposures to the work at AIHW. These inputs, as well as others, give a comprehensive character to the issues covered in the book. The text is not as well organized into sections as it could have been but it is well indexed.

Sax's lifelong commitment to issues of social justice is reflected in the way policy issues are covered. He notes the significant contribution of socio-economic status to health and life expectation [p. 50] and returns to his theme in his final chapter discussing public-health factors in creating a 'good old age'. He does not, however, emphasize the social to the neglect of medical factors: 'Modern surgical methods and modern therapies not only improve the quality of life of older patients but may prevent or limit premature admissions to residential care' [p. 75]. The book is balanced in its treatment rather than committed to a particular line of argument or interest-group point of view.

The coverage of health and disability, as well as policy issues, will be of interest to an international audience. The issues and style will provide a good insight into research and policy on ageing in Australia.

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Medical Care and the Health of the Poor (Cornell University Medical College Eighth Conference on Health Policy). Edited by David E. Rogers and Eli Ginzberg. Westview Press, 1993. vii + 144pp. Hardcover US\$49.50

The focus for the Cornell conference on health policy was chosen because of a feeling that the issue was the root cause of the dismal US showing in many indices of health. Invited papers, published in this volume, were discussed at a two-day conference. However, it is quite clear from a brief summary of the entire conference, that discussion of the papers yielded a far more spirited and critical assessment of the US scene. It is the discussion that should have been published; this is an instance where institutional conference rituals defeated aims. The paper-writers were at a disadvantage because they were asked to review issues from different specialist viewpoints. Given the complexity of determinants and the very limited role that medical care can play in influencing societal origins of poverty, they had little scope for any useful commentary.

In by far the most thoughtful and useful contribution, the economist Fuchs addressed fundamental questions on the relationship between poverty and health, dwelling especially on factors influencing health status and access to medical care. He explained the failure of the US health-care system to provide adequate services and favoured cash transfers to the poor instead of the existing Medicare and Medicaid programs. Fuchs asked why Americans are less willing than those in other industrialized nations to subsidize medical care for the poor—through what he termed ‘the weakness of *noblesse oblige*’.

From fairly Olympian heights the sociologist Starr considered how much inequality in health status and in access to health services a democracy can tolerate. He believed a universalist (nationally comprehensive) system of health-care insurance is not a commitment of democracies. The latter will permit a reasonable degree of access provided the poor have a basic level of services available to everybody. Accordingly, he proposed a two-tier system with the rich paying for additional services in the upper tier.

Hamburg, the Commissioner of Health for New York City, reproduced an official speech about tuberculosis increasing rapidly in the poorest districts. She blamed massive funding cuts during the 1980s for the current situation, but thought it was controllable by an organized campaign (along lines similar to the Australian national program which was terminated in 1966).

The only non-American contributor was Black, who as chief scientist for the UK Department of Health and Social Security, chaired the committee that produced the Black Report, which the Thatcher government tried to suppress. This report provided evidence that nearly 40 years of the UK National Health Service had not reduced social inequalities in health status. Black’s paper stands out through being firmly based on official statistics, and although he made some telling general comments on the health consequences of poverty and political ideology during the 1980s, he was not prepared to tell the Americans what they should do.

Two papers by clinical investigators centred, respectively, on hypertension and arthritis, emphasized the various constraints and barriers to obtaining medical care and maintaining effective personal regimes of treatment. Even those who received subsidized care faced financial barriers in the form of co-payments for federal Medicare (aged) services and even, in some states, for Medicaid, which

covers ten per cent of all Americans as a means-tested federal and state funded program targeted at the welfare population. As Rowland explains, these forms of social insurance are seriously defective for assuring access and an adequate quality of medical care among the poor.

Miller, a paediatrician, was enthusiastic about specific programs for poor children. He supported what a 1990 US House of Representatives Select Committee on Children, Youth and Families recommended as cost-effective initiatives to improve the health, development, nutrition and well-being of the nation's children. These included educational, employment, training and cost-supplementation programs.

This collection of papers does not provide any guide to advanced thinking about health and poverty nor any credible approach to solutions for enormous problems with the health of the US poor. Part of the reason is the traditional professional conference culture; it cannot cope with social issues where specialists have to focus on dealing with adverse outcomes of complex societal processes. Clinicians were aware of social determinants influencing advanced diseases among the poor but because they were in the straitjacket of a medical conference all they could suggest was tinkering around with regimes designed for the treatment of individuals.

In fact, tinkering around with existing processes and arrangements appeared to be the generally preferred pathway towards solutions. And this is what makes these papers so depressingly unhelpful. The writers seemed to be suffering from what Bloom (1988) described in his book, *The Closing of the American Mind*. Indeed, the intellectual timidity of the authors (excluding Fuchs if you read between the lines) is quite shattering. These papers were delivered while the state of Oregon was conducting a public inquiry into how to ensure that all its citizens received an adequate level of health care, when forces were gathering to elect President Clinton on a platform that included major health-care reforms and after numerous analyses had appeared on how social inequalities had widened in the US during the Reagan administration.

None of this is echoed by the contributors. They urge cautiously that conditions for the poor must change but generally in a piecemeal and incremental manner. Overwhelmingly favoured are special remedial programs, always imposed on the poor by experts (no hint of negotiating solutions or community participation in these pages). Race and gender issues of the poor are ignored or treated in a deterministic way, as with African Americans being more prone to hypertension. There seems almost a determination to avoid mentioning any of the considerable body of theoretical and empirical work done in other industrialized countries. Even Fuchs quibbles about the use of social indicators to measure health inequalities, despite Navarro having demonstrated that it is possible to construct socioeconomic status, race, and health differentials from US data (Navarro 1990).

A strong impression is left from reading these papers that most of the writers believe any structural changes involving whole-society efforts to raise the health status of the US poor will conflict with an immovable American ethos on social institutions. And that is deeply disturbing because as Samuel Johnson put it, 'A decent provision for the poor is the true test of civilisation'.

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The Social Basis of Health and Healing in Africa. Edited by Steven Feierman and John M. Janzen. Berkeley: University of California Press, 1992. xviii + 487pp. Hardcover US\$17.00

This volume consists of 18 essays which examine the social, political, and economic contexts of health, disease, and therapeutic practice in Africa. Many take an historical perspective as well, with material ranging from the pre-colonial to post-colonial periods. Indeed, the editors argue that health and healing are part of 'historically continuous streams of interrelated theory and practice' (p. xvi) and thus cannot be understood when regarded simply as 'traditional' or as 'modern' medicine. Moreover, without an understanding of the changing contexts—social, political and economic—in which contemporary health practices are grounded, health programs in Africa will have limited success. The inadequacy of biomedical interventions alone, in the face of socioeconomic disparities and political discrimination, is depressingly illustrated in several of these essays.

The volume is divided into three parts. Part I consists of an introduction that examines alternative approaches to earlier ethnomedical studies of health, disease, and cure in Africa which tended to limit analysis to discrete ethnic groups. However, as Janzen shows in his study of the Lemba cult of western Equatorial Africa (Chapter 7), cult practitioners and followers came from a wide area, crossing several ethnic, as well as national, boundaries. The idea that healing practices relate to a timeless and culturally-specific world view is similarly undermined by these essays. Rather, it is argued, perceptions and practices of health and healing are part of broader social, political, and economic processes which are continually being reassessed and contested, for as the editors observe, 'Struggles for health are tied to society's central struggles' (p. 10). These struggles may include those between pre-colonial chiefs and healing-cult leaders over local political authority, between European colonial officials and African leaders over public health rulings on housing segregation, or in the post-colonial period, between western-trained and indigenous doctors over claims of medical legitimacy and government funding.

In Part II, a history of 'patterns of ill health' in Africa is sketched out through the use of demographic data on mortality, fertility, and migration which document changes in African populations from the late nineteenth century through the twentieth century. Despite the dearth of vital statistics for the period, it is generally agreed that there was a decline in population from approximately 1880 to 1920 after which the population steadily increased. In the introductory essay to Part II, various explanations for this phenomenon are discussed including increased transportation and migration, forced resettlement, and changing family and gender relations. The five essays that follow explicitly address the social context of illness and of population decline in several different areas. In their comparative study of demographic data from pre-colonial Central African Republic and contemporary Burkina Faso, Cordell, Gregory and Piche examine connections between mortality, fertility, migration, state policies and class structure. Malnutrition and famine also predisposed individuals toward disease, although these conditions were often related to social and political inequalities. Vaughn discusses the ways that particular social groups differently experienced the famine of 1949 in Nyasaland (present-day Malawi). Dawson shows how people's movement away from famine areas led them to congregate in particular places, contributing to a devastating smallpox epidemic in early colonial Kenya. In essays by Packard and by Marks and Andersson, the spread of tuberculosis in South Africa is related to malnutrition and poverty associated with work in the mines and with government-supported racial discrimination.

Part III consists of essays based on specific ethnographic studies of therapeutic practices. While these practices display considerable continuity over time and area, they also show a good deal of variation. These differences are reflected in the ways that some of the authors have chosen to

characterize medical knowledge and practice in particular societies. Some (for example, Prins, Chapter 13) describe well-defined medical systems of cause and therapy, whereas Last (Chapter 16) emphasizes the improvisational quality of prevailing medical practices in certain societies. The authors of these essays tend to agree, however, on the close connection between politics and medical practice. The political control of medicine by the state or other centralized polities—through differential funding and through professional licensing, for example—may be complemented (or countered) by more decentralized, local practices including participation in spiritual healing cults and individual therapeutic strategies.

In the introduction to Part III, the early historical intersections of African, Western, and Islamic medicine as well as the later introduction of colonial allopathic medical practices are briefly discussed. The historical nature of these varied and changing medical cultures is emphasized by grouping these essays into pre-colonial, colonial, twentieth century, and post-colonial periods. The first three essays examine the ways that medical practice is related to religious belief and practice. Abdulla documents the diffusion of Islamic medicine in northern Nigeria. Janzen discusses the history of the Lamba cult in West Equatorial Africa from the mid-seventh to the late-nineteenth century. Waite considers the relationship between the leadership of kings, priests, and chiefs and public-health practices in pre-colonial East-central Africa.

The section on colonial medicine continues this examination of the relationship between authority, political and spiritual, and medical knowledge and practice. In his essay on medical knowledge and urban planning, Curtin examines how prevailing ideas about malaria transmission shaped colonial African cities.

The continuity of African concepts of disease and curing, despite the introduction of Western medicinal practice by missionaries in Tanzania, is discussed by Ranger.

In the section on twentieth-century medicine, specific models of medical systems are related to conceptions of disease and curing practices for particular areas. Greenwood documents the overlap of two distinct medical systems, humoral and Prophetic, in Morocco.

Sindzingre and Zempleni outline local explanations for recurrent disease and subsequent therapies practised by the Senufo people of Côte d'Ivoire. The importance of divination in therapeutic practice is noted in several of these essays. For the Lozi of Zimbabwe, it serves the need to identify 'core areas' of affliction described by Prins. In discussing Zulu women diviner-healers in South Africa, Ngubane emphasizes the significance of patient-doctor communication and of the diviner's social network in affecting cure. Davis-Roberts's discussion of the illness of a young Tabwa girl in Zaire illustrates how diagnoses made by diviners may derive from the social domain as well as physiological ones. Last describes the therapeutic practices of rural Hausa diviner-healers in Northern Nigeria who do not appear to draw upon any overarching conceptual system of medical knowledge.

The two essays in the final section on post-colonial medicine consider government health programs in Kenya and in Sierra Leone. Mburu's essay on the inequalities in health care available in Nairobi emphasizes the role of class and political power in obtaining health services. The role of the state in legitimating various forms of healing—whether indigenous or Western—is discussed by MacCormack, who discusses a model for integrating services offered by bureaucratically organized medicine and 'traditional' medical practitioners.

These essays provide an excellent introduction to the varied health practices in Africa. While many of the essays have been published elsewhere, having them together under one cover allows the reader access to abundant material on ideas and practices relating to disease and conveys a sense of the diverse options of health care which exist in the continent. There are a few, small complaints, mainly

with copy editing, as in the bibliography where some dates are omitted (Packard et al.) and names are misspelled (Ruzicka, not Ruzika); Map 1 lists Lagos as the capital of Nigeria.

These essays forcefully demonstrate that aspects of the political economy and of social organization must be considered when investigating the basis of ill-health and healing in Africa, a point which has important policy implications for health-program implementation. For this reason, it is unfortunate that the editors did not make some attempt to address the issue of HIV-AIDS research in Africa, perhaps in a brief concluding section. While they note this omission in preface remarks, an essay addressing general issues of HIV-AIDS research in Africa (see Packard and Epstein 1991) might have been included to good effect. These essays provide examples of cautionary ironies: for example, in Zaire, colonial officials forced villagers living on hill-top sites to move to *trypanosomiasis*-infected lowlands for health reasons (Ford 1971). Such examples underscore the sometimes unintended consequences that result when social, economic, and political contexts of health are not taken into account.

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