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Age bias, but no gender bias, in the intra-household resource allocation for health care in rural Burkina Faso*

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Abstract

Household survey data , time allocation data, and qualitative interviews were used to examine whether households allocate their resources for health care differently between age and gender groups. Households allocated significantly fewer resources to the health care of sick children compared to that of sick adults. In contrast there were no such differences with regard to gender. The underlying household rationale is to concentrate its resources spent for health care on productive members rather than to spread them equitably among all its sick members. While children are not productive, women were shown to contribute as much to household production as men, hence their health is valued equally with that of men. Unless we understand intra-household biases in resource allocation, policies will be undermined. Further research is needed to test the hypothesis for the households' preference of production maintenance over health maximization.

Infant mortality and 1-4 year mortality rates are still several times higher in developing countries than in developed countries. With an infant mortality rate of 132 per 1000 live births and an under-five mortality rate of 205 per 1000, Burkina Faso is among the 20 countries with the highest mortality rates in the world (World Bank 1994). The comparative numbers for the US are 9 per 1000 (IMR) and 12 per 1000 (under-five mortality rate). In contrast, age-specific mortality rates in adults are very similar in developing and developed countries.

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Several reasons for this excess childhood mortality have been given, including repetitive infections, especially with malaria; and malnutrition, especially in the weaning period. We pose the hypothesis that these risk factors are compounded by a smaller allocation of household resources, both money and time, to health care for children than for adults, and by less use of modern health care. If this were proved to be true, the effect of the highly efficient

tools of the 'child survival revolution', such as oral rehydration and antibiotic treatment for acute respiratory infections, would be reduced.

There is a large body of literature on gender bias in the allocation of health care and food within households from South Asia (Chen, Huq and D'Souza 1981; Sen 1984; Das Gupta 1987). In contrast, studies looking at the allocation of resources within households in West Africa have not been able to find any gender bias: Haddad and Reardon (1993:274-275) using stratified outlay equivalent analysis on the International Food Policy Research Institute (IFPRI) data set in Burkina Faso could not identify any differences in expenditures for boys and girls. The authors did not analyse health care expenditures separately. Deaton (1993) found that while additional children did reduce adult consumption, the effect was similar for boys and girls. He concluded that there was little evidence of any sex bias in the allocation of food. The lack of sex bias in the intra-household food distribution is consonant with anthropometric studies which consistently do not find any difference between the nutritional status of boys and girls (Svedberg 1990).

With regard to age bias in health care, the literature is much sparser: Caldwell, Reddy and Caldwell (1983:196) noted from their study in South India that 'the young and very old are underrepresented among patients'. They attibuted this to parents' perception that many childhood ailments were signs of metaphysical, 'non-medical', rather than medical disorders and thus not amenable to Western-type treatment. They gave a rich description of such non-medical causes of childhood diseases which included divine retribution or punishment, transgression in a previous life, ghosts, the evil eye, and spirit invasion. Caldwell et al. concluded that such cultural concepts of childhood disorders explained the low health care use by children.

Comparing age-specific health care use in Tamil Nadu and Uttar Pradesh, Basu (1990) noted that a higher proportion of children in the former state did not receive medical attention. However, she did not attribute this observation to cultural differences, but rather to differences in maternal employment which made it more inconvenient for Tamil mothers to take their children to the hospital. She concludes that 'once accessibility to services is controlled for, cultural origin is not a serious barrier to their utilization' (Basu 1990:279).

Singh, Gordon and Wyon (1962) found that sick neonates in Punjab had the lowest level of care of any age group. The neonatal mortality rate was extremely high, 73 per 1000. Of the neonatal deaths, half were unattended and the remainder were seen by the spiritual healer. Up to the age of 15, low-cost health care alternatives were chosen in the case of illness. Only adults were reported to use high-cost health care choices, such as seeing a physician.

Data from West Africa on age differentials in health care use or expenditures are much sparser. Two earlier papers (Nougtara et al. 1989; Sauerborn et al. 1994) in which two of the current authors were involved reported age differentials in the use of modern health care from a district adjacent to the current study zone. They found that sick children under five years received significantly less modern health care than sick adults. Controlling for self-reported severity of illness, distance, quality of health services, costs of care and maternal education, age ranked second only to perceived severity in its relationship with health care use. Demand for outpatient services was found to be very price-elastic for newborns ($\eta = -3.64$) while it was inelastic for adults ($\eta = -0.27$). The authors did not analyse intra-household allocation of financial and time resources for health care by age and sex and did not provide any insight in why households make the choices and allocate their resources the way they do.

However, if existing intra-household inequalities are ignored or if they are acknowledged but poorly understood, the effectiveness of policy is likely to be undermined (Haadad and Kanbur 1990; Haddad and Reardon 1993).

This study attempts to fill the gap by comparing the allocation of household resources (time and money) for child care with that for adult care and between health care for girls and

boys. We make extensive use of qualitative in-depth interviews and case studies to shed some light on the households' rationale for allocating their resources the way they do.

Population and methods

The study population showed the pattern of high fertility and moderately high mortality typical of Sub-Saharan Africa. The crude birth rate was 47.3 per 1000 and the crude death rate 12 per 1000. The average household comprised 8.5 individuals. Polygamy was common: one in three household heads had more than one wife.

Formal education was very low and showed a bias against girls. The percentage of individuals who had attended more than one year of formal schooling was 8.9 for men and 4.3 for women. The majority of the study population was Muslim (59.2%), whereas 29.6 per cent report themselves to be Christian and 10.9 per cent to believe in African religions. It is safe to assume that this latter percentage underestimates the influence of animist religion. The study population was composed of five major ethnic groups who spoke their own languages. Most households, however, used Dioula as a *lingua franca*.

The vast majority of households lived by subsistence farming, with millet, sorghum and groundnuts being the main staples. Average annual household income was 143,248 F CFA[1], of which 6.1 per cent was spent on health care. The average daily wage rate was 289 F CFA, with no difference between men and women (Sauerborn et al. 1996a, 1996b). Women work extensively in the household's fields, particularly in the sowing and harvesting time. In most ethnic groups in our study population, women had their own plots of land or gardens on which they worked in addition to the general household fields. The harvest of these 'women' fields and any receipts from produce sales belong to the women.

We used three study methods: a household interview survey, a time allocation study and qualitative interviews.

The survey was carried out on a representative two-stage cluster sample of 566 households, comprising 4,820 individuals. Using a recall period of one month, information was gathered on past perceived illness, healer choice as well as the financial and time costs the households of the sick individuals had incurred. Time costs included both the days lost to illness by the sick household member and the days lost by any healthy household members tending the sick or accompanying them to a distant treatment site. Bias was defined as significantly less health care expenditures on illness episodes and a significantly smaller probability of seeking modern care in children under nine years compared to adults (age 10 - 64).

The time allocation study was carried out on the same household sample based on the recall of 'yesterday's activities' (White 1982; Acharya 1982). We classified activities in eight major categories shown in Table 1, which were further subdivided into 56 single activities. In our classification of activities we followed the one used by McSweeny (1979) in her time allocation study of Mossi households in Burkina Faso. Activities A to D in Table 1 were defined as 'household production' (Sauerborn 1994).

In the qualitative study component, we examined household decision-making during 30 severe illness episodes through interviews with the household head, the sick individual or, in the case of sick children, with their main caregiver. In addition, we interviewed 21 'key informants' comprising village midwives, village heads, religious leaders, and members of village organizations, such as the Young Farmer Association of Bourasso, who were interviewed to further explore the rationale of the resource allocation between adult and children, and between boys and girls. Interviews were translated from the five local languages

[1]At the time of the study , the exchange rate was 265 F CFA to US$1

into French, and coded using the software package 'Ethnograph'. The coded interview transcripts were the basis for a conceptual analysis (Maxwell and Miller 1994). In addition, seven household case studies permitted contextual analysis of intra-household resource allocation (for details, see Sauerborn 1994).

Table 1
Groups of activities used for time allocation study. Groups A to D are defined as productive activities. Modified after McSweeney 1979.

Activity group	No. of coded activities
A. Agricultural production	12
B. Food processing	4
C. Crafts	14
D. Household work	8
E. Community activities	4
F. Personal needs	4
G. Leisure	10
H. Other activities	not coded

Results

The burden of death and illness in children

Age specific mortality

Based on indirect demographic techniques (UN 1983) applied to a health census in the study area, Sauerborn and Garenne (1993) estimated the probability of children dying before year one and between the ages of one and four to be 1q0=0.074 and 4q1=0.119 respectively. There were no statistically significant gender differences in these mortality indices.

Age specific morbidity

The age distribution of illness in the sample is not proportional to the age distribution: infants represent only 4.85 per cent of the population, but account for 14.64 per cent of illnesses. Figure 1 displays the frequency of reported illnesses by age. It shows the familiar u-shaped pattern with a high illness burden at both age poles.

The frequency of reported illnesses did not differ significantly between boys and girls.

Severity

An illness was labelled 'severe', if it was perceived as 'life-threatening' by the respondent; in the case of children this was the mother or any other main caretaker. Aggregated across sex and age, 27.2 per cent of reported illness episodes were perceived as severe. Illness in children was regarded more often as severe than illness in adults (Chi square 6.7, DF 1, p= 0.009). Between boys and girls, however, there was no significant difference in perceived severity of illness.

Figure 1
Frequency per year of reported acute illness episodes, by age group, aggregated across all types of acute illnesses

Children's use of health services

There were five treatment options availble in the study area: (1) home treatment, which was carried out almost exclusively using traditional herbs and roots (Sauerborn and Nougtara 1993); (2) consulting the traditional healer, which involved substantial travel costs and fees (only second to modern care, see Table 2); (3) modern outpatient care at the dispensary; (4) inpatient care at the district hospital in Nouna; (5) the local community health worker, a village member trained in short courses to treat some mild illnesses. Other treatment options, such as direct purchases of drugs at pharmacies, or treatment by neighbours, or members of the extended family, were rarely chosen. The choice of treatment options was statistically significant between adults and children (Chi-square=41, DF=5, $P < 0.00001$). Table 2 shows healer choice broken down by two age-groups, under ten years and equal to and above ten years. This age cleavage point will be chosen henceforth in the study. It is based on the

contribution of age groups to household production. Children of ten years and over spent almost as many hours on household production as adults (see Figure 3).

Children were less frequently taken to both the modern health services and the traditional healer. More than two-thirds of children (67.2%) are treated within the household, compared to only 45.3 per cent of the adults. Conversely, 22.6 per cent of those aged ten or over are treated in either the hospital or the dispensary, while the proportion of children taken to these facilities in the case of illness is only half of this (11.5%).

Health care choice did not differ between boys and girls.

Table 2
Treatment choice by age group

Source of treatment	Mean costs/ episode	Age group			
	F CFA (S.D.)	0-9 years		10 years and over	
		N	%	N	%
Household	76 (245)	176	67.2	227	45.3
Dispensary	1,432 (2,560)	22	8.4	61	12.2
Hospital	6,939 (17,261)	8	3.1	53	10.6
Healer	656 (1,965)	29	11.1	98	19.6
VHW	221 (462)	15	5.7	22	4.4
Other	364 (678)	12	1.6	40	8.0

Household costs incurred for child health care

Financial costs by age

Financial costs included all household expenditure involved in seeking care: transport, fees, drugs, and living expenditure at a distant treatment site. These costs varied substantially with the choice of treatment, as Table 2 shows. In view of the different use pattern, it is therefore not surprising that health care expenditures for the adults were more than four times those for children, on average 1,163 FCFA and 234 F CFA respectively. Though the variance was considerable, analysis of variance indicated that this difference was significant ($p<0.015$). This was in spite of the fact that children's illnesses were perceived as significantly more severe than those of adults. Mean health care expenditures for boys and girls were 128 and 186 F CFA respectively. However, the difference was statistically insignificant.

In addition to those resources mobilized within the household, we found in many instances transfers from other households to the household of the sick to help meet the demands of illness. However, this 'community' support carried the same bias in favour of adults as the household support: 796 F CFA is the average amount transferred to the household of the sick for the illness episode of an adult (over ten), whereas the average transfer for a child was 264 F CFA. Figure 3 shows the result of case studies of two households: one household lost a child of two years, whereas the other household lost an adult of 37 years of age. Health care expenditures for the child were less than half of those incurred for the adult. For the child expenditures for her burial were minimal and there was

no funeral. For the adult, the index household spent considerably more on the funeral than on treatment (see Figure 2).

Figure 2

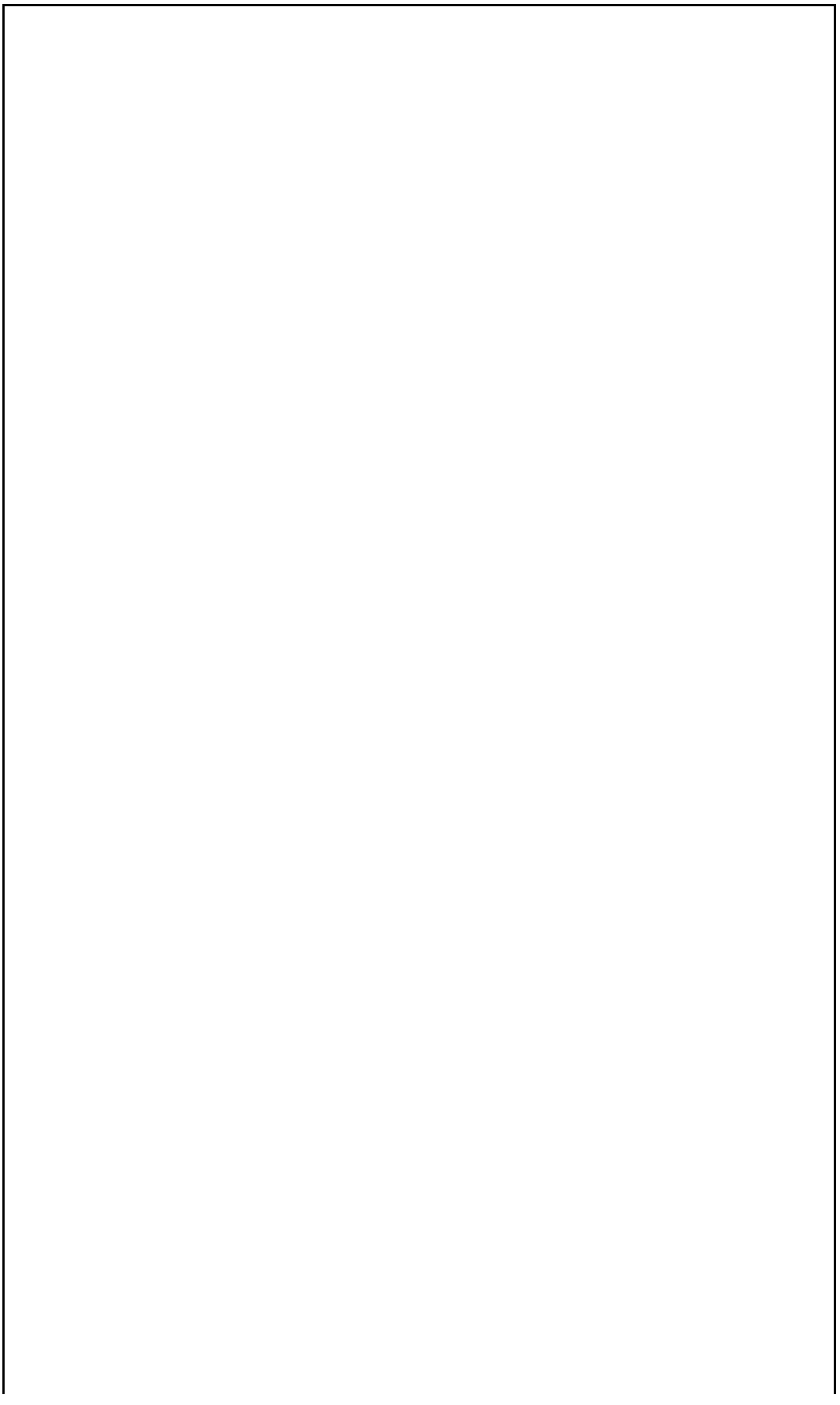

Table 3
Intra-household resource allocation for health care as a function of age

Household decision	Age group		
	under 10	11-59	60 and over
Type of treatment	Home treatment	Health services	Home treatment
Expenditures for health care	+	+++++	+
Expenditures for burial and funerals	+	+++	+++++
Time costs of care	++	++	++
Support from other households to cover health care expenditures	+	+++++	+

Household time costs incurred for child care

The average time spent by healthy household members to provide care for sick children was 1.97 hours per illness episode. This was not significantly different from the time spent on sick adult household members (2.89 hours, p=0.26). Table 3 summarizes the age-specific differences in household decision-making derived from the case studies based on qualitative interviews.

Children's contribution to household production

Household production was defined as any activity needed for the maintenance of the livelihood of the household. It included agricultural production, animal husbandry, food processing and preparation and home production: cooking, fetching water etc.

We used as a proxy of production the amount of time per day that each household member spent on production (activities A to D in Table 1); Figure 3 displays the average number of hours worked per day at different ages. The amount of time spent on daily production is significantly lower in children under ten than in adults of 11-64 years ($p<0.00001$, analysis of variance). Similarly the age group of 11-64 years contributes significantly more time to household production than household members of 65 years and over.

Figure 3
Average time per day spent on household production by age

Women's contribution to household production

In the dry season, the contribution to household production, measured as the mean number of hours spent on productive activities, was significantly greater for women than for men as Table 4 shows. However, in the rainy season men had a small lead in production over women (Sauerborn 1994).

A case study on how a household substituted labour lost through the illness of a 56-year-old woman suggests perceived equality of productivity of men and women. In order to compensate for the loss of 28 days of his wife's work in the fields during harvest time, the husband hired 30 days of male wage labour.

Table 4
Mean hours per day spent on household production, by gender.

Type of household production	Mean hours per day spent on household production		
	women	men	significance of differences of the mean
Farming/ animal husbandry	0.4	1.9	*
Food processing	1.4	0.1	*
Crafts	1.1	1.3	ns
Housework	2.8	0.5	*
Total production	5.7	3.8	*

Note: * = $p < 0.00001$ (ANOVA)

Households' reported rationale of different allocation of health care between age groups

The analysis of the qualitative interviews suggests that a middle-aged adult is perceived as a productive 'asset' for the household production. In contrast, the stream of future benefits economists associate with young children is not perceived as such. One way of exploring preferences was by asking the hypothetical question to five key informants:

> Both of your sons are seriously ill: your twenty-five year old son, who works in the fields with you, and your one-year old baby boy[2]. You see the physician and receive a prescription for each of your sons, each amounting to 2,000 F CFA. You can only spend this amount on one son. Who would you spend it on and why?

All answered that they would prefer to spend the money on the 25-year-old and gave as reason that their adult sons were needed for field-work in order to feed the entire household. A typical answer of a farmer of the Bwaba ethnic group of Bourasso is:

> You see. The adult son, you know, it's he who will pull me one day out of the hole. If I cure the child and leave the adult son, I will sooner or later run into problems. The child can't serve me in any respect directly now.

The under-use of health care by the young was mirrored by that of the very old (64 years and over). Here, the main argument the qualitative interviews revealed was that old people had reached a stage in the cycle of life where any forceful treatment does not make any sense.

[2]The costs of treatment required for both sons were assumed to be the same. In addition, the household was assumed to have resources available to cover only one treatment.

The following words of a wealthy 70-year-old village head caring for his 72-year-old cousin illustrates this concept:

> Now in her case, if you do your fast today, you will pray to God, that he reserve her a good place, but to cure her illness..... it's useless. To say 'she does not have to die' - that's not true. Even with all the drugs, she's going to die. You see, that means man has a cycle of life: he is born, grows and dies. And when you have arrived there, it's no use to force things.

In contrast, when asked what he would do if one of his sons, who were between 16 and 37 years old, had a similar illness, the same village head responded very forcefully, interrupting the interviewer: 'refer him, refer him to the hospital immediately'.

> R: Apart from this, for this old woman, they bring her food, but to pay for drugs, no.
> I: You do not pay for drugs for old people?
> R: For the old ones, it's no use wrecking your head to pay for drugs

In summary, the perception we gleaned from the qualitative interviews was twofold: the young were seen as unproductive and health care was viewed as an investment. Therefore health care for children had a lower priority for the household decisions than care for the currently productive adults. For the old, the rationale for the under-use of health care is one of perceived ineffectiveness. It is viewed as useless to interfere with disease at the last stage of life.

Discussion

Caldwell et al. (1983) made the point that household interview surveys are notoriously weak in capturing childhood morbidity. The authors reported that obviously sick children were not reported thus.

From our own work experience in the study area, we fully agree that many medical disorders are not viewed as diseases. In-depth ethnographic studies are needed to elucidate culture-bound illness concepts and their influence on perceiving as illness what health professionals consider as disease. However, in our study we looked at health-seeking behaviour and household spending behaviour given perception of illness. The perceived illness episode was the focus of our analysis. If indeed there was age bias in morbidity reporting, the age bias described in this study would have been even larger. We therefore conclude that any existing age bias in reporting does not invalidate our findings, but rather makes them a lower-bound estimate.

The reported age bias in health care use and expenditure is consistent with earlier reports from a neighbouring district that showed significant differences in health care use (Nougtara et al. 1989, Sauerborn et al. 1989). Controlling for severity of illness, quality of care offered, price of care, distance of service, household size, age showed the second strongest association with health care use, second only to severity of illness. Although we did not repeat this multivariate analysis in this paper, we feel it is reasonable to expect a similar result.

Less clear-cut are our results as to why households behave as they do. Several explanations could be put forward to explain the household allocation of resources for child health care:

(1) Lack of information on the availability and effectiveness of health services for children; this explanation is unlikely in the setting of the study area where studies have reported the high esteem the population has for the effectiveness of modern care across all age groups.

(2) Cultural versus medical illness paradigm. Caldwell et al. (1983) argued that the religious aetiological illness model prompted a non-medical response, such as purging the

child's body and soul of evil spirits, rather than a visit to the nearest health centre. Our study did not produce any information to support such an explanation for the under-use of modern health care. We concede that more in-depth ethnographic research on age-specific illness and treatment concepts is needed to explore this potential explanation further. If traditional medicine were viewed as more appropriate for the treatment of children, we would expect to see more use of the traditional healer. In contrast, sick children are about half as likely to be presented to traditional healers as sick adults.

(3) Child fostering. Bledsoe, Ewbank and Isiugo-Abanihe (1988) argued that children fare worse in health care because of the high proportion of foster-children (40% in Sierra Leone) who receive less attention than the parent's own children. In comparison, the proportion of foster-children was 12.2 per cent in the Burkinian study population. In addition, in the study area, children are generally fostered by wealthier households and can therefore be expected to fare better than those who remained in their natal household. Not surprisingly, disaggregating our analysis by foster status did not yield any significant differences either in use of services or in the allocation of households' financial and time resources.

(4) Maternal employment: an argument put forward by Basu (1990) to explain the lower health care use for children in Tamil Nadu, where many mothers have formal employment far away from home. However, there is virtually no formal employment for women in the study area.

(5) Protecting household production. Of the five possible hypotheses examined here, our results are best compatible with the economic one: production maintenance. While this study does not provide the definitive answer, results point to the hypothesis, to be tested by further research, that the household's production maximization rationale determines its allocation of resources for health care to productive adults, away from children. We consider the following as a hypothesis to be tested by further research, rather than a confirmed conclusion, given the data presented.

Households living on the margin of subsistence with a severely sick member face a cruel trade-off. They can either use household resources to maximize health equitably among all members and thereby risk jeopardizing the household's economic viability or they can selectively protect the health of the productive members only in order to assure the household's capacity to produce. The latter option carries the risk of worsening the health status of those members who are not productive, such as children. Funnelling household resources to adults is therefore a matter of economic survival and not of neglect of children.

Our findings suggest that maintaining its capacity to produce is the main objective of the household. From the household's perspective, priority is first given to health expenditures which support production and income maintenance. The greatest efforts in generating the financial resources for treatment were observed when productive adults were ill, prompted by the threat to household production. Conversely, illness in the economically unproductive household members (the very young and the old) rarely leads to major household resource allocation for health care.

Our conclusion of livelihood protection as the guiding principle for the intra- household allocation of resources is indirectly corroborated by our finding of lack of gender discrimination. Indeed, given the hypothesized rationale of household behaviour, it does not make sense for the household to discriminate along gender lines, since women are at least as productive[3] as men, as our time allocation study suggests (see Table 4). Our conclusion is consonant with the lack of gender bias in intra-household food allocation reported by Deaton

[3]An indication of the economic valuation of women lies in the considerable bridewealth that the future husband has to pay.

(1993) for Ivory Coast and Haddad and Reardon (1993) for both rural and urban Burkina Faso.

DrŠze and Sen (1989) argue that gender differences in life expectancy point to gender discrimination. The fact that life expectancy for women in Burkina Faso exceeds that for men by two years (47 and 45 years respectively) corroborates our finding of lack of gender discrimination in health care.

Similar household preferences, based on perceived productivity, were reported by Behrman (1988) based on a study of intra-household food allocation in rural India. He showed that parental preferences had productivity-equity tradeoffs and that parents favoured older, that is more productive children in the allocation of food.

Similarly, famine research supports the conclusion that economic viability, not consumption, is the primary objective of the household in times of crisis: Corbett (1988,1989) and Chen (1991) showed that households gave high priority to maintaining their ability to produce. Consumption was reduced (food consumption was even reduced to starvation levels) well before any productive assets were sold. Households generally tried to mortgage productive assets, thus maintaining their ability to produce, before they had to sell them.

Pryer (1989) and Evans (1989) argued that maintaining the economic viability of the household is the prerequisite for maintaining the health of all household members, including the unproductive ones. Their case studies documented the effect of illness of the household's breadwinner on the entire household, especially on children.

While some minimal level of adult health is probably a necessary condition for child health, it is certainly not sufficient, as the extremely high mortality rates for children in Burkina Faso show. The use of effective health services is another condition essential for promoting child health. In this case, policy makers may not find full support for their priorities in household preferences. The household age bias against child care is in striking contrast with the current policy agenda. Equity of use of health care across age, sex, and income boundaries is a common goal in public health policy (Hammer and Berman 1995). Major donor agencies such as USAID and UNICEF focus on improving child health services. However, without a clear understanding of the household rationale underlying children's under-use of health services, some of these efforts may not produce the desired results. Our study suggests some strong age-disparities between need and demand for health care, as Figure 4 shows in a schematic way.

The implications of these findings for appropriate health policy strategies are not simple or obvious. International agencies have promoted child survival as a 'public' or 'merit' good, arguing for substantial public action to reduce childhood disease and mortality. This approach is based on an assumption of various types of market failures, including under-consumption due to the 'free rider' problem and information failures related to consumer 'ignorance'. The results presented here suggest that households in Burkina Faso are not ignorant of the potential for improving child health, but rather rationally choose to allocate scarce resources to productive adults. Is this strategy indeed rational? For example, does it succeed in maintaining overall household survival better than an alternative strategy, given the choices the households face? Should governments support child health services as a social investment, even if this is not a priority of households?

To the extent child health is valued as a public good in Burkina Faso, government could act to reduce the costs to households of effective child health interventions. This could be done through low prices and cross-subsidies from higher-priced adult health services. Sauerborn et al. (1994) showed that demand for child health care in rural Burkina was very price-elastic , while demand for adult health care was inelastic. Similar findings were reported from Ivory Coast by Gertler and van der Gaag (1990). Cross-subsidies from adult to child health services are equivalent to a small income transfer to poor households. However, it

should be noted that, if households are indeed rational, lower prices for adult health services might be a more effective transfer to promote household welfare.

Figure 4
Schematic presentation of the contrast between age-specific household demand for health care and (professionally defined) age-specific need.

Inverse relationship between need and demand for health care

Another way to reduce age-specific financial access barriers consists in health insurance, which covers children at no additional cost at the point of use (co-payments). It is encouraging that insurance in rural areas of Sub-Saharan Africa has recently attracted great interest (for a review see Shaw and Griffin 1995). More applied research is certainly welcome in this domain, especially with regard to the effect of insurance schemes on children's health care use.

Households' reluctance to devote scarce time to child health care is likely to remain a significant constraint, even if the money price of services is low. To address this constraint, mass outreach interventions may be needed. However, it is questionable whether any of these actions would be sufficient to overcome the household allocation bias unless household preferences themselves change. Given the poverty of these families, it is also unlikely that persuasion (such as social marketing) would be sufficient to change their preferences, although it could encourage better use of low-cost interventions. This latter approach might be important if households were willing to procure a few more effective services for their children, if they knew which services those were.

In summary, this study showed that households spent significantly less for the care of children than for the care of adults. Sick children are considerably less often presented to modern health services than adults. None of these differences were observed along gender

lines. The underlying household rationale is the protection of the household production which takes precedence over the health maximization for all of its members. This paper argues that better understanding of intra-household discrimination may be needed to design more effective policies. More research is welcome to corroborate our hypothesis that production maintenance is the guiding principle for the intra-household allocation of resources. The principle obviously transcends the health field and, if true, would also be applicable to resource allocation in other areas, such as nutrition or education.

As to gender discrimination, we agree with Haddad and Reardon (1993:274-275) that 'the burden of proof remains with those who claim that household resources are skewed away from girls in Sub-Saharan Africa'.

References

Acharya, M. 1982. *Time Use Data and the Living Standards Measurement Study*. World Bank Working Paper no. 18. Washington DC: World Bank.

Basu, A.M. 1990. Cultural influences on health care use: two regional groups in India. *Studies in Family Planning* 21,5:275-286.

Behrman, J.R. Nutrition, health, birth order and seasonality: intra-household allocation among children in rural India. *Journal of Development Economics* 28:43-62.

Bledsoe, C.H., D.C. Ewbank and U.C. Isiugo-Abanihe. 1988. The effect of child fostering on feeding practices and access to health services in rural Sierra Leone. *Social Science and Medicine* 27,6:627-636.

Caldwell, J.C., P.H. Reddy and P. Caldwell. 1983. The social component of mortality decline: an investigation in South India employing alternative methodologies. *Population Studies* 37,2:185-206.

Chen, L., E. Huq and S. D'Souza. 1981. Sex bias in the family allocation of health care in Bangladesh. *Population and Development Review* 7,1:55-70.

Chen, M.A. 1991. *Coping with Seasonality and Drought*. Delhi: Sage Publications.

Corbett, J.E.M. 1988. *Famine and Household Coping Strategies*. London School of Hygiene and Tropical Medicine.

Corbett, J. 1989. Poverty and sickness: the high costs of ill health. *IDS Bulletin* 20:58-62.

Das Gupta, M. 1987. Selective discrimination against female children in rural Punjab, India. *Population and Development Review* 13,1:77-100.

Deaton, A. 1993. *The Allocation of Goods within the Household.* Living Standards Measurement Study Working Paper No. 39. Washington DC: World Bank.

DrŠze, J. and A. Sen. 1989. *Hunger and Public Action*. Oxford: Clarendon Press.

Evans, T. 1989. The impact of permanent disability on rural households: river blindness in Guinea. *IDS Bulletin* 20:41-48.

Gertler, P. and J. Van Der Gaag. 1990. *The Willingness to Pay for Medical Care.* Baltimore: Johns Hopkins University Press.

Haddad, L. and R. Kanbur. 1990. How serious is the neglect of intra-household inequality? *Economic Journal* 100:402.

Haddad, L. and T. Reardon. 1993. Gender bias in the allocation of resources within the household in Burkina Faso: a disaggregated outlay equivalent analysis. *Journal of Development Studies* 29,2:260-276.

Hammer, J.S. and P.A. Berman. 1995. Ends and Means in Public Health Policy in Developing Countries. In *Health Sector Reform in Developing Countries: Making Health Development Sustainable*, ed. P.A. Berman. Cambridge MA: Harvard School of Public Health.

Maxwell, J.A. and B. Miller. 1994. Categorization and contextualization as components of qualitative data analysis. Unpublished paper.

McSweeny, B. 1979. Collection and analysis of data on rural women's time use. *Studies in Family Planning* 10,11/12:379-382.

Nougtara, A., R. Sauerborn and H. Diesfeld. 1989. Assessment of MCH-services offered by professional and community health workers in the district of Solenzo, Burkina Faso. I. Utilization of MCH-services. *Journal of Tropical Pediatrics* 35,S:2-9.

Pryer, J. 1989. When breadwinners fall ill: preliminary findings from a case study in Bangladesh. *IDS Bulletin* 20:49-58.

Sauerborn, R. 1994. Household strategies to cope with the economic costs of illness: a community based study in Burkina Faso. Doctoral Dissertation, Harvard School of Public Health, Boston.

Sauerborn, R. and M. Garenne. 1993. *Rapport prŽliminaire sur les rŽsultats du Projet Recherche Action sur l'Impact des Services de SantŽ*. Ouagadougou: Minist•re de SantŽ Publique.

Sauerborn, R. and A. Nougtara. 1993. Traditional medicine is practiced by mothers rather than by traditional healers — a study from Solenzo, Burkina Faso. *Curare* 15:97-100.

Sauerborn, R., A. Nougtara and H.J. Diesfeld. 1989. Low utilization of community health workers: results from a household interview survey in Burkina Faso. *Social Science and Medicine* 29:1163-1174.

Sauerborn, R., A. Nougtara, M. Hien and H.J. Diesfeld. 1996. Seasonal variations of the household costs of illness in Burkina Faso. *Social Science and Medicine* 43,3:281-290.

Sauerborn, R., A. Nougtara and E. Latimer. 1994. The elasticity of demand for health care in Burkina Faso. *Health Policy Planning* 9:185-192.

Sen, A.K. 1984. Family and food: sex bias in poverty. In *Resources, Values, and Development*, ed. A.K. Sen. Cambridge MA: Harvard University Press.

Shaw, R.P. and C.C. Griffin. 1995. *Financing Health Care in Sub-Saharan Africa through User Fees and Insurance*. Washington DC: World Bank.

Singh, S., J.E. Gordon and J.B. Wyon. 1962. Medical care in fatal illness of a rural Punjab population: some social, biological and cultural factors and their ecological implications. *Indian Journal of Medical Research* 50,6:865-880.

Svedberg, P. 1990. Undernutrition in Sub-Saharan Africa: is there a gender bias? *Journal of Development Studies* 26,3:469-486.

White, B. 1983. Measuring time allocation, decision making and agrarian changes affecting rural women: examples from recent research in Indonesia. Paper presented at Methodology Workshop: Research on Rural Women, 12-14 March, 1982. University of Sussex.

United Nations. 1983. *Manual X: Indirect Techniques for Demographic Estimation*. New York.

World Bank. 1994. World Development Report: Infrastructure for Development. Washington DC.

>=60

60-64

55-59

50-54

45-49

40-44

35-39

30-34

25-29

20-24

15-19

10-14

5-9

1-4

0-1

arbitrary units

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Cross-sectional anthropometry: what can it tell us about the health of young children?

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Abstract

It has become common practice in health surveys to collect anthropometric measurements from young children. These datasets comprise one-point-in-time measurements for a number of children, and are very different in character from longitudinal data such as those collected during growth monitoring. This paper explores the nature of cross-sectional data, their applications and their limitations, using sample data from Burundi, Uganda and Zimbabwe. Methods of analysis which treat the data as continuous or dichotomous are compared. The conclusion is that cross-sectional data can make a valuable contribution to health research provided their application and interpretation are properly understood.

The collection of body measurements, or anthropometry, has become a basic tool for monitoring the health of young children. The reliability of weight gain as an indicator of child health is widely recognized, and major episodes of illness are almost invariably associated with loss of weight. Prolonged growth faltering precedes most child deaths.

Growth monitoring usually involves weighing individual children during a series of visits to a health facility so that weight increases can be tracked over time. Health workers throughout the world record weights of infants and children on growth charts which compare their progress with the expected range for their age. Having less than the expected range of weight or weight gain indicates failure to thrive and the need for special care. Weight, rather than length or height, is the preferred measure for growth monitoring of infants as height increases more slowly and is difficult to measure accurately in small children, but height for age also is taken into account when the health status of both infants and young children is assessed.

In recent years it has become increasingly common to use survey techniques to collect a single round of anthropometric measurements from a large number of children. In some instances this may be a practical exercise to identify children most in need of nutritional supplementation when there is a critical food shortage, or to determine the prevalence of poor growth attainment. For example, Beaton et al. (1990:17) recommend one-time screening in emergency situations to identify individuals requiring immediate attention in order to survive, and in non-emergency situations, individual one-time screening can be used to identify children in need of immediate nutrition or health intervention. In other instances cross-sectional anthropometry is collected to support health-related research, as in the case of the Demographic and Health Surveys (DHS), which also gather information on a wide range of other health issues and socio-economic, demographic and environmental characteristics. In these cases the anthropometric measurements are intended as an indicator of a child's nutritional and health status.

Cross-sectional data, however, are very different from data collected longitudinally over time to monitor the growth of individuals, and cannot be interpreted in the same way. Indeed, because there is only one measurement for each child, some would argue that one-off, cross-sectional measurements are of little value other than as a rough method of identifying cases for intervention in emergency situations.

This paper considers the nature of cross-sectional height and weight data for children aged up to five years, and compares their use and interpretation with that of longitudinal data. Approaches to the analysis of cross-sectional data also are discussed. Examples are drawn from three DHS cross-sectional data sets, for Burundi, Uganda and Zimbabwe, to give an appreciation of cross-national similarities. These surveys were carried out between 1987 and 1989 as part of the first round of DHS. The choice of countries was primarily because of the availability of DHS I data, their regional proximity and several common features[1].

Measuring growth attainment

Child growth is determined primarily by food intake, genetic potential and the experience of infection, and may be affected by other factors, such as stress and exercise levels (Ferro-Luzzi 1984; Mata 1985:165; *Nutrition Reviews* 1988:217; Tomkins and Watson 1989:30). Height and weight are thus measures of growth attainment rather than nutritional status, since more information is required to distinguish the effects of nutrition from other factors. For example, in the short term some forms of micro-nutrient deficiency may not manifest as impaired growth (see Fidanza 1991). Although malnutrition is a major cause of short stature, it also may be inherited or due to congenital dwarfism, chromosomal disorders, inter-uterine growth retardation, hormonal deficiencies or chronic diseases (Ebrahim 1978:7). Genetic variation in size between children of the same age is expected within any population (Mora 1985:270), and there is usually a normal distribution of height and weight across samples of children of any given age. Within any given population healthy children of different ages are expected to be of different sizes, and some variation also is expected between children of the same age. At the same time, all healthy children are expected to increase progressively in dimensions and weight until they reach adulthood.

It is therefore essential to understand thoroughly the nature of child growth before drawing conclusions about nutrition or health from cross-sectional anthropometry. On the one hand, even with clinical assessment, it is virtually impossible to determine from one-time measurement the relative contributions of nutrition, genetics, infection and other factors to the growth attainment of an individual child. Nevertheless, it is possible to make some judgements about nutrition and health at the population level from large samples of cross-sectional measurements.

Because there are obvious ethnic variations between adults, many people find it difficult to accept the fact that children of different ethnicities have the potential to achieve similar levels of growth attainment in the first few years of life. Research has shown, however, that ethnic differences become established at puberty rather than in early childhood (Falkiner 1986:125). Eveleth and Tanner (1976) concluded from an examination of data from some 50 studies that, before puberty, greater differences exist between ethnic groups living in different environments than between different ethnic groups in the same environment. They also found

[1]Africans constitute the majority of the population in all three countries, with each having at least two major ethnic groups. All three have a substantial population growth rate with a large proportion of the people dependent on subsistence or semi-subsistence cultivation. Each has experienced colonialism, and each suffered major civil conflict at some time in the decade preceding the survey, which had an impact on living standards and health services.

that environmental differences can affect the timing and magnitude of adolescent growth spurts. There was little difference in height between 16-year-old boys and girls in African tribal groups, whereas Afro-American boys had already experienced their adolescent growth spurt and were 9 to 10 cm taller than 16-year-old Afro-American girls.

Similarly, Habicht et al. (1974) concluded from their study of well-nourished children from different ethnic backgrounds that nutrition generally has a much greater effect on growth attainment in the first few years of life than does ethnicity. They found that the effect of ethnicity was so small compared to that of nutrition and environment that it was reasonable to use height and weight standards drawn from well-nourished white populations to compare with samples of children from other populations. In most developing countries poor growth attainment is due to both malnutrition and repeated infection rather than to malnutrition alone. It is widely recognized that there is a synergy between malnutrition and infection which increases their effect when they occur together (see various research reports in Tomkins and Watson 1989). Differences between populations therefore justify the use of cross-sectional anthropometry at the population level as a proxy for the extent of nutrition and infection, but not for one without the other.

The evaluation of growth attainment requires the use of a reference standard which allows for normal variation at any age. The same standard may be used for both cross-sectional and longitudinal anthropometry, at either the individual or the population level. The World Health Organization / National Center for Health Statistics / Center for Disease Control (WHO/NCHS/CDC) reference data are widely recommended for this purpose and for evaluating the efect of nutritional programs (Waterlow et al. 1977:490; WHO 1986:937; Behrens 1991). There are a number of other internationally recognized reference standards, such as the Harvard data, which were collected before the WHO/NCHS/CDC data, and some countries have developed their own standards. This paper refers only to the WHO/NCHS/CDC data, which have become the most popular reference. These data were compiled from two samples of well-nourished American children during the 1970s. The complete set of tables comprises the mean weights and heights for every 10th centile, and the 3rd, 5th, 95th and 97th centiles, across the normal distributions for each month of age up to 18 years, separately for males and females.

One limitation of the WHO/NCHS/CDC reference data is that heights and weights below the 10th centile or above the 90th centile were estimated (WHO 1983:61). That is, values below the 10th centile were not derived from observations. In countries such as Burundi, Uganda and Zimbabwe many children cluster at the lower extremes of the reference tables, but the WHO/NCHS/CDC reference values for these groups are not actual population means. Despite this, the WHO/NCHS/CDC reference values are widely used even for populations with a high prevalence of poor growth attainment, because limited funds and lack of time usually prevent the development of a local standard. As will be shown here, the important thing is not the source of the reference data but the way in which they are used.

Since the interpretation of any given height or weight depends on the age of the child, the growth reference curves were transformed into age-standardized normalized growth curves so that children of different ages could be compared. Using these curves, which are considered to be normal (Gaussian) curves at each age, the growth attainment of a particular child can be expressed in three ways: as centiles of the reference distribution, as percentages of the reference median and as standard deviations (SDs) from the reference median. All three indices can be applied to both longitudinal and cross-sectional data. SDs, also known as Z-scores, are the most widely used of the three indices. Their derivation and use is described in detail in Dibley, Goldsby et al. (1987); Dibley, Staehling et al. (1987).

The standardized measurements used most commonly for children are height-for-age (Ht/A), weight-for-age (Wt/A) and weight-for-height (Wt/Ht)[2]. Other measurements not discussed here include Head Circumference (HC), Mid Upper Arm Circumference (MUAC), Skinfold Thickness (SFT) and Body Mass Index (BMI) and various other dimensions discussed in Fidanza (1991).

To allow for normal genetic variation in growth attainment, the convention is to select a cut-off point, below which all children are considered to have low attainment. Cut-off points of minus 2SDs below the reference median in the case of Z-scores (or 80 per cent of the reference median Wt/A and 90 per cent of the reference median Ht/A if percentages are preferred) are widely used to identify cases for intervention or to assess the prevalence of poor growth attainment in developing countries. Children whose height-for-age is very low or below a chosen cut-off point are said to be 'stunted'; very low weight-for-age is 'underweight'; and very low weight-for-height is described as 'wasted'.

Low height-for-age generally indicates long-term past malnutrition. Height deficiencies are usually related to intermittent or continuous inadequate nutritional intake and frequent infection, especially during the first two years of life (Graitcer et al. 1981:292). Low Ht/A is therefore considered a good indicator of chronic malnutrition. It is a very common condition in poorer countries.

Low weight-for-age is associated with current or acute malnutrition or infection. A child who has previously received adequate nutrition, but is currently experiencing a short-term episode of reduced food intake or infection, would typically have normal Ht/A and low Wt/A. When used on its own, Wt/A is a better indicator for children up to age one year than for older children, because weight is obviously related to height. In some African countries up to 50 per cent of young children are stunted, but half of them are within the normal range for Wt/A, and otherwise healthy apart from their small stature.

Older children who have low height-for-age may also have low weight-for-age, even if they are not currently malnourished. In this case, if only one cross-sectional measurement is available, Wt/A alone does not distinguish acute (short-term) malnutrition from low weight associated with smallness of stature or chronic (long-term) malnutrition (Waterlow et al. 1977:491). This limitation of Wt/A applies particularly to cross-sectional data, but less to longitudinal surveys, where repeated measurements are taken and trends can be observed.

Weight-for-height is a more robust indicator, particularly for cross-sectional data, since it allows for stunting. Wasting is considered the best indicator of present malnutrition, and hence is the best proxy for nutritional status. Between ages one and ten years Wt/Ht is nearly independent of age, although when children of the same height who are aged less than one year are compared, the older child tends to be heavier (Waterlow et al. 1977:491).

It is important to note that the choice of cut-off point is optional. Different cut-offs may be selected to suit particular purposes or conditions. For example, in the case of one-time assessment to select candidates for emergency nutritional supplementation the cut-off point may be adjusted to identify the number of children that can be fed with the available budget. The minus 2SDs cut-off point and 80 or 90 per cent of the reference median have become so widely used that their real meaning tends to be forgotten. They do not signify a rigid distinction between one group of children who are adequately nourished and healthy and

[2]Children up to two years of age commonly have their length measured, as they are placed in a supine position against a measuring board. Older children usually stand upright so that their height is measured rather than their length. For simplicity this paper refers to the 'height-for-age' (Ht/A) and 'weight-for-height' (Wt/Ht) of children of all ages, in preference to the more precise, but cumbersome, 'length-for-age' or 'weight-for-length' for those up to two years of age and 'height-for-age' and 'weight-for-height' only for older children. Similarly, the terms 'length','height' and 'stature' can be treated as interchangeable.

another group who are not. Rather, they are rough boundaries. Above the cut-off point the health and nutrition of most children, but not all, is probably adequate. Below the cut-off point the health and nutrition of many, but not all, is probably a cause for concern.

WHO (1986) argues convincingly that the most commonly used cut-off points, minus 2SDs and 80 per cent of the reference median, may be unrealistic and of limited use. One obvious limitation is that different scales of measurement may focus on different cases. For example, 80 per cent of the reference median weight-for-age is roughly equivalent to a Z-score of minus 2SDs, but the relative proportions of children diagnosed as underweight by the two indicators vary according to age (Waterlow et al. 1977:494).

Keller and Fillmore (1983) found that 27 per cent of a sample of children aged between one and two years had a weight-for-height minus 2SDs or below, but only 15 per cent were below 80 per cent of the reference median. Similarly, Mora (1985) used different data to demonstrate that the actual cases identified by cut-off points for the various indices may differ. It is thus evident that, in the absence of supporting data to indicate trends over time, cut-off points should never be regarded as making a definitive statement about nutrition and health.

The use of international reference standards based on well-nourished American populations also has led to some debate. One school of thought is that local standards should to be developed, since some countries find it unacceptable, as well as possibly inappropriate, to compare children in developing countries unfavourably with standards drawn from an alien population (WHO 1986:4). Since it is usually impracticable to develop a local standard because of time and cost constraints, such an argument serves only to direct attention away from the more important issue of how to use the reference values correctly.

Recent work by the WHO Working Group on Infant Growth (1995) has shown that the growth of populations of infants fed according to current WHO recommendations is less than expected on the basis of the WHO/NCHS/CDC reference values. The American children from whom the WHO/NCHS/CDC reference values were derived were mainly bottlefed, whereas WHO recommends exclusive breastfeeding for the first four to six months, after which children should receive appropriate and adequate complementary weaning foods but continue to receive breastmilk up to age two years or more. Relative to the reference values, the mean weight-for-age for samples of breastfed children declined continuously from two to 12 months to a low of almost -0.6 SDs, but thereafter gradually increased and approached the reference median. Differences were smaller for height-for-age and weight-for-height. On the basis of this the Working Group has now recommended a new reference which reflects current health and feeding recommendations (WHO Working Group on Infant Growth 1995:173).

Although this would improve the validity of the WHO/NCHS/CDC reference values for breastfed children, it does not mean that they cannot be used in their present form. Waterlow et al. (1977:490) argued that the reference values should be used only as a yardstick and not a target. WHO (1986:4) suggested that if attainment of the reference standards is unrealistic they could serve as a hindrance to practical planning, and recommended that local 'norms' should be set, such as 95 per cent rather than 100 per cent of the international reference value.

As discussed above, poor growth attainment in young children is usually caused by malnutrition and infection as a result of socio-economic disadvantage, rather than by differences in genetic potential (Habicht et al. 1974; Pelletier 1991). This is a compelling argument in favour of using the WHO/NCHS/CDC reference values as at least an approximate target for children in all countries until another standard becomes available, since the difference due to breastfeeding is only small. The most important thing is to draw attention to the fact that substantial shortfalls in child growth attainment at the population level indicate socio-economic disadvantage and a need for nutrition and health interventions.

Weight charts based on international reference standards have been used very successfully throughout the world to measure the progress of individual children in both developed and developing countries. Weight charts, however, indicate growth trends. The following section of this paper explores the application of the WHO/NCHS/CDC international reference standard to cross-sectional anthropometric data when only a single set of measurements is available for each child.

Anthropometric patterns and correlations in cross-sectional data

As discussed above, an obvious limitation of data from one-off cross-sectional anthropometric surveys is that they cannot be used to draw firm conclusions about the health status of individual children because they give no indication of growth trends. This is especially so in countries where large proportions of otherwise healthy children are stunted. For example, whereas a child who has normal height-for-age and low weight-for-age would probably be a cause for concern, a child who is minus 2SDs below the reference median for both Wt/A and Ht/A at the time of survey could be a previously healthy child who has become ill and is losing weight rapidly; a previously unhealthy child who is experiencing a period of healthy weight gain; or a genetically small child who has been consistently stunted and underweight with respect to the reference median since birth. Only a series of measurements over time can provide sufficient information to allow reliable judgements to be made at the individual level.

Since sample surveys are designed to portray population rather than individual characteristics, this limitation is somewhat irrelevant. A more important question is whether limitations at the individual level prevent the drawing of valid conclusions about growth patterns at the population level. The answer is that cross-sectional data are as useful as longitudinal data for population-level analysis, and in several respects are superior.

One major advantage of one-off cross-sectional surveys compared with longitudinal studies is that data can be gathered from relatively large samples at relatively little cost. It is therefore possible to explore mean growth attainment at different ages, using data for a large number of children at one point in time rather than data for a small number of children at different points in time. Greater sample sizes give cross-sectional data the advantage of being more likely to be nationally representative. Cross-sectional surveys also are able to collect data on a wider range of topics, such as detailed information on socio-economic, demographic and environmental characteristics of respondents, which can be related to patterns of growth attainment. To demonstrate the validity of cross-sectional anthropometry at the population level the next section compares the patterns depicted when sample means for one–month age groups are compared with the reference values.

Patterns of distribution

The DHS samples for Burundi, Uganda and Zimbabwe are large enough to depict nationally representative patterns. The survey respondents were women aged 15-49, and the target population for weighing and measuring were all children aged from three months to 36 months in Burundi, all children from birth to 60 months in Uganda and all children aged from three months to 60 months in Zimbabwe, at the time of the interview. Table 1 gives details of the sample of measured children. A smaller percentage were missed in Burundi, as the target age limit was lower and young children are more likely to be with their mothers.

Table 1
Selected characteristics of measured children

	Burundi		Uganda		Zimbabwe	
	%	N	%	N	%	N
Child's age (months)						
0-5	12.1	*230*	13.2	*486*	7.5	*177*
6-11	22.3	*424*	13.1	*485*	10.6	*251*
12-17	16.6	*317*	12.5	*461*	11.9	*281*
18-23	15.1	*287*	10.1	*373*	10.8	*254*
24-29	18.3	*349*	9.7	*357*	11.6	*274*
30-36	15.6	*298*	9.2	*339*	9.8	*232*
36-47			17.4	*644*	18.1	*428*
48-60			14.8	*546*	19.7	*465*
	100.0	*1905*	100.0	*3691*	100.0	*2362*
Child's sex						
Male	50.7	*967*	49.3	*1821*	50.2	*1185*
Female	49.3	*939*	50.7	*1870*	49.8	*1177*
	100.0	*1906*	100.0	*3691*	100.0	*2362*
Mother's age (years)						
15-19	0.8	*16*	8.7	*320*	5.2	*122*
20-24	18.6	*354*	25.2	*931*	23.3	*550*
25-29	31.3	*596*	28.0	*1035*	26.5	*627*
30-34	24.4	*465*	18.3	*675*	21.8	*515*
35-39	15.8	*300*	12.7	*468*	14.1	*333*
40-44	6.3	*119*	5.5	*203*	6.4	*150*
45-49	2.8	*54*	1.6	*59*	2.8	*65*
	100.0	*1904*	100.0	*3691*	100.0	*2362*
Mother's education						
None	80.3	*1530*	42.0	*1548*	18.5	*436*
Primary	17.1	*326*	50.2	*1854*	64.6	*1527*
Secondary +	2.6	*50*	7.8	*288*	16.9	*399*
	100.0	*1906*	100.0	*3690*	100.0	*2362*
Mother working for money						
No	96.0	*1828*	91.8	*3377*	80.7	*1905*
Yes	4.0	*77*	8.2	*302*	19.3	*457*
	100.0	*1905*	100.0	*3679*	100.0	*2362*
Husband's education						
None	59.5	*1028*	17.2	*606*	11.3	*243*
Primary	35.3	*610*	61.6	*2174*	60.1	*1290*
Secondary +	5.2	*89*	21.2	*748*	28.6	*615*
	100.0	*1727*	100.0	*3528*	100.0	*2148*
Place of residence						
Rural	97.0	*1847*	8.9	*330*	76.7	*1811*
Urban	3.0	*58*	91.1	*3361*	23.3	*551*
	100.0	*1905*	100.0	*3691*	100.0	*2362*
Drinking water source						
Well	55.8	*1063*	48.6	*1795*	49.0	*1150*
Piped	1.4	*26*	6.7	*248*	38.1	*893*
Surface,other	42.8	*816*	44.6	*1648*	12.9	*303*
	100.0	*1905*	100.0	*3691*	100.0	*2346*
Toilet facility						
None	4.1	*78*	16.9	*624*	42.4	*1000*
Flush	1.3	*24*	2.6	*97*	25.9	*611*
Pit, other	94.6	*1804*	80.5	*2970*	31.7	*749*
	100.0	*1906*	100.0	*3691*	100.0	*2360*

Note: Total number of cases may vary because of non-response.

Figures 1, 2 and 3 show the height-for-age, weight-for-age and weight-for-height distributions for Burundi, Uganda and Zimbabwe. Although the age range of children for whom data are available varies between the three countries, only children aged 3-36 months are included in these figures, so they are exactly comparable.

Figure 2: DISTRIBUTION OF WEIGHT / AGE, AGES 3-36 MONTHS

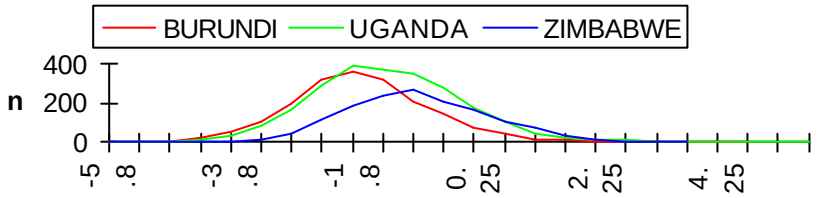
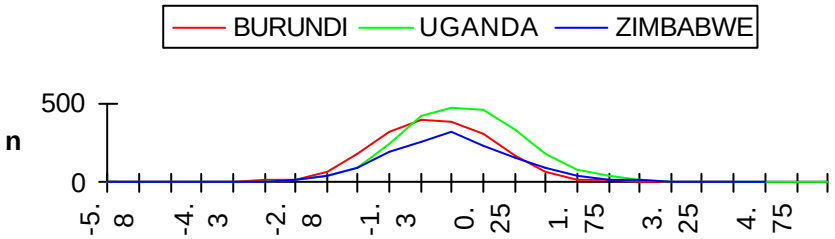


Figure 3: DISTRIBUTION OF WEIGHT / HEIGHT, AGES 3 - 36 MONTHS



It is apparent that the distributions for all three indicators in each country are close to a normal curve in shape, but those for Ht/A and Wt/A are noticeably displaced to the left of the reference median. That is, there is the expected normal variation in weight and height across the population, but the level is low in relation to the reference median. The patterns thus indicate that a large proportion of the sample has failed to achieve the reference median height

and weight for their age. Zimbabwe appears slightly advantaged in both Ht/A and Wt/A compared to Burundi and Uganda, which is consistent with its better economic status.

In all three countries the curve for weight-for-height is closest to the reference median. The modes for both Uganda and Zimbabwe are close to zero, with that for Burundi displaced slightly more to the left, with a mode of approximately minus 0.75 SDs. This pattern reflects the high-risk nature of low Wt/Ht, which usually indicates growth faltering. Whereas children may remain stunted or underweight for long periods of time, often throughout their lives, wasting tends to be a more transient condition because wasted individuals are likely to deteriorate further and die, or else to recover and gain weight.

Table 2
Percentage of singleton children stunted, underweight or wasted [a]

	Stunted %	Underweight %	Wasted %	N
Burundi	47.9	37.9	5.7	*1906*
Uganda	43.8	25.3	2.3	*2386*
Zimbabwe	29.9	12.6	1.2	*1514*

[a] Defined as 2SDs or more below the reference median.

Table 2 gives the percentages of children in Figures 1,2 and 3 who would be classified as stunted, underweight and wasted when minus 2SDs is used as the cut-off point. It can be seen that stunting is the most prevalent condition among children aged 3- 36 months in all three countries. Fewer children are underweight, and only a very small percentage are wasted. It is interesting to note that in these data sets virtually all of the underweight children were also stunted, signifying that they were suffering from both chronic and acute malnutrition. As is the case in most countries, wasting is uncommon, but most prevalent among children aged 12 - 23 months, the age at which weaning usually occurs. Even in this age group the percentages with this condition are small: 10.1 per cent in Burundi, 3.8 per cent in Uganda and 1.9 per cent in Zimbabwe.

Since, as discussed above, weight-for-height is the best indicator of present malnutrition, the low prevalence of wasting limits the extent to which anthropometric indicators can be used as proxies for current nutritional status. Because there tend to be fewer wasted children at any point in time, much larger samples would be needed to explore the correlates of this condition. The remainder of this paper therefore focuses only on patterns and correlates of Ht/A and Wt/A in the three countries.

As the cross-sectional data in Figures 1,2 and 3 show approximately the normal distribution expected in any population, it is reasonable to compare the means for each age with the reference median. Figures 4, 5 and 6 depict the mean Z-scores for Ht/A and Wt/A separately for males and females in relation to the reference values, which are represented as a straight line index. All measured children are included in these figures, that is, ages 3-36 months for Burundi, birth to 60 months for Uganda and 3-60 months for Zimbabwe.

Figure 4a: Burundi: mean height-for-age in standard deviations from reference median, males and females aged 3-36 months

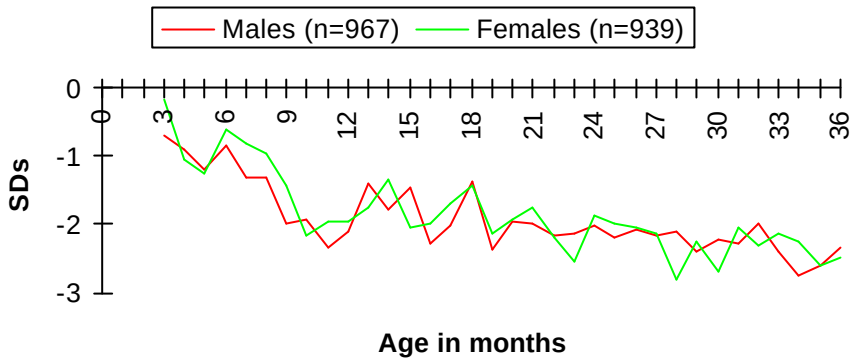


Figure 4b: Burundi, mean weight-for-age in standard deviations from reference median, males and females aged 3-36 months

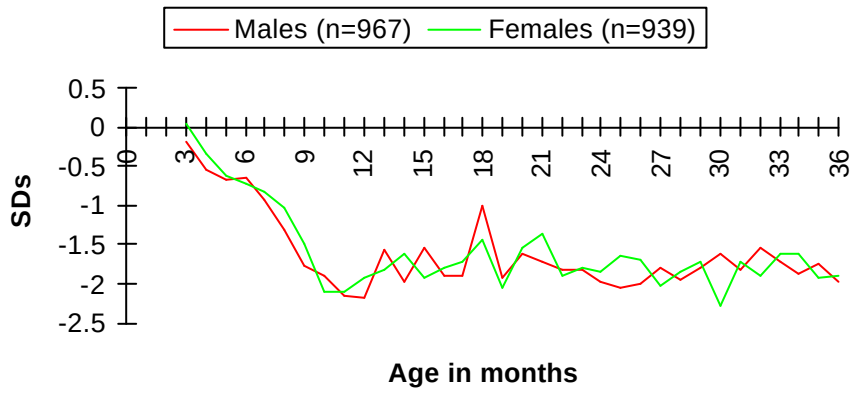


Figure 5a. Uganda: mean height-for-age, males and females aged 0-60 months (standard deviations)

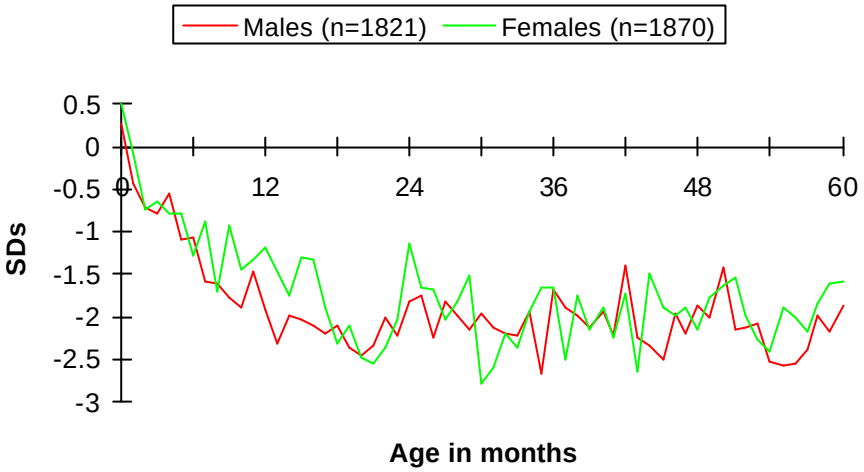


Figure 5b. Uganda: mean weight-for-age, males and females aged 0-60 months (standard deviations)

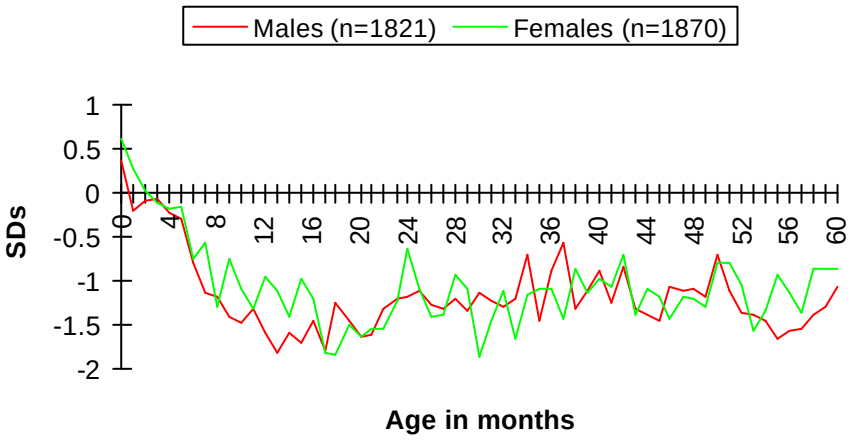


Figure 6a. Zimbabwe, mean height-for-age, males and females aged 3-60 months (standard deviations)

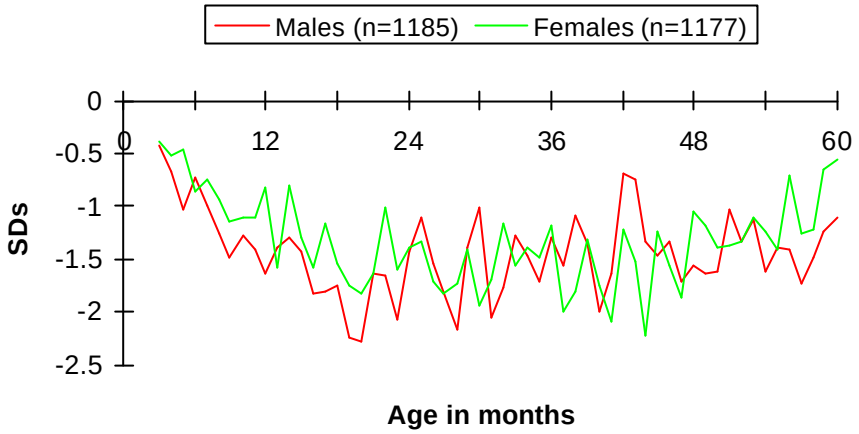
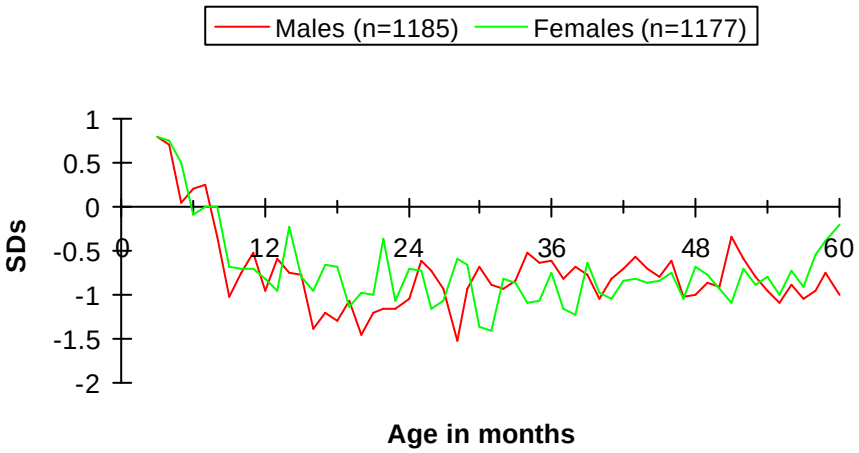


Figure 6b. Zimbabwe: mean weight-for-age, males and females aged 3-60 months (standard deviations)



A strikingly consistent pattern can be seen. In each country the means for both Ht/A and Wt/A start out close to or even above the reference median, but deteriorate sharply over the succeeding 12 months or more as age increases. The curves are similar in all three countries,

even though there is some fluctuation as a consequence of relatively small samples at each age[3].

It is obvious from the jagged nature of the plotted curves that they are synthetic trend lines comprising mean values from many different cases, in contrast to a real trend line of longitudinal data from a single case. The synthetic nature of such curves should be borne in mind even when cross-sectional samples are so large that the curves appear smooth. But even though they are synthetic, the implications of these patterns are considerable. They signify that at birth and at very young ages these samples are comparable with the reference values; that is, with well nourished populations of American children. In the succeeding months, however, they grow more slowly than the reference population, and the mean values slip ever further below the reference values until around 24 months, when they begin to level out. The cause of this inferior growth attainment at the population level is obviously not due to any ethnic differences in growth potential, or the distance from the reference values would be more or less the same at all ages. Rather, it is a result of socio-economic disadvantage, manifesting as malnutrition and infection.

Clearly, cross-sectional data are valuable for, and ideally suited to, portrayals of this nature, but the information they give is not the same as that yielded by longitudinal data. To identify similar patterns of mean growth attainment with age from longitudinal data, it is necessary to treat observations at each age as individual cases, and to calculate means for the observations at each age; that is, effectively to convert longitudinal observations into cross-sectional observations. However, since longitudinal data include a time dimension, they depict a growth history. This is different from a cross-sectional snapshot, which, as a composite of data from children of different ages at one point in time, may not equate with either the sample mean growth history or the growth history of any individual child.

The extent to which longitudinal data mirror actual historical trends in growth depends on the age distribution of the sample. For example, ten-year longitudinal data for a cohort of Zimbabwean children who were all born in 1975 might show very poor mean growth attainment at ages one to five years, because of social disruptions and nutritional deprivation in the period before independence was achieved in 1980. However, if such data were from a continuing longitudinal survey of children born between 1975 and 1985, better growth attainment of children born after 1980 might cancel out the poor growth of children born during the war, and so reduce evidence of historical trends in nutrition. To some extent cross-sectional data also are able to reflect historical trends such as periods of food shortage, in that some cohorts have poorer mean growth attainment than others. Such events would tend to become increasingly less evident as they recede into the past and there is opportunity for 'catch-up' growth to occur.

It is thus necessary to consider the distribution of birth dates and ages in both longitudinal and cross-sectional samples in order to be sure what they depict. It must also be remembered that, as mentioned above, longitudinal observations are likely to be based on a relatively small sample of children compared with most cross-sectional surveys, and so are less likely to be nationally representative.

[3]The sample size at each one month of age ranges from a maximum of 97 children aged 11 months in Uganda to a minimum of 23 aged 44 months in Burundi, with an average of 30 to 40 children at each age.

Correlations

The identification of the correlates of poor growth attainment is important for planning effective health policy. Health planners need such information to plan and set priorities for intervention strategies to improve child health, and to assess the effect of interventions. At the population level cross-sectional data can be used to plan long-term health and nutrition interventions. In this case, poor growth attainment is regarded as a proxy for inadequate diet, infectious disease and detrimental socio-environmental factors (Beaton et al. 1990:18). Cross-sectional surveys are the preferred approach to collecting such data because large, representative samples and information on a range of topics can be obtained in a short time and generally more cheaply than setting up and implementing long-term longitudinal studies.

One important limitation of cross-sectional data in the context of health surveys, however, is that, unlike longitudinal surveys, they do not support assessment of the direct effect of a particular episode of illness on growth attainment. The DHS surveys for Burundi, Uganda and Zimbabwe asked mothers if their children had suffered from diarrhoea in the preceding 24 hours or two weeks, and if they had suffered from a cough, respiratory problems and fever in the past four weeks. Analysis of the data showed no consistent statistically significant associations between reports of illness and stunting, underweight or wasting. This is partly because the questions about illness relied on the respondent's perception of illness rather than on clinical diagnosis, and no attempt was made to assess the severity or duration of the episode. On the other hand, even such limited reports of illness would probably show some association with growth trends in longitudinal data.

The main reason for the limited associations in the cross-sectional data is that illness usually has a very direct effect on growth. Growth may slow or stop when children are sick, but resume when they recover. The assessment of the impact of illness on growth attainment thus requires knowledge of individual growth trends, which cannot be determined from a single measurement. For this reason cross-sectional measurements are unlikely to reflect a consistent relationship with reports of illness, whereas a series of measurements obtained at different points in time are very likely to demonstrate a direct causal relationship between episodes of illness, especially diarrhoea, and growth.

On the other hand, it is reasonable to use cross-sectional data to analyse the correlation of socio-economic, demographic or environmental factors with poor growth attainment. Since the association is less direct, population-level patterns are likely to reflect an association with these factors. Even so, the method of analysis selected can affect the results. In particular, the use of a cut-off point to classify cases may blur the association because the causes of the growth attainment of children in the two groups are not uniform.

As discussed above, cut-off points may be an essential tool to facilitate practitioners' judgements about a particular child's condition, and as a quick way of identifying cases for intervention programs. They also are obviously convenient to distinguish groups of cases, and to summarize data in written reports. However, it has become common practice to use cut-off points to transform Z-scores or percentages of the reference median into dichotomous dependent variables so that odds ratios can be estimated with logistic regression models. In many such studies the only other presentation of the anthropometric data is in cross-tabulations, also using cut-off points (for example, Choudhury and Bhuiya 1993; Katz 1995; Timaeus and Lush 1995).

Given the nature of cross-sectional data and their limitations at the individual level, analysis based on cut-off points should be used only in conjunction with other analytical techniques which give a picture of growth attainment patterns across the whole sample. Pelletier et al. (1994:2085S, 2087S) consider that relative-risk analysis is an unreliable basis for comparing the predictive value of various anthropometric indicators. They point out that

the results are highly sensitive to the choice of cut-off points, and that categories are not strictly comparable across indicators

One argument advanced by some researchers who favour cut-off points and dichotomous variables is that their data are too unreliable to use at the individual level (for example, Gaminiratne 1991). However, this approach still makes the questionable assumption that the data are sufficiently reliable to allow meaningful classification to either side of a cut-off point, and that there are real differences between the children on either side. Moreover, even when cases are reclassified into groups, the statistical procedures for analysing growth attainment operate on individual cases. Yip and Scanlon (1994:2044S) comment:

> In reality , the risk of undesirable outcomes including mortality does not change drastically when crossing the magic cutoff point. The only certain part of risk prediction in using the distribution of specific health or nutrition parameters as a guide, such as weight-for-age, is that the farther away from the central part of a distribution the greater the likelihood of true disease or poor outcomes.

In view of this, a better approach to the analysis of cross-sectional data is to treat anthropometric indicators as continuous variables, and to focus on patterns of covariation rather than on the odds of being in one discrete category rather than another. Linear regression is a suitable analytical technique for this purpose, with categorical independent variables converted into dichotomous dummy variables. This approach is consistent with the recommendation of Yip and Scanlon (1994:2045S) that it is important to look at the characteristics of the entire population when determining factors associated with adverse outcomes. Examples of authors who have used Z-scores or percentages as continuous variables include Sommerfelt (1991), Desai (1992) and Thomas (1993).

To demonstrate the difference between the two approaches, logistic regression models which treat Ht/A and Wt/A as dichotomies are compared here with linear regression models which treat Ht/A and Wt/A as interval variables. The conventional Z-score cut-off point is used in the logistic regression models, that is, above minus 2SDs and minus 2SDs or more below the reference median. The data are for Burundais children aged 3-36 months. Table 3 lists the variables tested for inclusion in both models, and their reference categories in the logistic regression models. Duration of breastfeeding, ownership of a refrigerator, immunization status and some other variables were not tested because there was no significant association in bivariate tabulations. In the linear regression models categorical variables were converted into dummy variables. Tables 4 and 5 present the results of the analysis.

The very low r^2 values in the linear regression model are to be expected, because Z-score data are age standardized. Moreover, several important factors which have a direct bearing on growth, such as genetic potential, experience of illness and food intake, were either not available in the data sets or lacked sufficient detail to be used. When the raw, unstandardized heights and weights of these children were regressed against age, 72 per cent of the variation in height and 61 per cent of the variation in weight were explained by variation in age. The models in Tables 4 and 5 therefore relate only to that portion of the variation which is not accounted for by age standardization. The inclusion of child's age in these models is to explore variation in Z-scores as age increases, as opposed to absolute variation in height and weight as age increases. The use of child's age squared in addition to child's age in both approaches is simply a device to fit the curvilinear pattern of variation with age, as depicted in Figure 4.

Table 3
Burundi: Variables tested in models and reference categories for logistic regression

Child's age	*Interval*	Mother's education	None
Antenatal tetanus	No	Mother's literacy	No or weak
Antenatal care	No	Husband's education	None
Dead sibling	No	Husband's literacy	No or weak
Birth order	*Interval*	Husband's occupation	Agriculture
Preceding birth interval	24-35 months	Water source	Well
Succeeding birth interval	None	Distance to water	*Interval*
Electricity	No	Toilet facility	Pit latrine
Sex of child	Male	Number in household	*Interval*
Mother's age	*Interval*	No. of children under 5yrs	*Interval*
Region	Central Plateau	Immunization	None
Residence	Rural	Heard of oral rehydration	Yes

It must be appreciated that the two models presented here look at growth attainment from different perspectives. The logistic regression model in Table 4 looks at the odds of cases in various categories being 2SDs or more below the reference median. That is, an odds ratio of less than one indicates lower odds relative to the reference category for that variable, and a value greater than one indicates higher odds. The linear regression model in Table 5 looks only at covariation of the dependent and independent variables. A negative B value indicates that a factor is negatively associated with growth attainment, while a positive value indicates the reverse.

It can be seen from Tables 4 and 5 that in both approaches similar variables are significantly associated with Ht/A and Wt/A. In the linear regression model, however, the use of dummy variables to represent individual categories of a single variable allows a wider range of factors to remain significant, including electricity in house, no soap in house and having a dead sibling. Child's age, region, and preceding or succeeding birth interval feature in both models for Ht/A. However, only Imbo region is significant in the linear regression model, while seven categories of husband's occupation are replaced by a dummy variable indicating that the husband has secondary education.

The strength of the association of birth interval with growth attainment is evident in the appearance of three out of the four categories in the linear regression model. The positive rather than negative association of a short succeeding birth interval probably reflects a bias towards older ages and a slight catch-up effect in growth among the few children in this very young sample who actually have a succeeding birth interval.

In the logistic regression model for Wt/A only child's age, region and preceding birth interval are significant. As before, a wider range of factors appear in the linear regression model, including electricity in the house, and no soap in the house, along with two regions, rather than one, and three birth interval categories. A comparison of the two approaches for Uganda and Zimbabwe, which is not shown here, yielded comparable results, with similar variables in both models, and an even wider range of significant categories in the linear regression model.

Table 4
Burundi: Relative risk of being 2SD or more below reference median

	Estimate	S.E.	Odds	N
HEIGHT/AGE				
Base	-0.4257	0.8755	1.00	*1769*
Child's age	0.1375	0.0269	1.15	
Child's age2	-0.0020	0.0007	1.00	
Husband's occupation				
Agriculture			1.00	*1416*
Prof./Tech./Cler.	-1.0480	0.4085	0.35	*42*
Retailing	-0.2321	0.2032	0.79	*124*
Manufacturing	-0.0606	0.1793	0.94	*161*
Never worked	0.8010	0.7708	2.23	*26*
Region				
Central Plateau			1.00	*988*
Mumirwa	-1.1320	0.8662	0.32	*216*
Mugamba	-1.5260	0.8726	0.22	*171*
Imbo	-0.0421	1.0280	0.96	*126*
Depressions	-1.3570	0.8632	0.26	*268*
Preceding birth interval				
24-35 mths			1.00	*657*
0-23 mths	0.2758	0.1640	1.32	*267*
No previous birth	0.3127	0.1625	1.37	*272*
36 + mths	-0.1418	0.1296	0.87	*573*
WEIGHT/AGE				
Base	-0.1803	1.0780	1.00	*1769*
Child's age	0.2588	0.0291	1.30	
Child's age2	-0.0056	0.0007	0.99	
Region				
Central Plateau			1.00	*988*
Mumirwa	-2.8200	1.0650	0.06	*216*
Mugamba	-2.8410	1.0680	0.06	*171*
Imbo	-1.9710	1.2030	0.14	*126*
Depressions	-2.8000	1.0630	0.06	*268*
Preceding birth interval				
24-35 mths			1.00	*657*
0-23 mths	0.4359	0.1656	1.55	*267*
No previous birth	-0.1442	0.1639	0.87	*272*
36 + mths	-0.0603	0.1332	0.94	*573*

Table 5
Burundi: Multiple regression estimates of covariation with growth attainment

HEIGHT/AGE		B	T	Sign. T
Child's age		-0.0419	-0.137	0.000
Electricity		0.9302	0.031	0.002
Succeeding interval < 24 mths		0.5909	0.042	0.000
Birth order		0.0315	0.020	0.041
Imbo		0.3719	0.030	0.003
Preceding interval < 24 mths		-0.2539	-0.027	0.007
No soap in house		-0.2059	-0.025	0.014
Preceding interval 36 mths +		0.1742	0.024	0.014
Dead sibling		0.1659	0.022	0.030
Husband secondary educated		0.3549	0.022	0.031
Constant		-1.3049	-0.145	0.000
Adj r^2	0.123			
N	1903			
WEIGHT/AGE		B	T	Sign. T
Child's Age		-0.0336	-0.115	0.000
Electricity		0.9669	0.044	0.000
Imbo		0.3696	0.037	0.000
Depressions		0.2311	0.033	0.001
Preceding interval < 24 mths		-0.1896	-0.026	0.009
Succeeding interval < 24 mths		0.3607	0.031	0.002
Succeeding interval 24-35 mths		0.3004	0.029	0.003
No soap in house		-0.1609	-0.024	0.019
Constant		-1.0048	-0.174	0.000
Adj r^2	0.092			
N	1903			

The linear regression model thus conveys more information about the factors significantly associated with growth attainment, while avoiding the necessity of classifying cases to either side of a cut-off point. Although odds ratios derived from logistic regression models are attractive and easily understood, the requirement of a dichotomous dependent variable means that the analysis must be compromised.

Longitudinal data can give a better picture of patterns of correlation and covariance, provided sufficient socio-economic or other variables are available to make the exercise worthwhile. To extract maximum value from longitudinal data, observations for each case should be viewed as trends rather than as individual points, using mean increase in weight or height between particular ages rather than age standardized indices. It can be seen from Figures 4, 5 and 6 that mean growth attainment over time relative to the reference values may not be very informative, unless the means are for short time periods of a few months.

The predictive value of anthropometric indicators can be explored with the relative operating characteristic (ROC) method, as recommended by Brownie, Habicht and Coghill (1986). This method is used in nuclear medicine to compare scanning diagnoses and for comparing the sensitivity and specificity of medical tests, but also is suited to the analysis of normally distributed epidemiological indices. Pelletier et al. (1994) used ROCs in addition to logistic regression to relate nutritional status at an earlier point in time to the risk of subsequent mortality. This approach also could be used to relate nutritional status at two points in time when longitudinal data are available.

Conclusion

The preceding analysis of cross-sectional anthropometric data for Burundi, Uganda and Zimbabwe demonstrates that such data can yield valuable information on patterns of child growth attainment at the population level. Cross-sectional data are particularly useful for depicting national and regional patterns, and for identifying differences between subgroups, such as between males and females. They also can show strong associations with certain socio-economic, environmental and demographic factors. This is essential information for the planning and monitoring of child health interventions, since growth is an essential component of child health. Where large proportions of children have poor growth attainment, child health can be considered to be below the desired standard.

Although they have only very limited value at the individual level, cross-sectional data are useful at the population level, and may even have advantages compared to longitudinal data. For example, a relatively large sample of cross-sectional data may give a more representative portrayal of growth attainment patterns at a given point in time than a series of longitudinal measurements for a small sample. Distributions of the sample may be usefully compared with normal distributions from reference populations, and mean growth attainment at each age provides a useful indication of trends at the population level. Figures 4,5 and 6 provide important information on infant and child growth patterns in Burundi, Uganda and Zimbabwe, indicating clearly that the high prevalence of stunting and underweight in these countries is largely due to slower rates of growth in children up to 18 months compared with the reference population.

It is important to remember, however, that because the growth patterns in cross-sectional data are composite patterns based on many individuals, they depict synthetic trends which may not equate with the observed growth pattern of any particular child. This is in contrast to longitudinal data sets which comprise a collection of observed trends over time.

Cross-sectional data are generally unsuitable for research on the association between growth attainment and recent morbidity in children, because it is not possible to determine a causal association from a single measurement and because morbidity reporting in surveys usually relies on maternal recall rather than exact diagnosis. If there is follow-up to identify subsequent mortality, cross-sectional data may support some research on the association of anthropometric status and mortality, but again a series of measurements, as in a longitudinal survey, would be more useful. Longitudinal data also give a better picture of seasonal variations in nutrition since they show common patterns in the growth trends of individual children.

Aside from these obvious limitations, the biggest problem associated with cross-sectional anthropometric data is the tendency of some users to misunderstand the nature and interpretation of a set of one-off measurements. This has led to a lack of appreciation in some quarters of the utility of such data for evaluating population health, and also to the practice of focusing on cut-off points in data analysis. In the absence of information on growth trends, and because of the possibility of inaccurate measurement, this focus endows cross-sectional

data with a spurious accuracy which invites criticism from those accustomed to assessing growth trends at the individual level. As shown in the preceding analysis, techniques which focus on patterns of covariation rather than cut-off points are more appropriate to such data and avoid this criticism.

The utility of cross-sectional anthropometric surveys can be enhanced in several ways. Where possible, second rounds of measurements should be collected from the same children at a later time period, ideally a year or two, thus effectively adding the advantages of longitudinal measurement to a cross-sectional data set. This would allow analysis of growth trends which could be more effectively related to morbidity and health care than can a single measurement. If a second round of measurements is not feasible an attempt should be made to collect birth weights for all measured children. This helps to distinguish those children who were born small from those who have suffered most growth faltering, and allows the calculation of mean growth rates.

If it is not possible to collect a second round of measurements from the same children, a series of comparable cross-sectional samples at, say, five-yearly intervals would help countries to monitor population-level growth trends. A common problem is lack of comparability between different surveys, because of inadequate sample sizes, different measurement techniques or because they are carried out in different regions. Every effort should be made to co-ordinate survey designs to maximize comparability.

Some of the second and third-round DHS surveys collected the heights and weights of mothers in addition to anthropometry of children. This is useful to identify disadvantaged mothers, particularly since adult BMI is a good indicator of nutritional status. However, it would be unwise to use mother's measurements to infer a child's genetically determined growth potential. Mock et al. (1994) found significant but weak correlations between maternal and child anthropometry. Although the specificity generally exceeded 80 per cent, the sensitivity of maternal BMI as a predictor of child anthropometry was very low, below 20 per cent for most indicators. The main value of collecting mothers' measurements in addition to those of children is to identify disadvantage at the household level. While it is a useful addition to a survey and adds another dimension to the analysis, maternal anthropometry is no substitute for a second round of measurements for research on child growth attainment.

Even without a subsequent round of measurements, a single cross-sectional survey can contribute useful information on growth patterns and differentials at the population level. It is, however, essential to understand thoroughly the nature of such data and how their use and interpretation varies from that of longitudinal data. Researchers who have this understanding will find cross-sectional anthropometry a valuable addition to their tool kit for identifying the determinants of the health of young children in developing countries.

References

Behrens, R.H. 1991. Biomedical methods for the assessment of nutritional status in the individual and in communities. Pp. 35-42 in *The Health Transition, Methods and Measures,* ed. John Cleland and Alan G.Hill. Canberra: Australian National University.

Brownie, C., J.-P. Habicht and B.Coghill. 1986. Comparing indicators of health or nutritional status. *American Journal of Epidemiology* 124,6:1031-1044.

Choudhury, Abu Yusuf and Abbas Bhuiya. 1993. Effects of biosocial variables on changes in nutritional status of rural Bangladeshi children, pre- and post-monsoon flooding. *Journal of Biosocial Science* 25,3:351-357.

Desai, Sonalde. 1992. The impact of family size on children's nutritional status: insights from a comparative perspective. Working Paper No 46. New York: Population Council.

Dibley, Michael J., James B.Goldsby, Norman W.Staehling and Frederick Trowbridge. 1987. Development of normalized curves for the international growth reference:historical and technical considerations. *American Journal of Clinical Nutrition* 46:736-748.

Dibley, Michael J., Norman W.Staehling, Phillip Nieburg and Frederick Trowbridge. 1987. Interpretation of Z-score anthropometric indicators derived from the international growth reference. *American Journal of Clinical Nutrition* 46:749-762.

Eveleth, Phyllis B. and J.M. Tanner. 1976. *Worldwide Variation in Human Growth*, London: Cambridge University Press.

Falkner, Frank. 1985. Monitoring growth. Pp.123-137 in *Nutritional Needs and Assessment of Normal Growth,* ed. M.Gracey and F.Falkner. New York: Raven Press.

Ferro-Luzzi, Anna. 1984. Environment and physical growth. Pp.169-198 in *Genetic and Environmental Factors During the Growth Period,* ed. C.Susanne. New York: Plenum.

Fidanza, F. 1991. *Nutritional Status Assessment*. London: Chapman and Hall.

Gaminiratne, K.H.W. 1991. Socio-economic and behavioural influences on child undernutrition in Sri Lanka. PhD thesis, Australian National University, Canberra.

Habicht, Jean-Pierre, Reynaldo Martorell, Charles Yarbrough, Robert M.Malina and Robert E.Klein. 1974. Height and weight standards for preschool children: how relevant are ethnic differences in growth potential? *Lancet* April:611-615.

Katz, Joanne. 1995. Sample-size implications for population-based cluster surveys of nutritional status. *American Journal of Clinical Nutrition* 61:155-160.

Keller, W. and C.M.Fillmore. 1983. Prevalence of protein-energy malnutrition. *World Health Statistical Quarterly* 36:129-140.

Mata, Leonardo J. 1985. Environmental factors affecting nutrition and growth. Pp.165-184 in *Nutritional Needs and Assessment of Normal Growth,* ed. M. Gracey and F. Falkner. New York: Raven Press.

Mora, J.O. 1985. Pitfalls of anthropometry. Pp. 270-273 in *Proceedings of the XIII International Congress of Nutrition,* ed. T.G. Taylor and N.K. Jenkins. London: John Libbey.

Nutrition Reviews. 1988. Parental health beliefs may cause failure to thrive. 46,6:217-219.

Pelletier, David L. 1991. Issues in the collection, analysis and interpretation of anthropometric data in sample surveys. Pp. 1073-1099 in *Proceedings of the Demographic and Health Surveys World Conference, Washington, DC August 5-7, II*. Washington DC: IRD/Macro International.

Pelletier, David L., Jan W. Low, F. Catherine Johnson and Louis A.H. Msukwa. 1994. Child anthropometry and mortality in Malawi: testing for effect modification by age and length of follow-up and confounding socio-economic factors. *Journal of Nutrition* 124,10S:2082S-2105S.

Timaeus, Ian and Louisiana Lush. 1995. Intra-urban differentials in child health. *Health Transition Review* 5,2:163-190.

Thomas, Duncan. 1993. Testing for sectoral differences in child anthropometric status in Zimbabwe:a comment. Center Paper No. 468. New Haven: Economic Growth Center, Yale University.

Tomkins, Andrew M. and Fiona Watson. 1989. *Malnutrition and Infection:A Review*. London: London School of Hygiene and Tropical Medicine.

Waterlow, J.C., R.Buzina, W.Keller, J.M.Lane, M.Z.Nichaman and J.M.Tanner. 1977. The presentation and use of height and weight data for comparing nutritional status of groups of children under the age of 10 years. *Bulletin of the World Health Organization* 55,4:489-498.

World Health Organization (WHO). 1983. *Measuring Change in Nutritional Status*. Geneva.

World Health Organization (WHO). 1986. Use and interpretation of anthropometric indicators of nutritional status. Report of a WHO Working Group. *Bulletin of the World Health Organization* 64,6:929-941.

World Health Organization (WHO) Working Group on Infant Growth. 1995. An evaluation of infant growth: the use and interpretation of anthropometry in infants. *Bulletin of the World Health Organization* 73,2:165-174.

Yip, Ray and Kelly Scanlon. 1994. The burden of malnutrition: a population perspective. *Journal of Nutrition* 124,10S:2043S-2046S.

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Searching for solutions: health concerns expressed in letters to an East African newspaper column

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> Questions people ask reveal not only the gaps of knowledge, but also reveal their existing attitudes and ideas and personal problems (Arya and Bennett 1973).

Abstract

This study examined health care questions from an unusual data set: 1252 unsolicited letters written over a three–year period to an advice column in an East African newspaper. Analysis of the letters was a non-intrusive method of ascertaining prevalent health questions and opinions. People wrote seeking information, advice, solutions, and reassurance about health problems. Emotions expressed in the letters ranged from hope to fear and frustration. The written format allowed questions which are generally too embarrassing or stigmatized to present in other public or interpersonal settings. More than half the total letters raised questions about sexual behaviour, sexually transmitted diseases, and HIV/AIDS. The letters present not only personal health concerns, but also expectations of health-care quality and reflections on the medical options presently available in Uganda. As a whole, the letters express dissatisfaction not only with the outcomes of health encounters, but with the process. Of the letter writers with specific physical complaints, more than one-third had already sought medical care and were dissatisfied with the results. The letters were seeking solutions, especially for alleviation of symptoms and discomfort. Almost equally prevalent was a plea for accurate and relevant health information; people not only want to feel better, but they also want to understand their own health.

Health education campaigns are designed and directed in response to policy makers' perceptions of major health problems. Health education is less often able to elicit and respond directly to prevalent personal health concerns which may or may not coincide with programmatic health priorities. This study examined questions from an unusual but revealing data set: the unsolicited letters written over a three-year period to a health advice column in an East African newspaper. These letters present concerns, comments and complaints about writers' own health and about the health-care options available to them. The written format, with its inherent distance and lack of direct personal contact, allowed questions which might be too embarrassing or stigmatized to present in other public or interpersonal settings.

Only a few other studies and authors have sought to 'read between the lines', analysing questions presented in African newspapers, letters and other media. Jahoda (1959) examined the transformation of attitudes and norms in social relationships as presented by letter writers. He found the letters described conflicting forces promoting and opposing social change in the realm of male-female relationships. Kisekka (1973) analysed letters written to a sexologist, seeking advice about sexual behaviour. The letters contained information about how individuals interpreted and internalized cultural values related to sexual behaviour. Arya and

Bennett (1973 uncovered misinformation embedded in the questions Ugandan university students asked about syphilis and gonorrhoea.

Background to the study

The New Vision, a daily English-language newspaper published in Kampala, Uganda, runs a weekly health section, which includes a question and answer column written by the African Medical Research Foundation (AMREF)[1]. The column answers between one and three letters each week, but a much larger volume of letters is regularly received.

The letters examined in this study were written between 1991 and 1994, in the context of a particular cultural and socio-political setting and time. The early 1990s in Uganda have been a national period of post-conflict development, a period of increasing political stability and economic growth. While the national economy and social services have been improving since the NRM government took over in 1986, the infrastructure is still not able to provide levels of service and care in health (or other social services) that were available in 1970. Uganda in the 1960s had a strong and well established social infrastructure, including a well-stocked and well-used health care system. Both the system and its subsequent breakdown during more than a decade and a half of civil unrest from the early 1970s to the mid-1980s have been well documented (Dodge and Wiebe 1985; Whyte 1990; Macrae, Zwi and Birungi 1993). During the years following Amin's takeover in 1971, the national economic and social infrastructure crumbled, and government services including health care weakened.

The letters present not only personal health concerns, but also expectations of health care, beliefs about quality of care, and reflections on the medical options at present available in Uganda. In addition the early 1990s overlap the period of national and international recognition of the seriousness of the AIDS pandemic. Since 1986, the Government of Uganda, numerous non-governmental organizations and international health organizations have contributed to massive health education campaigns to control and prevent the further spread of HIV/AIDS. A large number of letters present queries about HIV which reflect the effects of the epidemic or of the health education effort.

In this study, we examined the full data set of published and unpublished letters, and all letters were read by at least two researchers. The letters were coded for demographic characteristics of the writers, nature of any physical complaints, and for less clinical issues such as expressions of stigma, personal anxiety, misinformation, perceptions of the health care system, and reasons for writing to an advice column. These categories arose from the content of the letters themselves. When these categories were clustered, patterns of the letter writers' health concerns emerged.[2]

Limitations

There are a number of limitations inherent in undertaking a content analysis of letters to a newspaper. First, the letters are anecdotal and personal. Information contained in the letters was variable in quality and quantity. Writers usually provided some descriptive information about themselves and their problems, but it was not possible to obtain any additional details, clarification, or follow-up. Secondly, because the medium was an advice column, the letters

[1]Related articles are in progress from the same data set documenting questions from letters specifically about HIV and STDS.

[2]Content analysis of other newspaper columns using letter formats, for example, social advice, or legal matters, could be used as an unobtrusive method to gauge popular concerns, and extract questions which are too sensitive to emerge in other settings.

focused on difficulties and problems, which does not provide a balanced picture including successful treatment events.

Thirdly, the letter writers are self-selected, and thus not a statistically representative sample either for the population as a whole or for young people from the mid-teens to the late twenties. In addition, the writers are not geographically distributed. Uganda is one of the least urbanized African countries (89% of the population lives in rural settings); urban inhabitants were overrepresented among the letter writers. Not all letters carried any indication of location, but *New Vision* is printed and principally distributed in urban areas like Kampala.

Lastly, the writers are all literate in English, which indicates some formal post-primary education. The national adult (above 15 years) literacy rate in any language is slightly above 50 per cent; 63 per cent for males and 44 per cent for females (Ghana Ministry of Education 1994).

Although the letter writers are a self-selected group, we believe that the questions and problems presented in the letters are not unique to this group nor directly related to the qualities which make them non-representative. The presence of these problems in this urban, literate subset of the population is only 'the nose of the hippopotamus'. The questions and problems extend beyond the small visible portion above the surface.

The letters

Letters came on domestic aerogrammes, on unlined scraps of paper, or on folded sheets of lined paper, some of it pulled from school notebooks. Some letters, in fact, resembled school themes, with a title in capital letters underlined across the top of the page. Other requests were written on reused paper with writing on the other side; paper itself was scarce. The letters often began with a flowery salutation: 'I take this golden opportunity to greet you and to thank you for all of your good work towards promoting health and helping the people of this country'. After such greetings, the letters continued on a more personal note.

Each weekly printed column included questions and responses for one to three written queries. Letters selected and published in the newspaper were edited and shortened for reasons of space and confidentiality. The editor has used the column as a public forum for a wide range of health education topics. Published responses to letters have been informational, providing background about the condition and general guidelines for seeking treatment, but not giving personal recommendations for treatment. Yet despite this constraint, letters from concerned individuals were often long, involved, and almost confessional in tone.

Often, towards the end of the letter, the writers included a request that if the letter were to be published in the newspaper, only their initials be used. Despite the potential motivation to see one's letter in print, as noted by Jahoda (1959), most often the Ugandan writers said that they did not want their friends and relatives to recognize them. Some writers requested a personal reply through the mail because they could not afford to buy a newspaper regularly. A few sent stamps or envelopes with a request for a private reply.

Letters finished with pleas for advice, sometimes requesting advice 'before it is too late'. The most common closings at the end of the letters were 'confused', 'worried', and 'desperate', followed by a name, initials, or signifier such as 'student' or 'citizen'. One woman signed her letter 'your obedient, miserable housewife'.

The writers

There were a total of 1252 individual letter writers. Of the total letters, 189 letters were published, and 1063 were unpublished.[3] Among those who identified themselves by sex, there were far greater numbers of male letter writers (588) than female writers (343). Jahoda (1959) in a review of letters to a West African newspaper advice column, noted an even greater majority (90%) of male writers and attributed this to greater male enrolment in school. The majority of writers in this study were people in their late teens (16 and above) to late twenties. The youngest writer was nine years old, and the oldest was 50, both males.

In this present Ugandan study, there were 321 writers who gave no indication of sex by self-identification, physical description or distinctive name. Of these writers of indeterminate sex, 270 also gave no indication of age.

Table 1
Total writers by sex and age

	Male	Female	Indeterminate sex
9-19	69	81	13
20-30	184	102	29
30 +	45	18	9
Interdeterminate age	286	142	270
Total	588	343	321

Students were the largest self-designated subcategory of letter writers. Of 246 self-identified students, 137 were secondary school students; a small number, 28, were post-secondary, either at university or in vocational, business or teacher training colleges. Many simply introduced themselves or signed their letter as 'a student'. One hundred and fifty of the students were male, 64 female, and 32 of indeterminate sex.

One hundred and seven correspondents (59 males, 42 females, and 6 indeterminate) identified themselves as married. Marital status, whether married or single, was mentioned most often when it was relevant to the presenting problem, for example, a possible sexually-transmitted disease or a question about fertility. Males as old as mid- to late-twenties referred to themselves as 'boys' or 'youths' if they were not married. A few people wrote letters as concerned parents, spouses or friends, but most wrote with a personal problem which had confused or frustrated them. Excerpts from letters have been extracted and edited slightly, for reasons of readability and confidentiality, but they maintain the essence of the writers' words and meanings.

Health concerns and underlying questions

An emotional range of concern, denial, hope, fear and frustration lay beneath the surface of the letters. People wrote seeking information, advice, solutions, and reassurance about health problems. Physical problems described in the letters ranged from headaches to sore feet, from visible rashes noted as embarrassing to equally embarrassing but less visible symptoms in their 'private parts'. People wrote about acute symptoms, recurrent problems and long-standing debilitating conditions.

Any attempt to count or categorize the health concerns expressed in the letters quickly became problematical. Many letters contained more than one question. Others included

[3]In total, this study reviewed both unpublished and published letters: unpublished materials from 1991 to December 1993, published letters from March 1992 to January 1994.

multiple symptoms which from the writer's perspective were linked, but may or may not be so medically. Some symptoms appeared in different guises. For example, there were 47 letters with an itch or skin rash as the major presenting concern, but dozens more letters included a skin rash as a possible symptom of a sexually transmitted disease or of AIDS. Thus there is no clear way to quantitatively measure the importance of a single question or topic. If, however, these numbers are taken qualitatively, they can give some indication of the magnitude of writers' concerns, although there is no satisfactory way to generalize to the national population.

Noticeably absent from the letters were questions about some of the major recognized public health concerns such as infant diarrhoeal diseases, immunization, and acute respiratory infections. This may be, however, because of the age group and marital status of the writers. HIV/AIDS, also a major public health concern, was one of the most queried topics.

Some of the writers' symptoms were clinical conditions: physical problems which were uncomfortable or interfered with normal functioning and for which it could be appropriate to seek medical care. In fact, of the letter writers with presenting complaints such as stomach pain, rashes, headaches, joint pain, malaria, and sexually-transmitted diseases, more than one-third had already sought medical care and were generally dissatisfied with the results. Their letters requested an alternative, or perhaps more accurately, a definitive diagnosis and treatment advice.

For the writers with clinical conditions who had not yet sought medical attention, their letters were substitutes for a visit to the doctor; they too sought diagnosis and treatment advice. These letter writers did not seem to view it as unusual or unrealistic to seek diagnosis or treatment advice at a distance, without physical contact or personal interaction.

Sexual health, sensitive topics and stigma

The distance and anonymity of the written format allowed queries about sensitive and possibly stigmatized conditions. More than half the total letters raised questions about sexual behaviour, sexually-transmitted diseases, and HIV/AIDS. While the nature of the questions included in the published column will have some effect on letters written, the concern with sexual and reproductive health seems to be self-generated, not simply a result of publishing effect. The published column has covered a broad range of health topics including maternal health, nutrition, common infectious diseases such as malaria, gastro-intestinal upsets, skin diseases, and sexually-related conditions and diseases including HIV/AIDS. Only about one-third of the published letters over a two–year period have addressed any aspects of sexual or reproductive health. However, the fact that such topics have been addressed openly in the published column does seem to have made it a safe place for writers to send such questions.

A subset of the concerns expressed in the letters, although personally problematic and sensitive, were not physical problems which would be perceived as requiring medical treatment. For example, over 30 letters from men asked about the effects of masturbation, but none had previously sought medical advice. Of the more than 60 men who inquired about sexual performance, only one had seen a doctor for premature ejaculation (without satisfactory results). Twenty-five women questioned whether their menstrual cycles or flow were 'normal'.

More than 300 letters included questions about HIV/AIDS. In contrast to the pool of other letters which tended to be quite detailed and specific, the HIV questions often tended to be hypothetical projections about routes of transmission or about possible diagnoses.

Seeking information

Some of the letters posed straightforward questions, seeking information, clarification or verification of something the writer had heard. In some cases, particularly among students, the writers seemed to be motivated by intellectual curiosity as much as by personal need.

> I am well aware that goitre in human beings is as a result of lack of iodine in the body; it has always been seen to be dominant in women. What is really the cause of this? (Male university student)

Other letters may well have had more personal motivation, but did not include details.

> I would like to know the cause of boils in the human body. Is there any remedy for stopping them occurring? (Sex indeterminate)

Some letters posed questions which attempted to make sense of pieces of information from diverse sources. They wanted to integrate new information into a consistent whole.

> I have read that HIV can be found in sweat, tears, saliva as well as in blood. What is the difference between saliva and other body fluids? Can AIDS be passed by kissing? (Male)

Worry

Many writers took pen in hand in a state of 'worry', a changeable combination of hope, apprehension, and denial, with a thread of magical thinking. These letters tended to focus on a symptom or disease; writers suspected a 'problem'. In writing to a distant anonymous medical authority they hoped for reassurance that it really was not a problem, or at least not a serious problem, or, failing that, they sought accurate information and advice about their conditions. Of course, among these worried writers some are likely to be the 'worried well'.

> My blood was examined and the results came out: (details of WBC enclosed) Am I healthy? If not, why? How long am I sure to live? (Sex indeterminate)

Teenagers are particularly sensitive to their appearance and to the effects of the physical changes of adolescence. In their letters, writers critically compare themselves to their agemates and peers and worry if they are 'normal' or 'abnormal'.

> I am a boy, but my breasts are growing. At first I thought it was muscle. My agemates laughed at me. I can't engage in football or go anywhere I have to take my shirt off for fear of being laughed at. What can I do? (Male, 15 years)

In general, before writing people had explored resources easily available to them: they had tried self-treatment or had obtained advice from friends or relatives, much of which had added to the writer's sense of worry.

> For four years I have had heat in my feet, it is internal, they are not hot to the touch. At night I put them in cold water to be able to sleep. Some people told me it could be syphilis, others say elephantiasis. Yet others suggested AIDS. (Sex and age indeterminate)

Expectations and perceptions of health care

The letters convey the writers' desires that effective treatment would bring about complete alleviation of symptoms and discomfort. Those writers who have taken their problems to medical practitioners, sometimes repeatedly, and have not been successfully cured, end up feeling frustrated and desperate.

Many letters traced a long personal history of recurring symptoms searching for a diagnosis, or of a person with an already-named disease searching for an effective cure. The

tales included self-treatment, multiple doctors or clinics, and occasionally, traditional practitioners. Many of the letters described polypharmaceutical consumption of antibiotics and other drugs. In fact, some writers were more conversant with the names and details of the drugs they had taken than they were with their diseases.

Some writers did not know what disease they had or what it meant. A few had received a diagnosis without explanation from health care personnel and wrote to obtain more information.

> Two years ago I was treated for an STD. I went to a private clinic; because the charges were high I failed to complete the treatment. But all the same, the disease seemed to heal. After some three months it reappeared with a lot of abdominal pain. When I went to another doctor he told me it was ACUTE PID which I don't know what it means. (Female, 19 years old, secondary school student)

Among those writers who mentioned medical treatment, there was an expressed preference for private clinics, but economic constraints were an issue, and even those who had been to private clinics were not necessarily satisfied with the quality of care they had received.

Too often, the writers lamented that attempted treatments had been, as so many letters stated, 'all in vain'. These letters ended with a gracious and desperate plea for help. The writers had no sense of where to turn when they had run out of economic resources or had exhausted options in an overstretched medical care system.

> I have had this problem of recurrent abnormal pain associated with diarrhea for five years now. I have gone through several tests including HIV in June 1989 and Nov. 1990. I have also done the endoscopy and barium enema but all haven't helped. For all this time I have been using different drugs such as Tagamet, Flagyl, Peptobismol, Maalox, Codeine, Prednisone, Septrin, etc. But there is no major improvement at all. (Male)

Sexually-transmitted diseases seemed particularly problematic and resistant. Numerous writers had sought treatment, sometimes repeatedly. People catalogued lists of medicines, antibiotics, and injections they had received. But their conditions had not been cured, or the symptoms disappeared once, only to reappear at a later time.

> Sometime in 1991 I had a pus discharge from my penis and I went to the STD clinic where laboratory tests results were negative for HIV, and syphilis. I started getting treatment for gonorrhea: streptomycin, and procaine penicillin injections. It persisted. I went back and was given tetracycline and flagyl tablets for two weeks; still it persisted. Another test was carried out on the discharge and I was told to buy erythromycin and nystatin tablets. But all in vain. (Male)

Traditional treatment, when mentioned, was viewed as an option of last, and reluctant resort. It was presented as something potentially powerful or effective, yet somewhat feared.

> Since 1988 I have been having pains in my elbows and knees. When I go to the clinic they prescribe malarial treatments, but I have not found one that works. I am twenty-five years old and I had my first born child last August. But since the baby was born, I have felt terrible pain. It began as paralysis in the night. I couldn't hold my baby. Pain started in my wrist and extended to my shoulder. I was prescribed penicillin injections, folic acid, and massage with liniment. All seem to increase the pain. Local medicine may be the last resort, but I fear local herbs. (Female, 25 years old)
>
> Is there any knowledge of traditional herbalists successfully treating hypertension? I have tried medical treatment for two years with no success. (Male)

Historically, as noted in the introduction, Uganda had a well-established health care system, and the populace respected and relied on its medical personnel. During the years of civil unrest, however, the country lost medical personnel through involuntary expulsion and voluntary emigration. Distribution and availability of drugs decreased. By the 1980s the result was not only a damaged health infrastructure but decreased trust in the medical system. This distrust and disillusionment surfaced in the letters.

> I have a number of problems which I would like you to advise me in and what treatment should be used to eradicate all of these diseases tormenting me. All the medicines I have tried are really of no use, according to me, because it seems the doctors here are doing guesswork. (Sex indeterminate)

> I had pubic itching for a long time; when I went to check my blood they told me it was syphilis. I was told to get four weekly injections. I complied with the instructions until I finished the whole dose. After which I took three months until the body was somehow even and the rashes around my private parts got cured. But when I went to recheck my blood for the second time the result was still positive. But I was doubting since those people were making money those days. I rechecked in the next clinic they told me it was negative. I remain confused because I don't know which one is which. (Male student)

Discussion

The letters to the 'Dr. AMREF' column present a wide range of requests for health information and advice. Why does an individual write to a distant medical authority like a newspaper column instead of, or in addition to, seeking medical attention? What are the letter writers seeking?

One study of Ugandan health decision-making found that respondents felt that 'minor' or 'mild' illnesses such as flu or slight pain are treatable at home, often with medicines obtained from a local drug shop. Only the more serious illnesses, or illnesses which do not yield to self-treatment, are commonly felt to require medical attention (Barton and Bagenda 1993).Other studies of the private health sector have also emphasized self-treatment or the use of drug shops where treatment is the focus, not diagnosis (see Whyte in Hansen and Twaddle 1991).

The letters overlap all facets of diagnosis and treatment-seeking behaviour. Some letters seek information in the same way an individual might from a family member, friend, or local shop-keeper. This includes seeking information on some annoying conditions which might not be considered 'serious' enough to present to a formal health care provider.

Other letters are more clearly part of treatment-seeking, a less expensive alternative to a visit to a physician or a search for an authoritative voice in a series of unsatisfying medical visits. But there is a wide gap between the desire for personal care and advice expressed in the letters and the service that a public forum such as a newspaper column is able to provide.

A large proportion of the letters present questions about embarrassing, shameful or stigmatized conditions. Many, but not all, of the sensitive topics in the letters were related to sexual behaviour; there were also questions about other potentially embarrassing topics such as body odours, halitosis, snoring, bed wetting (adult), and gynaecomastia. In seeking a diagnosis or explanation at a distance, individuals might hope to avoid acknowledgement of the nature of their problem.

Some of the letter writers who had previously sought medical attention for their physical problems were frustrated by resistance or recurrence of their symptoms. In addition, a group of the writers were unhappy with the quality of care they had received. Patients left encounters without knowing the name of their disease and without knowledge for further prevention. The fact that writers could request a diagnosis and treatment advice at a distance

indicates that they have experienced health care encounters that did not include thorough physical examination and history taking.

The letters were seeking solutions; the foremost desire expressed in the letters was for alleviation of symptoms and discomfort, clearly a difficult or impossible task without an examination or the opportunity for further clarification. But an almost equally fervent parallel plea was voiced for accurate and relevant health information. This recurrent request for detailed information in the letters contradicts an assumption which has been noted among some health practitioners. Ndoleriire (1993:35), in a Knowledge, Attitude and Practice study of health personnel, described practitioners' perceptions of patients' desires:

> Asked if they had discussed the likely diagnosis with their patients and why they were being treated, the majority said 'no, patients were not interested in what was the matter, but just wanted to have medicine to make them better'.

The letters analysed here are a strongly opposing demand from the patients' side to this provider attitude. People want to feel better, but they also want to know and to understand their own health. The letter writers voice a strong desire to be better informed participants in their own health care.

Conclusion

The data set analysed in this study was a pool of letters written to an East African newspaper health column over a three-year period. Letters to a newspaper column provide a public but anonymous forum for expressing personal concerns. Analysis of the pool of letters provides a non-invasive and non-reactive method to ascertain prevalent health questions and opinions.

Content analysis of self-generated letters to a newspaper column gives a collective perspective on individual health concerns. Taken as a whole, the letters express dissatisfaction not only with the outcomes of health encounters, but with the process. Across a wide range of physical complaints, one common concern expressed in the letters was the desire for a quality of health care which includes more provision of information and explanations to the patients or consumers of health care.

Health care providers and policy makers need to hear and take seriously this discontent. The hidden costs of repeated or multiple treatment seeking are not often factored into analysis of use of scarce health-care resources, nor are the costs of further transmission of a disease because of ineffective treatment or lack of preventive health education.

The fundamental hope of the letter writers was a solution to their search for information about and effective treatment for a personally troubling health problem. Often these were problems for which the letter writers had already seen multiple practitioners. Taken collectively, the letters present a powerful plea for a quality of care that pays greater attention not only to symptoms, but to worries and questions of the users. The letters entreat that even in health-care settings with limited drugs or laboratory services, information should not be a scarce commodity.

References

Arya, O.P. and F.J. Bennett. 1973. What do the educated want to know about VD*? Uganda Medical Journal* 2,3/4:91-103.

Barton, T.G. and D. Bagenda. 1993. *Family and Household Spending Patterns for Health Care.* Kampala: Child Health and Development Centre, Makerere University.

Dodge, C. and P. Wiebe (eds). 1985. *Crisis in Uganda: The Breakdown of Health Services.* Oxford: Pergamon Press.

Hansen, H. B. and M. Twaddle (eds). 1991. *Changing Uganda: The Dilemmas of Structural Adjustment and Revolutionary Change.* Nairobi: Heinemann.

Jahoda, G. 1959. Love, marriage, and social change: letters to the advice column of a West African newspaper. *Africa* 29:177-189.

Kisekka, M. 1973. Heterosexual relationships in Uganda. Doctoral dissertation, University of Missouri.

Macrae, J., A. Zwi and H. Birungi, 1993. *A Healthy Peace? Rehabilitation and Development of the Health Sector in a Post-conflict Situation: The Case of Uganda.* London: London School Of Hygiene and Tropical Medicine.

Ndoleriire, M.S. 1993. Knowledge, attitudes, practices, and beliefs of health personnel regarding nosocomial AIDS/HIV infection in five hospitals in Eastern Uganda. Master's dissertation, Makerere University, Kampala.

Whyte, S.R. 1991. Medicines and self-help: the privatizaton of health care in eastern Uganda. Pp. 130-148 in *Changing Uganda: The Dilemmas of Structural Adjustment and Revolutionary Change,* ed. H.B. Hansen and M. Twaddle. Nairobi: Heinemann.

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Thai views of sexuality and sexual behaviour*

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Abstract

This study focuses on how married Thai men and women interpret sexuality and sexual behaviour in the context of their own social lives. We start by examining general views of male and female sexuality and then explore how these views relate to premarital, marital and extramarital heterosexual sex. Our study is based on qualitative data from a variety of segments of Thai society derived through the use of focus group discussions and individual focused in-depth interviews.

Research into sexuality, sexual behaviour and related attitudes in Thailand, as in much of the rest of the developing world, has been stimulated by recent concerns about the worldwide AIDS pandemic and, to some extent, by the increasing international attention to issues related to gender. In Thailand, increasing interest in sexual behaviour has been further fuelled by the spread of the AIDS virus from marginalized groups into mainstream Thai society. Sexual networks facilitating this spread of HIV infection in Thailand link prostitutes with their male customers, and the customers with their wives and non-commercial sex partners (Brown et al. 1994).

The key role played by commercial sex in male social life and in the spread of HIV in Thailand is reflected by the widespread availability and patronage of commercial sex outlets by men (Boonchalaksi and Guest 1994). This aspect of Thai society has a long tradition, at least in urban areas, although commercial sex has undoubtedly expanded in recent decades, at least until the onset of widespread awareness of the national HIV/AIDS epidemic (Bamber, Hewison, and Underwood 1993; Knodel 1993a; Wilson and Henley 1994). There is an enormous range of venues through which commercial sex is offered, including straightforward brothels, massage parlours, bars, nightclubs and cafes where hostesses are available on a discretionary basis for sex after closing hours. Homosexual sex is also available for men although by no means on the same scale as heterosexual commercial sex.

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High levels of patronage of prostitutes are evident from estimates provided by several surveys. Because of differences in methodologies, sampling and accuracy, precise comparisons between different estimates are not possible. However, they all confirm substantial levels of prostitute visitation and indicate such activity is higher among single men, but not negligible for married men.[1] Levels of non-commercial heterosexual relations among unmarried Thais may be increasing, and homosexual relations are reported by substantial numbers of Thai men who also engage in heterosexual relations (London, VanLandingham and Grandjean 1995). All of these features of Thai sexual life facilitate the spread of HIV throughout Thai society.

Both the dynamics of the AIDS epidemic in Thailand and the patterns of sexual behaviour underlying them are quite distinct from those found in many other societies, especially in the West, and can be puzzling to observers interested in stemming the spread of the epidemic. For example, the widespread practice of patronage of prostitutes is the source of frequent consternation in this literature, but surprisingly little of this research explores how these behavioural patterns are interpreted by the individuals participating in and affected by them. Understanding how Thai men and women themselves perceive gender differences in sexuality and relate this to gender-specific patterns of sexual behaviour is essential for any study of the broader Thai system of gender relations.

In this paper we focus on how married Thai men and women interpret sexuality and sexual behaviour in the context of their own social lives. We start by examining general views of male and female sexuality and then explore how these views relate to premarital, marital and extramarital heterosexual relations.[2] Our study is based on systematically derived in-depth qualitative data from a variety of segments of Thai society. It thus differs from much of the emerging body of research on sexual issues in Thailand, which consists largely of either quantitative analysis of responses to relatively simple survey questions or interpretive analysis of a small number of cases based on participant observation of relatively local settings.

Population-based estimates of behaviour and attitudes from analysis of survey data are clearly needed, although many issues regarding the interpretations and meaning of sexuality

[1]In a recent study of unmarried military recruits, with an average age of 22, 87 per cent reported having had sex with a prostitute at some time (VanLandingham et al. 1993). According to the 1990 urban survey by Deemar (1990), 27 per cent of single men (age 15 and older) and 9 per cent of married men reported sex with a prostitute in the previous 12 months. Higher levels were found in the 1990 Partner Relations Survey: 40 per cent of urban and 38 per cent of rural never-married men reported sex with a commercial sex partner during the last 12 months and 22 per cent of urban and 9 per cent of rural married men living with a spouse reported having commercial sex during the previous year (Sittitrai et al. 1992). There is some indication, based on a 1993 study using a questionnaire and sample resembling that of the 1990 Partner Relations Survey, that visits to prostitutes may have declined very recently, presumably in response to the HIV/AIDS epidemic (Thongthai and Guest 1995). In addition, statistics based on periodic surveys of commercial sex establishments by the Ministry of Public Health, indicate a decline of over 20 per cent between 1989 and 1994 in the number of prostitutes enumerated, again suggestive of a decline in patronage (Rojanapithayakorn and Hanenberg 1996).

[2]Given that much of the analysis contrasts behaviour of single and married persons, it is relevant to note that the age of marriage in Thailand is not early, particularly in urban areas, and has been rising during recent decades. According to the 1990 census, the singulate mean age at marriage is 25.9 for men and 23.5 for women nationally and 28.3 for men and 26.5 for women in municipal areas. For both men and women, the age at marriage rose 1.5 years between 1970 and 1990. As might be assumed from these ages of marriage, substantial percentages of men and women in their twenties are single. For example, the 1990 census indicates that among 20-24 year olds, 70 per cent of men and 48 per cent of women are single nationally while 82 per cent of men and 69 per cent of women in this age group are single in municipal areas (Thailand, National Statistical Office, no date).

and sexual behaviour are difficult to explore using this format. Likewise, interpretations of sexual behaviour derived from participant observation can provide important insights into social phenomena. Nevertheless, there is also a need for more systematic collection and analysis of qualitative data, as attempted in the present study. If conducted properly, such an approach can combine to some degree the more systematic features of the survey approach with the more interpretive nature of ethnographic methods and thus contribute significantly to the establishment of an adequate empirical basis for understanding sexuality and sexual behaviour within a social scientific framework.

Data sources and methods

Data for our analysis were collected through the dual techniques of focus-group discussions and focused in-depth individual interviews. A total of 14 focus groups involving 113 participants were held in Bangkok (with factory workers, residents of organized slums, and middle-class occupational groups), two provincial towns in the Central region, and villages in the surrounding area of the two towns. The field work took place during the latter part of 1993 and early 1994. Parallel but separate discussions were held with men and women. We also conducted focused in-depth interviews in the same locations with 21 men and 26 women. All study informants had been married and the majority were currently living with their spouses. Almost all were between ages 25 and 40. Our selection of study informants was purposive and largely opportunistic, provided they were married and within our target age group, and often involved the aid of intermediaries (see VanLandingham et al. 1995).

The emphasis on urban sites was deliberate since opportunities for commercial sex encounters are substantially higher in urban settings, where commercial sex establishments are concentrated. Moreover opportunities for extramarital affairs with non-commercial partners are also likely to be greater for urban than rural men. These were important concerns for the original purpose of the project which was to examine the influence of peers and wives on male extramarital sexual activity. This urban emphasis is likely to influence the results towards a heightened awareness of both commercial and non-commercial extramarital sex. Still, the inclusion of at least some rural focus groups and interviewees and the purposive selection of several different social-class milieux in Bangkok ensure that the data represent the views and behaviour of a fairly wide spectrum of Thai society.

It is more difficult to say how much the use of intermediaries and the opportunistic nature of the selection of our sample influence our findings. Participants for the focus groups of men and women factory workers in Bangkok were recruited in connection with a continuing AIDS-awareness project; this undoubtedly meant that the participants were more knowledgeable about AIDS and more sensitive to the dangers of risky behaviour than would otherwise be the case. More generally, we attempted to be quite open about the nature of the topics to be discussed during the recruitment process for all focus groups and in-depth interviews. Plausible arguments in opposite directions could be made as to the effect of this. For example, the fact that a person is willing to participate in our research could select for more worldly types who, in the case of husbands, are more likely to have sex outside of marriage, or in the case of wives, to have spouses who are prone to do so. In contrast, the fact that we were open about the topics to be discussed might select against those who felt they had something to hide.

While we have no precise way to judge, our general impression is that the range of persons involved in both the focus groups and the in-depth interviews was not particularly skewed for the particular groups we purposively targeted. As with all qualitative research, however, no claim can be made of representativeness in any statistical sense.

In the case of the focus groups, interaction among participants was encouraged and is considered a major advantage of the method. In contrast, the focused in-depth interviews took place on a one-to-one basis and were usually held in a private setting to ensure confidentiality. Both approaches proceeded on the basis of prepared guidelines which focused and structured the discussion or interview on the topics in which we were interested, yet allowed considerable leeway for the informants to express their views of a situation (Frankfort-Nachmias and Nachmias 1992; Morgan 1996). The focus groups concentrated on determining prevailing norms, attitudes and general observations regarding this topic, while the focused in-depth interviews explored personal behavioural patterns and their underlying rationale as well as attitudes. At the same time, to the extent appropriate, parallel questions were posed to focused group participants and to interview respondents.[3]

Both the discussions and interviews were tape recorded and fully transcribed and translated. The combined Thai and English transcripts serve as the data for analysis. We used the Ethnograph software program, designed to assist in analysis of qualitative data, to expedite the systematic review of the content of the transcripts in relation to the particular topics discussed (Seidel, Friese and Leonard 1995). We coded transcript text segments in terms of topics and categories of interest in order to derive 'overview grids' that provided a systematic summary of contents. These were usually done independently by those involved in the analysis and then compared in order to check reliability and to resolve differences in assessments of the content of the transcripts when they arose. This procedure facilitated judging how common particular themes were in the discussions and interviews as well as the extent of consensus and diversity of opinion (Knodel 1993b:47-49). When describing findings, we attempt to portray both the predominant opinion, and the diversity of views expressed when consensus is lacking.

Illustrative verbatim quotations from the focus groups or individual interviews are included in the following analysis. In each quotation, the location and type of group or interviewee from which it is drawn is indicated. In the focus-group quotations, participants are identified by the first initial of their first name in order to protect confidentiality. Sometimes the comments are extracted from a longer discussion, omitting intervening statements for the sake of brevity.

In brief, unlike survey questionnaires, the qualitative techniques used in this study allow the researcher soliciting information to elaborate on the questions being asked and encourage study informants to explain their answers, with all the detail recorded and available for analysis. Moreover, the conversational nature of our approach fosters rapport which is crucial when dealing with potentially sensitive sexual issues. At the same time, unlike much qualitative research, our approach is relatively systematic both with respect to data collection and in the style of analysis, and makes clear the source of evidence on which we base our interpretations.

Male and female sexuality

The sexuality of males and females is considered to be fundamentally different by both Thai men and women. Men are widely perceived as having a natural and driving need for sex that requires frequent outlet. In contrast, women are viewed as being in control of their sexual feelings which are seen to be far less pronounced than those of men. This difference was expressed repeatedly in both focus-group discussions and focused in-depth interviews and is

[3]Because of the difference in the nature of the two data collection techniques, we refer to focus-group discussion *participants* and to in-depth interview *respondents*. When we wish to refer to both together, we use the term *informants*.

consistent with anthropological and survey results. Anthropologists have noted that sexual desire is an integral feature of Thai conceptions of maleness (Keyes 1986; Fordham 1995). According to a 1990 urban survey by the Deemar Company (1990), 80 per cent of men and 75 per cent of women agree that 'it is natural for a man to pursue sex at every opportunity'.

The male urge for sexual intercourse is seen, particularly by women, as in the very nature of men, essentially as a basic physiological need or instinct. In much the same way as men need to eat to relieve hunger, they need sexual intercourse as an outlet for their sexual drive. In contrast, women are viewed by both sexes as typically having considerably less need and desire for sex. Some expressed the view that sex was of little importance to women. More commonly, women were viewed as also having sexual feelings but of a weaker and more controllable nature than the sex drive felt by men.

> Respondent: I think all men feel sexual desire instinctively... They need it since they are men. It's something natural for men. They have strong sexual desire and need some outlet. (Case 27 Lopburi urban female)
>
> Mr S1: Men feel it (sexual desire) all the time. Men are like that but only few women feel it that way.
>
> Mr N: If women feel it, they can keep it better than men. They are reserved.
>
> Mr S2: Women would keep it to themselves but men would not. If men feel the desire, they must find ways out. (Bangkok male factory worker group)
>
> Mr T: To have sexual intercourse is like having meals. We have to have it every day.
>
> Mr P: If we don't have it, it is like something is still missing. (Kanchanaburi urban male group)

In the views of a number of our informants, the sexual needs of men, married or not, include the desire for a variety of sexual partners. Such comments arose most frequently in connection with discussion of the reason some married men continue to engage in extramarital sex. The parallel between men's sexual appetite and appetite for food was evident in the frequent expression that married men require a 'change of flavour'. Both men and women voiced the opinion that men can become bored with sex with the same woman and need at least an occasional variation in partners. Our informants noted that not all men are the same in this respect, but nevertheless many married men are thought to want at least an occasional chance to have intercourse with someone other than their wives.

> Interviewer: Why do you think married men go on taking prostitutes?
>
> Respondent: I think it's in their nature... Men naturally want to try something new. (Case 22 Lopburi urban female)
>
> Moderator: I wonder why a married man still has to visit prostitutes?
>
> Mrs S: He is bored with his wife.
>
> Mrs J: Maybe he isn't bored with his wife but he wants to try something new.
>
> Mrs S: He wants a change of flavour. (Bangkok middle class female group)
>
> Interviewer: Why do married men go see prostitutes since they already have a wife?
>
> Respondent: They are probably bored with their wives. It is like having the same type of food with the same flavour every day. It is boring. (Case 18 Lopburi rural male)

Premarital sex

Premarital patronage of prostitutes

In discussing male sexual behaviour and related attitudes in Thailand, whether in regard to premarital or extramarital sex, it is important to distinguish between commercial and non-commercial contacts. Commercial sex involves an explicit, typically on-the-spot monetary payment, after which the obligations of the customer end. Non-commercial sex partners usually require a greater investment in time and resources on the part of the man and involve a greater emotional investment from both parties. Indeed, in the case of single couples, the expectation of marriage or at least a strong possibility of an enduring relationship is necessary before some women consent to sex. In most contexts the distinction between a commercial and a non-commercial relationship is clear to the people involved and the ensuing fundamentally different implications are typically accepted by both parties (VanLandingham et al. 1995; Fordham 1995).

We also attempted to distinguish between various types of sexual behaviour viewed as ordinary (normal or common) and viewed as appropriate or proper. In Thai, perhaps more than in English, the terms for 'ordinary' (*tamada*) and 'appropriate' (*mohsom*) overlap somewhat. Some respondents thought that some sexual practices (e.g., visiting prostitutes) may be *tamada* (in the sense of being unremarkable) but not *mohsom*; others implied that some practices were *mohsom* by virtue of being so *tamada* (in the sense of being widespread).

Results from our focus groups and in-depth interviews indicate that both Thai men and women recognize that visiting prostitutes is common in Thailand and generally view it as a normal activity for single men. In in-depth interviews, both men and women respondents almost universally considered it to be an ordinary practice. Given the common perception that male sexuality involves a strong natural sexual urge requiring periodic release, men and women alike view visiting prostitutes as a legitimate outlet for men without a regular partner. Indeed of the 21 men interviewed, 17 reported having patronized commercial sex establishments before marriage. Sex with a prostitute is clearly a common experience for Thai males and perceived to be so by the general public.

> Moderator: Mostly as I listen, (you say) unmarried men can go for sexual entertainment...
>
> Mrs N: It's a common matter.
>
> Mrs S: It's just like his releasing pressure, draining it away. (Bangkok middle class female group)
>
> Interviewer: Do you think it's common for men to see prostitutes before they get married?
>
> Respondent: I think it's common. It's okay. We are males. Why do we have to keep it pressed inside? It's common. (Case 20 Lopburi urban male)

Although there is widespread agreement that it is common for unmarried men to have sex with prostitutes, it is not universally approved, especially by women. When probed, two-thirds of the women but less than a third of the men in-depth respondents in our study expressed reservations about the appropriateness of premarital commercial sex patronage. A somewhat similar gender difference in attitudes towards single males visiting prostitutes was found in a 1993 quasi-national survey.[4] The risk of infection from sexually transmitted

[4]Of male respondents, 43 per cent compared to 54 per cent of women said it was wrong for a single man to visit a prostitute (Thongthai and Guest 1995). The choice given the survey respondents, being

diseases (STDs) was frequently and spontaneously cited, particularly by women, as a reason against single men going to prostitutes. Overall, female respondents were more than twice as likely as men to mention STDs when discussing whether visiting prostitutes was common or appropriate for single men. While AIDS was only occasionally mentioned by name, it was clear that many thought the situation today was more dangerous than in the past.

> Interviewer: Is it suitable for single men to take prostitutes?
>
> Respondent: It was okay in the past since there was no AIDS. In the past, there were some other venereal diseases and they were not very dangerous... (Case 3 Bangkok female trader)
>
> Respondent: There is AIDS now. In the past, it was okay. Now, it's dangerous... In the past, men only got venereal diseases. Now, there is AIDS so men had better keep their virginity. (Case 44 Kanchanaburi urban male)
>
> Respondent: They should not do it often. Those single men are young and they can't be sure of the girls they take. Some prostitutes may be infected with AIDS. They can end their lives. (Case 5 Bangkok female grocer)

Besides soliciting attitudes towards premarital patronage of prostitutes, we also inquired about how women felt about their husbands' prior experiences with prostitutes. There was a strong general consensus among women in the focus-group discussions and the in-depth interviews that it was of little concern to them that their husbands had sex with prostitutes before marriage. Many women said that their husbands had admitted to such activity, either volunteering it or in response to direct questioning by the wife. In some cases, women had inquired before the marriage about their future husband's experience. More commonly the matter was only discussed after the couple was already married. The usual reaction of a wife learning of her husband's premarital commercial sex experience was that she had little right to condemn her husband for events that took place before the establishment of her own relationship with him.

> Moderator: How do wives feel if they know that husbands took prostitutes before getting married?
>
> Mrs N: I won't blame him... It's okay if it was before we are married. After the marriage, I ask him not to do it. We can't find an inexperienced husband nowadays. (Bangkok slum female group)
>
> Mrs N1: I asked him (if he had been to prostitutes before) because I am curious about how they visit prostitutes? I asked him after we were married. I wanted to know what did they do and how? I'm curious.
>
> Moderator: Mostly, how does one feel when asking men about this?
>
> Mrs T: Nothing, it's funny. It's an enjoyable topic.
>
> Mrs N2: It's a thing of the past. (Bangkok middle class female group)
>
> Moderator: What would wives say if they learn that husbands took prostitutes before marrying them?
>
> Mrs K: It's a normal practice.

'wrong or not wrong' (*pen karn kratham pit ru mai*) is different wording from that used in the lead questions for our focus-group discussions and in-depth interviews and thus is not directly comparable. However, it approximates our attempt to ask about whether such behaviour was appropriate (*mohsom*) as opposed to ordinary (*tamada*).

Mrs T: They shouldn't mind since he was single then.

Mrs U: It's their privacy. But if they are married to us ... (Laughed). (Lopburi rural female group)

Premarital non-commercial sex relations

General views

There was almost universal agreement among the urban focus groups that it is now common in Thailand for unmarried couples to engage in sexual relations. This usually referred to couples who had some commitment to each other, often including the anticipation of marriage, especially on the woman's part. The rural focus groups were less emphatic that premarital sex apart from prostitutes was routine, although, like the urban groups, they generally agreed that the trend is in this direction. Most in-depth interview respondents who discussed the matter, even those in rural areas, felt premarital sex was now common. A number of both male and female focus-group participants volunteered that they had lived with their spouses before being married.

Moderator: Is it a normal practice to have sexual affairs before getting married?

Mr N: In the past, after the engagement, men and women rarely spent time together. Nowadays, they live together before getting married.

Mr S: They do it that way nowadays. Most do. (Bangkok male factory worker group)

Mrs N: I look at my relatives, most of them have had sexual relations before they got married.

Mrs W: We become lovers and then get married.

Mrs N: They must get married but they have premarital sex. (Bangkok slum female group)

Both focus-group participants and in-depth respondents believe that in the past premarital sex outside prostitution was uncommon and that even couples planning to wed did not engage in sex before their marriage.[5] They acknowledge this was the traditional way even if it is no longer honoured today. Indeed, many older focus-group participants pointed to the difference between the present situation and that of their own generation.

Mr L: I think it depends on the person's age. If they are under 30, I'm sure they have had sex before getting married, almost every couple. But if they are over 30, then they got married first. (Lopburi urban male group)

Respondent: Nowadays, unmarried couples stay together as a trial. If they feel displeased with each other, each goes their own way without any obligation. In my generation, if girls were holding hands with boys, they felt ill at ease, that they were not pure. Our future husbands-to-be might feel disgusted with us. (Case 3 Bangkok (Phetburi) female trader)

[5]This demands consideration of just what constitutes a marriage. Presumably most study informants have in mind a social rather than a legal definition, as marriage registration is far from universal even at present, and often undertaken long after the couple hold a marriage ceremony or live together in a state recognized by the community as marriage (Chayovan 1989). Clearly elopement and other forms of establishing a cohabiting union recognized as a marriage by the community but without a full marriage ceremony have been common in the past (see e.g. Riley 1972) but apparently the present situation of living together before marriage differs in the view of many Thais.

The perceived frequency of premarital cohabitation by our study informants is undoubtedly influenced by the urban emphasis in our sample. Some urban focus groups explicitly contrasted the urban and rural situations. However, premarital sex is probably on the rise even in rural areas. In an ethnographic study of two villages in the Northeast, Lyttleton (1995) suggests this is occurring as part of the emulation of city lifestyles. Villagers in his study saw motorcycles as playing an important role providing unmarried couples the ability to go off on their own. This point was elaborated in one of our rural focus groups.

> Mr Y: Transportation is different. It used to be very difficult to go places... At one time, a woman would take her friends along. She wouldn't go alone with a man. Suppose you invite her to go out, she'll take her friend with you... But now we just ride on motorcycle together, there's no need to have a friend.
>
> Moderator: Isn't there anything like that in former times?
>
> Mr C: No, there isn't.
>
> Mr T: You could hardly find that practice. (Lopburi rural male group)

In some focus groups, participants felt that more casual forms of premarital non-commercial sex were also common or increasing, especially among this new generation of adolescents. Undoubtedly some of these opinions are exaggerated, probably reflecting images from mass media and, unlike the views of living together before marriage, less based on their own experiences or personal observations. Nevertheless, the experiences of our male in-depth informants confirm that premarital non-commercial sex that does not lead to marriage is not unusual. The majority of both urban and rural male respondents indicated they had at least one such relationship and in many cases several sexual relationships with 'ordinary' women.[6]

Approval of premarital sexual relations as expressed in the focus-group discussions was mixed and, to the extent it was seen as acceptable, was mainly in reference to sexual relations among couples who were planning to marry. This distinction between sex undertaken as a prelude to marriage and sex in more casual relationships is crucial for many in their attitudes towards premarital sex. While only some of our study informants disapproved of premarital sex for couples under any circumstances, there was considerable consensus that more casual non-commercial premarital sexual relationships were improper.

> Moderator: Suppose a man and a woman live with each other and they aren't married yet, but they have sexual relations. Is it common?
>
> Mrs W: It's normal if they love each other.
>
> Mrs C1: It's okay, but they must have plans to get married, not just live together like that and then separate again.
>
> Mrs C2: If they love each other and they have a plan to get married then it's all right. (Bangkok female factory worker group)
>
> Interviewer: Do you take it as suitable (if boyfriends and girlfriends have affairs)?
>
> Respondent: No. They have to propose if they mean to marry us. They may just want to seduce those girls.
>
> Interviewer: Suppose they mean to marry them later?

[6]Since the original purpose of our project was to investigate male extramarital sexual behaviour, we did not ask women in-depth survey respondents about their sexual histories.

Respondent: If they really mean to, it's okay. (Case 15 Lopburi rural woman)

Respondent: If the two of them are going to get married with each other, that's OK (to have sex), there's no problem about that... But the man has to really love the woman and must be sure. He shouldn't leave her after he gets her. (Case 20 Lopburi urban man)

A 1993 survey found that high percentages of respondents (61% of men and 73% of women) indicated it was wrong for a single woman to have sex with a man but there was less disapproval of single men having sex with a non-commercial partner (44% of men and 55% of women). Given the distinction made by our study informants about the acceptability of committed rather than more casual premarital sexual relationships, it is difficult to interpret these results since the questions did not specify the type of non-commercial relationship (Thongthai and Guest 1995). The findings suggest, however, that attitudes towards premarital non-commercial sex incorporate somewhat of a double standard. This was also evident in our qualitative study and appears to derive from the very different views of male and female sexuality described above.

For men, premarital non-commercial sex relations are viewed as being to their advantage since men have little to lose. Seeking sex was sometimes seen as either the dominant motive or as a very prominent one for many men in their relations with women. In contrast, women were rarely cited as seeking sex for its own sake with men. Instead, women needed to be on their guard against men who would take advantage of them. Unlike men, women who succumbed to premarital sex, especially if not engaged, risked social disapproval. This in part reflects the traditional value placed on female virginity before marriage. By having sexual relations with a boyfriend before a commitment is made, a woman risks weakening her position in negotiating marriage with him.

Moderator: Is it appropriate for boys and girls to have sexual intercourse before getting married?

Mrs N1: Women and their parents are at a disadvantage.

Mrs N2: If we let it happen before the marriage, they might give us up and find someone else... Most men aim at taking women before the marriage. Women don't want to since we are at disadvantage. We would like to be a virgin until the wedding day. We want them to be proud of us. However, most men want to have us before the appointed date. (Bangkok slum female group)

Mr N: Women might say no (to premarital sex). However, it's always all right for men since we aim at taking them from the beginning.

Mr D: Men have the advantage... We know we like them and if we do, we'll try to sleep with them... Whoever we court, we want to sleep with.

Mr C: Our aim is for sexual pleasure... It's against the local tradition, for women to be taken by men before marriage. They feel ashamed and are afraid of being blamed as being promiscuous. (Bangkok slum male group)

Importance of female virginity

Interestingly, being a virgin was never spontaneously mentioned when we asked focus-group participants what men sought in a wife. However, when asked directly, men's groups generally agreed that men prefer to marry a virgin. At the same time, many indicated that virginity was not one of the most important concerns in selecting a wife.

Moderator: Why is it important that you get virgins?

> Mr S: Everybody wants to be the lead warrior, to be the first. We don't want to follow anybody. But if that is not possible and you have to be second, you can accept it. You don't have to think too much.
>
> Mr L: I don't think it's important. You may get a virgin but you (can still) have family problems. You might have to divorce... Okay, you're proud to get a virgin but in the future this virgin could cause problems... You have to understand each other. (Lopburi urban male group)

Opinions were quite mixed about the extent to which men were concerned about a potential wife's prior sexual relationships. Sometimes the issue was expressed in terms of pride about being the first to have sex with one's wife. Other comments were linked to concerns about being sure either that the prior relationships would not resume or that they were not indicative of possible future infidelities with other men. Distinctions were sometimes made between women who had a prior marriage and those who had affairs while single, possibly because the latter held greater significance as an indicator of how prone the woman might be to fidelity after marriage.

> Mr P: If she separated from her husband and then we like her and she liked us, that's one thing. But if we know that she had somebody before as a lover and she's not married, she had other men, one here and one there, well I've got to think perhaps I shouldn't have taken the leftover from other men. Men consider that she is experienced even though she has ended the earlier relationships. (Lopburi urban male group)

On balance, the Thai husbands in our study are fairly tolerant of women who have had premarital sexual relations as candidates for spouses. Though many articulate their preference for virgin wives, they do not necessarily condemn wives for prior sexual relations, and would not consider the discovery of a wife's premarital sexual history to be grounds to prevent or terminate a marital union. The lack of importance given to female virginity by men in our study may, however, reflect the largely urban nature of our sample. Participants in the two rural male focus groups expressed more concern about virginity than men generally did in our urban groups. Other researchers have also found considerable concern about virginity among rural men, noting that a woman's premarital sexual history can lead to marital conflict (Im-Em 1996).

Views of husband's prior relationships

Although women did not express negative views about marrying a virgin man, for most it seemed pointless to contemplate this. Indeed, many accepted the double standard implicit in the belief that men needed sexual experience before getting married. This was evident in their tolerance of husbands' prior visits to prostitutes. Women were also generally accepting of premarital non-commercial sexual relationships that their husbands might have had, although typically they expressed greater concern about prior affairs than about premarital patronage of prostitutes. Women's main interest in this connection was getting assurance that any earlier relationships were ended and would not resume.

> Respondent: (My wife and I) have talked. She asked me how many women I had (before were married). I told her six. She did not say anything because it was before our marriage. She was only interested in women other than service girls because she was afraid that I would meet them again and have affairs. (Case 17 Lopburi rural male)
>
> Moderator: What will wives feel if they know that their husbands had sex with some other girlfriends before marrying them?

Mrs. K: It might be okay as long as they didn't go on with that affair... It was in the past, wasn't it? If he didn't continue the affair, it wouldn't matter.

Mrs. T: We come later so we have to let it be. (Lopburi rural female group)

The importance of sex in marriage

When focus-group participants were asked what characteristics men and women seek in a spouse, the most common answer, typically mentioned spontaneously, is that both men and women want someone who understands and gets along with them. In all groups, women said that a good husband was one who earns and provides support for the family. Both men and women participants believe a good wife is one who is able to care for and provide emotional support not only to the husband but especially the children. In other words, a wife should be a good housekeeper and mother.

Sexual compatibility was never spontaneously mentioned by either men or women as an important characteristic of a good spouse. When the issue was explicitly brought up by the moderator, diverse opinions were expressed. Some participants felt that sex was a crucial aspect of the marital relationship while others saw it as only secondary or as an aspect that loses its significance after an initial period. This was true in both men's and women's focus groups, although men were more likely to state that sex played an important role in marriage. Furthermore, although married male respondents sometimes brought up the centrality of sex in their lives, poor marital sex seemed only rarely to be considered as grounds for proclaiming an unhappy or unsatisfied union.

Moderator: Do you think sexual life is important to husbands and wives?

Mr. N: Both husbands and wives need it. If we don't agree on it, we can't be together.

Mr. P: If we don't want it, we can become monks.

Mr. N: If we have all we need but have no sexual drive, we may have problems. If wives want it and we don't, they may feel desperate. If we want it and wives don't, we can't stand it either. (Bangkok factory men)

Mr. B: Marriage and sex life go together. It's natural but sex life is not the top priority... It's like adding spice to the meal. (Bangkok middle class male group)

Mr. T: I don't think that sexual life is an important factor. Most Thai people get divorced because of other factors. As for sex, Thai husbands and wives can compromise. (Kanchanaburi urban male group)

If the importance of sex in marriage declines over time as several of our informants mentioned and as statistics on coital frequency would seem to suggest (Knodel and Chayovan 1991), the importance assigned to sexual compatibility in our results could be influenced by the fact that most of our focus-group participants and in-depth survey respondents were married for at least several years. Nevertheless, other observers of the Thai family have noted that the sexual relationship between husband and wife is usually considered as subordinate to other issues, especially the socio-economic functions of marriage (ten Brummelhuis 1993). Moreover, a recent small-scale survey of a purposive (apparently urban) sample of married couples from five different social strata found that, except for white-collar couples, only a minority of respondents agreed with the statement that to be a good wife, a woman should not only be good at housework but also be good in bed (Tangchonlatip 1995). Contrary to the impression gained from our qualitative data, men were even more likely to disagree than women.

One relatively consistent pattern to emerge was that women focus-group participants discussed marital sex primarily from the husband's perspective rather than from their own. This occurred in several ways. Perhaps most generally, the need for sex was seen as being more innate and intense for men than for women, so naturally the emphasis of marital sex should be on providing the husband with an outlet for his sexual drive. Rarely did women say that sexual satisfaction was important for themselves.

> Mrs S: Men are more sexually experienced than most women so they take it as a priority. To earn the living is second to sexual life. (Laughed) For women, children must be properly fed and clothed and sexual life is second to children's welfare. (Lopburi rural female group)
>
> Moderator: What about 'Bed business' (in marriage)?
>
> Mrs N: They all think about it.
>
> Mrs L: Yes, men do.
>
> Mrs N: They look at it as natural. We also do but for them it is innate. (Bangkok slum female group)

In virtually all the women's focus groups and in many of the in-depth interviews, women expressed the view that it was important for wives to please their husbands sexually. This was seen as important for discouraging husbands from seeking sex elsewhere. Indeed, given the perception of an innate male need for sex, not providing sexual satisfaction for the husband is seen by many women as risking his infidelity. Consistent with this view as expressed by our study informants, results from a small-scale survey indicated that the majority of respondents, and especially women, agreed that if wives could please husbands as skilfully as prostitutes, then husbands would not patronize commercial sex (Tangchonlatip 1995).

> Interviewer: Do wives have to be good in bed?
>
> Respondent: Yes. Husbands would look for some others if they are not sexually satisfied with wives. Men can't live without it but women can. (Case 06 Bangkok female clerk)
>
> Moderator: Between husband-wife, do you think that sexuality is important?
>
> Mrs T: As I listen to the others and from my own experiences, sometimes it's quite important for a family, because some men need it and if his wife can't give it to him, he then must go out and seek it elsewhere. (Bangkok middle class female group)

Occasionally, men stated that they were concerned about pleasing their wives sexually, but this was far less common than women's expressed concerns about pleasing their husbands. In general, in views about the need for sex both before and after marriage, there is a clear difference in the extent to which sex is considered important to men and women.

Extramarital patronage of prostitutes

The degree of social acceptance for patronage of prostitutes by married men is quite varied and often conditional on it being only occasional. There are also clearer differences between the views of men and women on this matter. Many married men consider occasional excursions to prostitutes to be ordinary and even acceptable under certain circumstances. Indeed, among the 21 men with whom we conducted in-depth interviews, 11 admitted having had sex with a prostitute since marriage and seven apparently continue to do so. Both the focus-group discussions and the in-depth interviews reveal quite mixed views among our male informants about visits to prostitutes after marriage. Some men are completely opposed

and only a few condone such behaviour without qualifications. Given that many Thai men see variation in sexual partners as an important part of their sexual lives, some amount of patronage of prostitutes after marriage is perceived as normal by most men.

> Moderator: Let me ask you whether it is acceptable for Thai married men to visit prostitutes?
>
> Mr E: As for men, it's acceptable.
>
> Mr B: To me, those who don't visit a prostitute are abnormal.
>
> Mr T: They are hen-pecked or something like this. (Bangkok middle class male group)
>
> Moderator: Do you think it's a ordinary practice for married men to take prostitutes?
>
> Mr R: It might be if they do it once in a while...
>
> Mr N1: For men, there must be times like that occasionally.
>
> Mr N2: As men, we can't stay home all the time. We need different flavours. Friends may say we are afraid of wives if we don't go with them anywhere. (Bangkok male factory worker group)
>
> Respondent: I think that depends on an individual. Some still go (visit prostitutes) even though they are married with a wife already. They feel they don't have enough. It's like they need a change of taste. (Case 37 Kanchanaburi rural male)

Numerous male respondents in the in-depth interviews stated that infrequent patronage was acceptable as long as family needs were not neglected. Some also mentioned the need to protect oneself (and thus one's family) from STDs. However, both the focus-group discussions and the in-depth interviews illustrate that a substantial proportion of our male informants view frequent visits to prostitutes by a married man as excessive and disapprove of it, especially if it leads to abrogation of family responsibilities.

> Respondent: Going frequently is not proper. But if they (married men) go only once in a while and protect themselves from diseases by using condoms, it is all right. (Case 18 Lopburi rural male)

Married women have a less tolerant attitude than their husbands towards married men visiting prostitutes. Some view even occasional visits as totally unacceptable. In our focus groups, and undoubtedly in the general public, the majority of married Thai women clearly prefer their husbands not to visit prostitutes at all.

> Mrs S: Hundred per cent, women don't like it (married men visiting prostitutes).
>
> Several: We don't like it.
>
> Mrs S: But sometimes we can't forbid it since men think it's ordinary. (Bangkok middle class female group)
>
> Respondent: I don't see why married men have to (visit prostitutes) since they already have families. Women surely don't like it if their husbands do that... They shouldn't do it at all, especially now when there are a lot of diseases... If they think they can't live with only one woman, I mean a wife, they shouldn't get married in the first place. (Case 4 Bangkok female middle class)

Despite their dislike of the practice, some women accept the view that men have a natural need for sexual variety and thus reluctantly tolerate occasional patronage of prostitutes by their husbands. For them, and indeed for many Thai men, it is seen as a form of male entertainment and not as a serious breach of marital trust. Just over two-fifths of the

women in-depth respondents (compared to about two-thirds of the men) felt that visiting prostitutes after marriage was ordinary behaviour. This does not mean they approved of it or thought it was proper but rather that they saw it as a 'fact of life'. Moreover, wives' tolerance was typically conditioned on the husbands' visits to prostitutes being discreet and infrequent, precautions being taken against STDs, and the costs not draining the family finances.

> Respondent: It seems to be an outlet and a kind of entertainment among men. They do it in groups of friends if urged by each other. (Case 21 Lopburi urban female)
>
> Respondent: They give us most of the money so we must sometimes let them stray... Not as a habit. They are allowed to (visit prostitutes) once in a while... if we are not financially troubled. (Case 2 Bangkok female teacher)
>
> Interviewer: Is it normal for married men to take prostitutes?
>
> Respondent: It's okay for me if they do it now and then or on some special occasions. If they do it as a habit, they are irresponsible and they may get wives infected through them. (Case 22 Lopburi urban female).

Some women, who indicate that they are opposed to their husbands having sex relations outside the marital union, make exceptions to their general opposition during times when they are unable to have sexual intercourse with their husbands for an extended time. They see their husbands having an innate need of frequent release of sexual drive and thus view situations where they themselves cannot meet this need as justifying an occasional visit to a prostitute. Such situations include long periods of marital abstinence necessitated by pregnancy and recent childbirth. It might also include situations where employment requires the couple to be separated for long periods.

> Mrs K: There's one period of time, during a wife's pregnancy, when a man wants to go out (and see prostitutes).
>
> Mrs P: That's normal.
>
> Mrs M: Yes, it's normal.
>
> Mrs T: There's no one to release his desire. (Kanchanaburi urban female group)
>
> Mrs R: If I cannot give him happiness (sleep with him), I would let him do it with prostitutes occasionally, but he has to protect himself. (Kanchanaburi rural female group)

Family responsibilities are often cited as reasons for opposing men's use of commercial sex, especially if frequent. It is nevertheless possible for some women to reconcile a husband's occasional visits to prostitutes and his obligations to his family. Thus tolerance, among those women who reluctantly accept the practice, is contingent on men not squandering more than they can afford and taking precautions against STDs.

Extramarital sexual affairs

While visiting prostitutes by men is often seen as a means of entertainment and thus not as a serious act of infidelity, entering a sexual relation with an ordinary (non-commercial) partner is viewed quite gravely. This is so whether the offending spouse is the husband or the wife. Nevertheless, there is a fundamental difference in overall views towards male and female infidelity.

Female infidelity

Views on women's extramarital sexual activity are unambiguous. Both male and female focus-group participants and in-depth survey respondents typically saw female infidelity as unacceptable and assumed that it would lead to the termination of the marriage by the man. Indeed it could also lead the husband to violence, against the wife, the lover, or both.

> Moderator: Is it common for women to have other men?
>
> Mr S: Men just can't accept that. If the woman does that, it means we have to separate... Our society just can't accept this kind of behaviour in women... Men consider themselves as tigers. Two tigers can't live in the same cave. One must die. (Lopburi urban male group)
>
> Moderator: Can you stand the idea of your wives sleeping with other men?
>
> Mr S: It's a big, troublesome deal then. (Laughed) They shoot each other because of this. (Bangkok male factory worker group)
>
> Respondent: If they do that (extramarital sexual relations), they are bad women. This is forbidden. They can be killed by their husbands. (Case 17 Lopburi rural male)

The total unacceptability of female infidelity was often explicitly contrasted with the more lenient attitudes towards male indulgence in extramarital sex. Unlike men, women are expected to control their sexuality and devote themselves solely to their husbands and their families.

> Respondent: It is common for men to sleep with women other than their wives. But as for women, if they have affairs, it is unacceptable... Such behaviour of women is against Thai culture. But as for men, it is common. The only thing that women have to keep in mind is that they have to take good care of the family, make their family happy. (Case 28 Lopburi urban male)
>
> Respondent: Men are men and women are women. Women are supposed to behave... If women take lovers as a revenge to husbands, they will never have them back... It's the most serious damage a married woman can do to her family. (Case 21 Lopburi urban female)
>
> Mrs M: People in all societies are like that. If women are unfaithful to husbands, they will be left... But if men are unfaithful, wives will try to solve the problem. (Lopburi urban female group)

There were occasional mentions, especially by women, of situations where it is understandable, if not socially acceptable, for a woman to seek or accept a sexual relationship with some man other than her husband. Such circumstances typically involved a husband who was irresponsible or abusive towards his wife and family. Other reasons for infidelity were also stated, such as boredom or bad character on the part of the woman, but received little or no sympathy from our study informants.

The virtually universal disapproval and strong condemnation of extramarital affairs by women does not mean they are non-existent. In at least one in-depth interview, a male respondent tearfully confided his wife's infidelity. Moreover, in a number of the focus-group discussions, local examples were cited. Everyone agreed, however, that these are exceptional cases. Survey evidence is sparse on the subject, but to the extent it exists indicates that almost no women admit to such behaviour (e.g. Sittitrai et al. 1992). Married men's extramarital sexual affairs with women other than prostitutes are another matter.

Male infidelity

In Thailand non-commercial sexual relationships in which men involve themselves are quite varied, ranging from casual encounters to committed relationships. While there is a lack of

reliable population-based estimates of the prevalence of extramarital non-commercial sex for Thai men, there is some quantitative and qualitative research which suggests that it is not uncommon (Havanon, Bennett and Knodel 1992; VanLandingham et al. 1995).[7] Even if not paid directly, most non-commercial sex partners of married Thai men will expect some material benefit in the form of gifts, occasional loans, or outright total support from their male partners, depending upon the nature of the relationship with the married man. Men who enter these relationships typically understand these expectations. Furthermore, so do their wives. In the extreme case where a non-commercial sex partner is fully supported by a married male, she is usually referred to as a minor wife by both parties.

> Mr S: A minor wife is known to the society. People know her. The legal wife also knows about her... You have to be responsible for them the same way you are for the legal wives. (Lopburi urban male group)
>
> Moderator: Who are minor wives then?
>
> Mrs M: Those who are financially supported by our husbands. They may have children by them.
>
> Mrs T: We have to share the income with them.
>
> Mrs M: We don't have as much as we used to have. They are treated just like wives since they share everything with us. (Lopburi, urban women)

Minor wives and concubines have apparently been common in Thailand among the upper strata for centuries (Wilson and Henley 1994). Moreover, as our study informants acknowledge, they are clearly still a salient threat to modern married women. Probably because minor wives have potentially greater economic and emotional significance for the husband-wife relationship, this category of non-commercial sex received more attention in the focus-group discussions and in-depth interviews than did other types of non-commercial sex partners. In reality, most non-commercial sexual relationships of married men probably are of a less committed nature than that with a minor wife. However, wives also see such more casual relationships as threatening to family security, both in their own right and because they might eventually lead to a more demanding minor-wife-type relationship. With few exceptions, women in our study viewed relationships with minor wives, or women who could potentially have a long-term affair with their husbands, as either intolerable or as an extremely difficult burden to bear.

> Mrs S: There is an old saying that it is better to lose gold equal to the weight of one's head than to lose a husband. Minor wives cause family problems. Husbands should not take them if they do not want to quarrel with their wife. (Lopburi rural female group)
>
> Interviewer: What would you do if your husband had an affair?
>
> Respondent: Those (women) who have such problems must think about their children. Men tend to be selfish and they are likely to keep both women. Most middle-class wives can't do much without husbands' support so they have to stand the situation. Then, they

[7]Such data are undoubtedly very difficult to ascertain accurately in a broad-based survey. Available estimates of men recently (in the last six or twelve months) having sex with non-commercial sexual partners range from 5 to 28 per cent (Sittitrai et al. 1992; VanLandingham et al. 1993; Thongthai and Guest 1995). Even less information is available on the types and characteristics of the women who are non-commercial sexual partners of married men or why they enter such relationships (see, however, Havanon et al. 1992). It seems likely that in most cases such women are not married themselves, being either single or formerly married, but reliable statistics are lacking.

> get used to it. For those who don't have a financial problem, they may get a divorce since the wives can provide for their children. (Case 6 Bangkok female clerk)
>
> Moderator: And if he doesn't really intend to take her as a minor wife but just sees her from time to time?
>
> Mrs N: Even if he doesn't think about it, we women have to think about it. We're afraid he might take it seriously. (Bangkok slum female group)

Except for the most casual affairs, even non-commercial relationships that do not reach the minor-wife stage will normally last much longer than commercial contacts. Thus wives typically feel far more threatened by ordinary women who engage sexually with their husbands than by prostitutes, who require neither extensive emotional nor resource commitment. The predominant opinion expressed in the focus-group discussion with both men and women was that non-commercial affairs were worse than patronage of prostitutes. Similar opinions were expressed by women in the in-depth interviews although concerns about the risk of AIDS from prostitutes was also very prominent among them, sometimes tipping the balance in the opposite direction.

> Mrs R: To go out (to visit prostitutes) is better (than taking a minor wife). I think it's better to be temporary and it can be finished. In a case of a minor wife, he must be responsible for her. In fact, he would have to divide with her the money that he would provide me. Instead of the family being completely supported, we have to divide into two instead of receiving the whole amount. (Kanchanaburi urban female group)
>
> Respondent: For me, I won't stand it if my husband has affairs. As for prostitutes, if he takes them from time to time, it's okay. They do it as a job. If he has affairs with some ordinary girl, he must be really fond of her. It means that he doesn't care for me any longer. (Laughed) I won't stand for it. (Case 22 Lopburi urban female)
>
> Interviewer: Would women consider men's taking prostitutes differently if there were no AIDS?
>
> Respondent: It might be all right. If he was bored with me, he could take one.
>
> Interviewer: Could he take mistresses?
>
> Respondent: No, absolutely not. He would spend all on her and I and my children would be in trouble. He would waste all, money and time. (Case 32 Kanchanaburi rural female)

Married women's reluctant tolerance of their husband's visits to prostitutes must be understood within this context. Thai wives are less threatened by their husbands' occasional visit to a prostitute than by their taking up with a ordinary woman, as a girl-friend or, even worse, as a minor wife. Non-commercial sex partners of any sort, and minor wives in particular, are seen as threatening the very core of family because they represent potential resource reallocation from wife and children to other recipients outside the present family; so it is not surprising that occasional visits to prostitutes are tolerated. Some women even seem to adopt a conscious strategy of permitting commercial sex visits in order to prevent the greater threat posed by non-commercial affairs. Given the Thai view of male sexuality, which includes the need for variety, some infidelity seems likely if not inevitable. Permitting visits to prostitutes means this need can be met without risk of serious resource loss to the family.

> Respondent: Some wives believe it's better than taking mistresses. I hate both, either prostitutes or mistresses. Some wives are forced to take the idea of husbands taking prostitutes as better. (Case 19 Lopburi urban woman)
>
> Mrs N: I can accept when my husband visits prostitutes but he must protect himself. It's better to let him go and pay his money than having another woman as a regular partner. I

> accept it when he goes out, I told him to pay in return and not to do it for free, because free of charge might cause a constant attachment... That will hurt us if he has someone else and he keeps supporting her. Let him go out if he wants a change of taste. (Bangkok middle class female group)
>
> Mr B: I got this idea from my wife. After I got married, she asked me not to have a minor wife but she allowed me to visit prostitutes. When you visit a prostitute, you pay for her and that's it. But if you have a minor wife, you have to keep paying or giving her money. If my wife doesn't allow me to visit a prostitute, I must have a minor wife. It's natural for a man to feel bored, so he has to look for something new. (Bangkok middle class male group)

Frequent patronage of commercial sex, however, is also seen as unacceptable by women (and many men), for it also drains familial resources and heightens the risk of bringing disease to the family. At the same time, non-commercial sex of any sort, especially serious girl-friends and minor wives, is universally regarded as unacceptable by married women. It is typically when familial resources are in question that wives object most strongly to husbands' extramarital affairs.

Conclusions

Current views of Thai sexuality are linked with the social construction of gender, which is itself but one component of a broader system of social relations and expectations between men and women in Thai society. While it is important to recognize that there is much diversity in views among individuals, there are still reasonably distinctive patterns that have emerged from the focus-group discussions and individual in-depth interviews with married men and women.

There is a clear consensus among Thais that sex is more important for men than for women and that men by nature have a need for sex that requires frequent outlet. Also, in the view of many, men need some variety in sexual partners. Our informants often stated that men become bored if limited to a monogamous relationship and that a desire for an occasional break from one's steady partner is a natural inclination for men. The premarital and extramarital commercial sex patronage by many Thai men is consistent with these general views of both our married male and female informants. In contrast, women are thought to be far more in control of their sexual desires, which are in any event far less intense than those of men. There was also no expression of a need for variety as part of female sexuality. Instead, many women viewed their own sexuality as a means for providing satisfaction for their husbands' needs.

Both men and women, but particularly women, perceived that male sexual satisfaction was a necessary (if not sufficient) element in a successful monogamous union. The responsibility of a wife to please her husband in sexual relations was seen by some women as part a strategy to accommodate men's stronger sexual needs and thus reduce the risk of husbands seeking alternative outlets that might threaten the security of the marriage. At the same time, in the discussions of what makes a good spouse, satisfactory sex was generally seen by both men and women as secondary in importance to more general personal compatibility, mutual understanding, and fulfilment of complementary responsibilities as defined by the culturally embedded gender system.

Clearly, married women dislike all forms of male infidelity, but the social construction of male sexuality in Thailand conditions the degree to which women and men view various forms of male extramarital relations as threats to their marriages. Occasional commercial sex patronage was generally not seen as an act of marital betrayal by either the men or the women, though many of the women were concerned by the threats posed by AIDS and other

STDs. Both men and women also noted that excessive commercial sex patronage could result in financial hardships and marital conflict for the man's family. These qualifications are essentially pragmatic concerns rather than moralistic or ethical ones. This is in sharp contrast to prevailing views in most Western societies, where commercial sex patronage by a husband is likely to viewed as a serious breach of marital trust and could be potentially devastating to couples.

The differing social constructions of male and female sexuality also form the basis for a prevalent double standard in Thai society with regard to sexual behaviour. It is permissible for single men to seek sexual release with prostitutes. The idea of single women paying for sex is probably unimaginable and the idea simply never arose in any group discussion or in-depth interview. Some tolerance exists for a single woman to have sex with her regular male partner, especially if the couple is committed to eventual marriage. More casual non-commercial sexual relationships are less tolerated but the shame associated with them is mainly directed towards the woman. Loss of virginity for a woman is seen as detracting from her attractiveness as a potential wife for another suitor, although for many urban men in our study this is a secondary concern. Virginity for single men is considered an oddity and thus not expected as a characteristic for a future husband.

The double standard is pronounced with respect to marital fidelity. There is virtually uniform strong condemnation by both men and women of married women who are unfaithful to their husbands unless there are extraordinary mitigating circumstances. In contrast, men are quite tolerant of occasional extramarital commercial sex outings as long as they are infrequent and discreet. Also some Thai wives are reluctantly willing to tolerate an occasional visit by their husbands to prostitutes. This stems from a perception that men need some sexual variety and that in the male quest to fulfil this need, visiting prostitutes can serve as an alternative to involvement with a non-commercial partner that might drain emotional and material resources from the current marriage.

The overall impression provided by our study informants is that children are considered a more central focus of marriage than the sexual and emotional intimacy of the conjugal bond. Thus it is not surprising that the financial threats posed by husbands' non-commercial sex partners were the most feared aspects of male infidelity for married Thai women. This is not to argue that affairs between married Thai men and non-commercial partners have no emotional effect on the men's wives or that male infidelity does not engender a sense of emotional betrayal. Some Thai couples undoubtedly share much emotional intimacy within their marriage. Moreover, if the husband is indiscreet in either his patronage of prostitutes or affairs with non-commercial partners, the wife will lose face. But general expectations that Thai men have 'natural' needs for sexual variety temper the degree to which Thai women take these extramarital liaisons as a sign of personal rejection, especially when they only involve occasional relations with prostitutes in the course of male entertainment activities.

Thai patterns of sexual behaviour are currently in flux. More companionate forms of marriage are probably becoming popular among Western-educated urban elites and eventually may diffuse to the more general population. More dramatically, the AIDS epidemic is undoubtedly serving to make longstanding patterns of male sexual behaviour more costly and less common. Future patterns of Thai sexual behaviour and views of gender and sexuality, however, will necessarily be based on those that prevail at present. Thus gaining an accurate view of current Thai perceptions is an essential step for mapping changes that either are induced by programmatic interventions or come about from less deliberate forces set in motion by the epidemic and the changing socio-economic context in which it is occurring. As the present study shows, the systematic collection of qualitative data by the use of focus groups and focused in-depth interviews can contribute significantly to the expanding

base of knowledge on matters that only a decade ago were almost completely absent from the social science research agenda.

References

Bamber S. D., K. J. Hewison and P. J. Underwood. 1993. A history of sexually transmitted diseases in Thailand: policy and politics. *Genitourinary Medicine* 69:148-157.

Boonchalaksi, Wathinee and Philip Guest. 1994. *Prostitution in Thailand*. Nakhorn Pathom: Institute for Population and Social Research, Mahidol University.

Brown, Tim, Werasit Sittitrai, Suphak Vanichseni and Usa Thisyakorn. 1994. The recent epidemiology of HIV and AIDS in Thailand. *AIDS* 8(Supplement 2):S131-S141.

Chayovan, Napaporn. 1989. Marriage registration among Thai women. Pp. 205-221 in *Health and Population Studies Based On the 1987 Thailand Demographic and Health Survey*. Demographic and Health Surveys Further Analysis Series, No. 1. New York: Population Council and Institute for Resource Development.

Deemar Company. 1990. *AIDS Research in Thailand*, Vol. I*: Computer Tabulations.* Bangkok.

Frankfort-Nachmias, Chava and David Nachmias. 1992. *Research Methods in the Social Sciences.* Fourth edition. New York: St. Martin's Press.

Fordham, Graham. 1995. The ritual constitution of maleness amongst the northern Thai. Paper presented at Gender and Sexuality in Modern Thailand conference, Australian National University, 11-12 July.

Havanon, Napaporn, Anthony Bennett and John Knodel. 1992. Sexual networking in a provincial Thai setting. AIDS Prevention Monograph Series Paper No. 1, Family Health International, Bangkok.

Im-Em, Wassana. 1996. Partner relations and AIDS in Chiang Mai villages. Ph.D thesis, Australian National University, Canberra.

Keyes, Charles. 1986. Ambiguous gender: male initiation in a northern Thai Buddhist society. In *Gender and Religion: On the Complexity of Symbols,* ed. C. W. Bynum, S. Harrell and P. Richman. Boston: Beacon Press.

Knodel John. 1993a. Prostitution in (historical) perspective. *Bangkok Post* 30 June.

Knodel, John. 1993b. The design and analysis of focus group studies in social science research. Pp. 35-50 in *Successful Focus Groups: Advancing the State of the Art,* ed. D. Morgan. Newbury Park: Sage.

Knodel, John and Napaporn Chayovan. 1991. Coital activity among married Thai women. Pp. 925-945 in *The Demographic and Health Surveys World Conference, Proceedings*, Vol. 2.

London, Andrew, Mark VanLandingham and Nancy Grandjean. 1995. Homosexual behaviour among northern Thai males: measures, prevalence and cofactors. Paper presented at Annual Meeting of the American Sociological Association, Washington DC.

Lyttleton, Chris. 1995. Changing the rules: shifting bounds of adolescent sexuality in rural Isan. Paper presented at Gender and Sexuality in Modern Thailand conference, Australian National University, 11-12 July.

Morgan, David. 1996. *Focus Groups as Qualitative Research*, 2nd edition. Thousand Oaks: Sage Publications.

Riley, James Nelson. 1972. Family organization and population dynamics in a central Thai village. Ph.D. dissertation, University of North Carolina.

Rojanapithayakorn, Wiwat and Robert Hanenberg. 1996. The 100% Condom Program in Thailand. *AIDS* 10:1-7.

Seidel, John, Susanne Friese and D. Christopher Leonard. 1995. *The Ethnograph v4.0: A Users Manual*. Amherst: Qualis Research.

Sittitrai, Werasit, Praphan Phanuphak, Jean Barry and Tim Brown. 1992. *Thai Sexual Behaviour and the Risk of HIV Infection: A Report of the 1990 Survey of Partner Relations and Risk of HIV Infection in Thailand*. Bangkok: Program on AIDS, Thai Red Cross Society and Institute of Population Studies, Chulalongkorn University.

Tangchonlatip, Kanchana. 1995. Sexual expectations of Thai married couples. Paper presented at Gender and Sexuality in Modern Thailand conference, Australian National University, 11-12 July.

ten Brummelhuis, Han. 1993. Do we need a Thai theory of prostitution? Paper presented at 5th International Conference on Thai Studies, School of Oriental and Asian Studies, London, 5-10 July.

Thailand, National Statistical Office. No date. Nuptiality of Thai Population 1990 Population and Housing Census, Subject Report No. 4. Bangkok.

Thongthai, Varachai and Philip Guest. 1995. Thai sexual attitudes and behaviour: results from a recent national survey. Paper presented at Gender and Sexuality in Modern Thailand conference, Australian National University, 11-12 July.

VanLandingham, Mark, Somboon Suprasert, Werasit Sittitrai, Chayan Vaddhanaphuti and Nancy Grandjean. 1993. Sexual activity among never-married men in Northern Thailand. *Demography* 30,3:297-313.

VanLandingham, Mark, John Knodel, Anthony Pramualratana and Chanpen Saengtienchai. 1995. *Friends, Wives and Extramarital Sex in Thailand*. Institute of Population Studies Publication No. 222/95. Bangkok: Institute of Population Studies, Chulalongkorn University.

Wilson, Donald and David Henley. 1994. Prostitution: facing the facts. *Sunday (Bangkok) Post* 25 December.

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The price of promiscuity: why urban males in Tanzania are changing their sexual behaviour*

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Abstract

This article presents evidence of a substantial change in sexual behaviour among urban factory workers during the last four years; it discusses the nature of this change and the reasons for it. Fear of AIDS was the main motivating factor, followed by economic hardship: because AIDS is incurable and because sexual relationships have a substantial transactional component, workers see themselves as paying the price of promiscuity with their lives as well as their dwindling financial resources. Respondents preferred partner reduction, and in particular sticking to one partner, to condom use. Condoms were not popular, mainly because of fears that they were impregnated with HIV and because of their association with promiscuous behaviour.

From a medical perspective AIDS is problematical because there is, as yet, no cure and no vaccine. It is also problematical from a social science perspective because its social aspect centres on sex, a form of social behaviour that has not received much attention from the social sciences, with the exception of psychology, before the AIDS epidemic. And not without reason: sexual behaviour is almost universally a private affair and people are not generally inclined to tell outside researchers about their sexual behaviour and experiences. Much recent social science research on sexual behaviour has been motivated, directly or indirectly, by the drive to develop interventions to alter behaviour that is seen as constituting risk for HIV infection. However, changing something as fundamental as sexual behaviour is not easy: just like smoking and drinking, sex gives short-term satisfaction, and because many people are basically hedonistic, possible consequences in the distant future do not weigh heavily. In addition, the interventions that are available are limited and when they have been applied it is not easy to evaluate in the short term whether they have had any effect; and even a more long-term decline in HIV incidence would not necessarily be an indicator of the efficacy of interventions. Do interventions affect people's sexual behaviour and if so how can we find out?

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One possibility is to ask them. In surveys people tend to report sexual behaviour change. For example, in a national survey in Tanzania 88.2 per cent of 1874 men said that they had changed their behaviour (Weinstein et al. 1994); and in the WHO/GPA survey for Tanzania, 62 per cent of the men reported having changed (Cleland 1995:177-178). Of these, 81 per

cent reported a reduction in the number of sexual partners (Cleland 1995:186), that is, half of the Tanzanian men reported reducing the number of sexual partners. In the Mwatex factory, a large urban textile plant in Mwanza, Tanzania, sexual behaviour change also seems to be occurring: a longitudinal study of 752 male workers in the factory shows that many of the workers report having changed their behaviour (Ng'weshemi et al. forthcoming). In interviews with a subsample of 334 workers in 1994, 92.4 per cent said that they had changed their sexual behaviour since hearing about AIDS. This change has been mainly in the form of a reduction in the number of sexual partners.

So when people report having changed their behaviour in response to AIDS how are we to interpret this? Are they really changing or are they just reporting what they think researchers want to hear? If they are changing what are the reasons for change, and if they are not changing, why not? This paper addresses these questions on the basis of a qualitative study carried out among a sample of participants from the larger quantitative study in the Mwatex factory.

Background

Interventions in Mwatex

TANESA (Tanzania Netherlands Project to Support HIV/AIDS Control in Mwanza Region, Tanzania) commenced in 1993, as the successor of TANERA (Tanzania Netherlands Project for Research on HIV/AIDS in Mwanza Region, Tanzania), which started in 1991. TANESA's main goals are to support the development and implementation of appropriate and effective methods for the reduction of HIV transmission, to assess the consequences of the HIV/AIDS epidemic at various levels and to contribute to the development of appropriate methods to cope with these consequences. One of the major TANERA/TANESA[1] activities was a longitudinal cohort study in the Mwatex factory, which had 2,000 workers in 1991. Enrolment for this study started in late 1991 and continued until late 1994. Follow-ups continued into 1995. A clinic was established at the factory and all study participants were invited for follow-up visits four months after their previous visit. If they failed to attend, reminders were sent on four subsequent occasions, including personal attempts to motivate them to attend. After one year of non-attendance participants were excluded from the study. During intake and follow-up visits, a standardized interview, physical examination and laboratory investigations were carried out. Free medical treatment was provided to all study participants at intake, follow-up visits and any time they presented in between. Referrals to hospitals were made when necessary.

Apart from the clinic, various interventions were initiated. These included free treatment of sexually transmitted diseases at the study clinic, condom distribution and voluntary HIV counselling services. In addition, several health education activities were initiated in the factory. These included workshops for factory workers to provide them with information about AIDS; drama performances; and the training of 30 peer educators (from 1993). The coverage of the peer educator program was very limited, however, because of power cuts, layoffs and closures at the factory.

Because of interventions in the factory, media coverage and national and other AIDS campaigns, it may be assumed that the workers had sufficient knowledge of AIDS to know what to answer when they were asked about behaviour change and numbers of partners. However, we assume that they were not simply telling us what we wanted to hear because, although the majority of respondents claimed to have reduced the number of sexual partners

[1]For convenience we use 'TANESA' to refer to both phases of the project.

or to now stick to a single partner, reported condom use has remained relatively low. This discrepancy is striking since campaigns have placed at least as much emphasis (perhaps even more) on condom use as they have on partner reduction, on the assumption that condoms would be the easier, preferable option. If respondents were simply repeating what they had heard during campaigns then they would surely tend to report condom use to the same extent as partner reduction.

Approach and methods

An analysis of sexual behaviour change has been carried out for 752 men who had made at least four follow-up visits to the project clinic by January 1995, five visits in all. Virtually all of these men had been enrolled before January 1993. In total 1433 men had registered for the study by January 1993 and could have completed five visits by January 1995. Some of these men dropped out of the study through death (1.5% of all enrolled) or other reasons (38.9%), others are continuing but have not yet reached their fifth visit (6.1%). Economic instability has contributed to high dropout rates. Since 1993 the factory has been repeatedly closed and re-opened, and was closed completely in late 1994. The majority of dropouts were temporary workers, who made only one visit to the study clinic (Ng'weshemi et al. forthcoming).

In 1994 a subsample of 334 randomly selected men were interviewed in order to evaluate interventions. During this interview (referred to in what follows as the 1994 behaviour change interview) respondents were asked whether they had changed their sexual behaviour since hearing about AIDS; of the 334 respondents 92.4 per cent said that they had. Most of this change involved reduction of the number of sexual partners. An analysis of the number of partners reported during the four-monthly follow-up interviews revealed that during the period 1991-1994 the proportion of men reporting more than one sexual partner during the last month declined from 22.3 to 12.2 per cent; the proportion of men reporting casual sexual partners during the last month declined from 9.8 to 5.2 per cent. Although the reporting of actual numbers of partners did not support the high percentage of those claiming to have changed in the 1994 interview (92.4%), the reduction was nonetheless impressive (Ng'weshemi et al. forthcoming).

Because the project had carried out interventions in the factory during the longitudinal study, and given the high level of knowledge about AIDS, we suspected that some desirability effect had led to reporting bias. We therefore decided to carry out a validation study among a subsample of respondents from the larger study. This study had three goals: first, to validate the substantial partner reduction which emerged from the longitudinal study; second, to investigate the discrepancy between the extremely high percentage of respondents who claimed to have 'changed' and the lower proportion who reported actual reduction of partners or condom use; and third, to explore the reasons for behaviour change or lack of change. The validation of partner reduction is reported in a separate paper (Pool et al. 1995). This paper focuses on the second and third goals.

From the 752 men in the longitudinal study who had made at least five follow-up visits to the TANESA clinic during 1991-1994 we randomly selected 32 for in-depth interviews. After a preliminary analysis of the first group of men it was noted that levels of agreement between the follow-up interviews in the longitudinal study and the in-depth interviews were high, and we decided to further challenge the data by randomly selecting another 13 men who were either incident cases of HIV or had had a clinical STD during the second half of the study period. This sample was kept relatively small because the emphasis was on in-depth understanding rather than on wide coverage.

All but two of the 45 respondents were married. Twenty-two had been married more than once; three were in polygynous unions. The average age was 39 years. Of these four were younger than 25, 17 were between 25 and 34, 15 between 35 and 44 and nine over 45. More

than half reported being Catholic (26); the rest were divided between various Protestant denominations (15), Islam (2), and traditional religion (2).

We also interviewed the wives of ten of the men regarding their impressions of changes in their husbands' behaviour. These were wives who were also enrolled in the cohort study. We could not interview the wives of the other married men whose wives were not included in the cohort study for ethical reasons: questioning women who were not involved in the study about their husbands' behaviour may have caused undue concern about possible HIV infection.

We invited the men to participate in open, in-depth interviews in which we discussed TANESA interventions, behaviour change among the factory workers in general, the individual's own behaviour, condom use, attitudes to extramarital relationships, opinions about various kinds of sexual partner and alcohol use. The in-depth interviews covered the five years preceding the interview and were loosely structured along the lines of the topics covered in the follow-up questionnaires in the longitudinal study, the idea being to allow the respondents to speak as freely and informally as possible while at the same time making sure there was some basis for comparison. The interviews were recorded and transcribed verbatim and then subjected to a discourse analysis.[2] We then checked both the internal consistency of what respondents had said in the in-depth interview and compared this to what they had said in the various follow-up interviews in the longitudinal study (for convenience we will refer to these simply as the follow-ups). We also compared the interview data on behaviour change with the testimonies of the spouses, HIV serology, self-reported genital discharge or ulcers and the clinical data on sexually transmitted diseases.

Comparison and the problem of consistency

Although there are many practical and epistemological problems involved in the comparison of data from quantitative questionnaires, qualitative open interviews and clinical diagnoses, we have chosen to interpret responses pragmatically, comparing answers from the in-depth and follow-up interviews point for point (thereby quantifying the qualitative data somewhat) and then compare these answers to the serological and clinical data. But we have also kept a flexible, interpretative approach, evaluating the general impression given by the data as a whole and carefully weighing this against the internal consistency of each open interview. Our conclusions are therefore based on a straightforward comparison of two lists of literal questions and answers and a more qualitative interpretation of the whole data set for each respondent.

Also, given the different kinds of interview and the different means of recording them, there is plenty of scope for divergence in the answers to what are putatively the same question. Obviously, complete fit cannot be taken as the criterion of acceptability, but just how much inconsistency is acceptable? In this paper we focus on behaviour change and the reasons for change, and consistency between the different sets of data is relevant only to the extent that it supports or contradicts the respondent's claim to have changed his behaviour. Inconsistencies that are not directly relevant to the question of change have been ignored, unless there are many of them between and within the different sources. If a respondent's claim to have changed is consistent between the longitudinal study questionnaires and the in-depth interview but is contradicted by one of the other sources (HIV seroconversion, clinical evidence of STDs or a spouse's testimony) then we reject it as inconsistent.

[2]On discourse analysis see Gumperz (1983), Mishler (1984). For an example of how the interviews were interpreted see Pool (1994).

Behaviour change

Promiscuity, multiple partnerships and single partnerships

In what follows, the labelling of behaviour or respondents as promiscuous is ours. All interviews and discussions were in Kiswahili and respondents did not use the word 'promiscuity'. Although Kiswahili speakers who speak English tend to translate such Kiswahili terms as *uasharati*, *mambo ya anasa* and *mambo ya uhuni* as 'promiscuity' when they are talking about the behaviour of others, they would never do so when describing their own behaviour because these Kiswahili terms have a more negative connotation than the English 'promiscuity'.[3]

We distinguish between multiple partnerships and promiscuity. In a multiple partnership a man has more than one sexual partner with whom he has a relatively stable relationship. These are relationships which resemble traditional polygyny. We also call relationships in which a married or cohabiting man has occasional additional partners multiple partnerships. We reserve the term 'promiscuity' for men having frequent and diverse sexual relationships, especially transient ones. Although we realize that the use of the term 'promiscuity' may be pejorative, we make the distinction in order to avoid lumping widely varying behaviours under the single label of 'multiple partnerships'.

We have grouped all those with a single partner together, whether they are married, are cohabiting or simply have a stable non-cohabiting relationship. For convenience polygynous marriages are also classed as single partnerships.

Number of partners

The results of the longitudinal study (Ng'weshemi et al. forthcoming) and the validation study (Pool et al. 1995) confirm substantial behaviour change among male Mwatex workers since the commencement of TANESA activities, though not to the extent that they tend to report it when asked explicitly about behaviour change. This behaviour change mainly involves a reduction of the number of sexual partners. The behaviour change of our 45 respondents, as confirmed by the comparison of data from the longitudinal study, the validation study and the comparison of clinical and serological data, is summarized in Table 1.

After analysing the data from the in-depth interviews with 45 male respondents and ten spouses and comparing this to the quantitative data on numbers of partners from the follow-up study, HIV serology and clinical diagnoses of STDs, we conclude that 16 of our 45 respondents have changed their behaviour and 29 have not changed their behaviour during the study period. Of the latter group five had changed, but before the study began, ten had never had risky behaviour and 14 had remained promiscuous in spite of claiming to have changed. Five of those who did not change reported not having changed in the follow-ups and in the 1994 behaviour change interview (though they did initially say they had changed in the in-depth interviews). This means that of the 40 respondents who reported changing their behaviour, 16 had actually changed.

Table 1
Number of men having reduced/not reduced the number of partners during the study period, as determined by multiple data sources

Reduction of	From very many to fewer partners (though still promiscuous)	3

[3]Other common terms in this context are *zinaa* and *uzinzi*, both usually translated as 'adultery'.

partners	From few partners to a single partner[4]	3
	From many partners to a single partner	10
	Total	16
No reduction of partners	Changed before the study	5
	Always had only one partner	3
	Did not stick to a single partner but were not promiscuous either	7
	Remained promiscuous[5]	14
	Total	29
Total		45

However, the figures could also be interpreted more favourably. For example, in the group of those who had not changed there were three who had always had only one partner and who therefore could not have changed. If we exclude these then 16/37 of the respondents who could have changed, did. Also, five of the respondents had changed before the study period, two of them in response to the threat of AIDS. If we add these two to those who have changed then almost half (18/37) of those who could have changed have changed in response to the AIDS epidemic. Seven of the respondents who did not change did not stick to a single partner, but they were not promiscuous either. Fourteen respondents remained promiscuous as opposed to 13 who now stuck to a single partner.

When we focus on high-risk behaviour rather than partner reduction we see that of the 27 respondents who initially had high risk behaviour, ten had changed to no-risk behaviour (single partner) and 17 had remained promiscuous, though three of these had become less promiscuous. So 10/27 had changed from high-risk to no-risk behaviour.

One important conclusion here seems to be that sticking to a single partner is the preferred mode of behaviour change; in the behaviour change interview 77.6 per cent of the respondents said that they now stuck to a single partner. Another conclusion is that if you just ask people whether they have changed their behaviour they tend to reply 'yes', whether they have actually changed or not. Indeed, they even say 'yes' when they cannot have changed because they only had one partner to start with. This is supported by other data from the in-depth interviews in the present study. When we asked the workers whether they thought that their colleagues had changed their behaviour since TANESA started its activities in the factory, 40 said that there had been a change and that some or all of the workers had become less promiscuous. Only three said that there had been no change and two said they did not know whether there had been any change. In other words the same number of respondents who reported that they had changed their own behaviour when asked explicitly, also answered in the in-depth interview that everybody or many had changed. In addition, of the 28 respondents for whom a comparison of the different data sources showed that they had not changed, 18 claimed in the in-depth interviews that they had changed. Respondents would often start off by declaring radical behaviour change, usually claiming to have only one partner, and then gradually move on to admit more and more sexual partners.

Obviously, given the high degree of knowledge about AIDS, people know that they are expected to change and may answer accordingly when someone from an AIDS-related project asks them. But then why not lie about the numbers of partners as well, and why admit to not using a condom? After all, people must also realize that we want to hear that they are using condoms unless they are faithful to one partner.

[4]For convenience 'single partner' here also refers to being faithful in a polygynous union.

[5]Here it should be noted that of the 14 respondents who remained promiscuous the different data sources were only consistent for one. For the remaining 13 there were inconsistencies which pointed clearly to continued promiscuous behaviour.

Why did so many respondents initially report behaviour change only to contradict this when discussing numbers of partners and condom use? The most likely explanation here seems to be related to methodology. When you ask people straight-off whether they have changed, either in an open interview or in a questionnaire, then they answer 'yes' without thinking because they have internalized the idea that this is desirable. This explains the degree of change reported in the 1994 behaviour change interview. In the ordinary follow-ups, however, respondents probably reported numbers of partners more honestly because the reporting was piecemeal. They did not have to say: 'I have had 20 partners in the last two years', but only that they had had one or two in the last few months, which does not sound as bad as the grand total. (Respondents were not ashamed of bragging about the numbers of partners they had before TANESA and AIDS, however.)

But then what about the in-depth interviews, in which respondents were asked for grand totals? Here we also see that when they were asked explicitly, many respondents claimed that they had changed. They often only revealed that they were promiscuous or had more partners later on in the interview, either by contradicting what they had said earlier and then confessing after it was pointed out to them, or by spontaneously admitting to having under-reported earlier. For example, one respondent claimed to have only one partner at first, but later, in the context of a question he put to the interviewer about the safety of condoms, described how he used condoms with casual partners and why he was worried that they were not protecting him adequately from diseases.

Here two factors play a role. First, the easy, informal and non-routine nature of the in-depth interviews was more conducive to being open than a formal situation. The interviewer succeeded in establishing rapport early in the interview and by the end some respondents were asking for advice and revealing more intimate details. Second, in open, in-depth interviews there is also more opportunity for the respondent to contradict himself and more scope for him to revise earlier statements. There is also more scope for the interviewer to steer and probe. Identification of these factors was made possible by a discourse analysis of the verbatim transcripts of the recorded interviews.

So different methodologies generate different responses, and there are good reasons why questions about behaviour change produce less reliable results than questions about numbers of partners. But what about the validity of the findings? Have somewhat less than half of the Mwatex workers who claim to have changed their behaviour actually changed?

In discussing the results of the WHO/GPA surveys Cleland is sceptical. He concludes that reported change should not be interpreted literally but may rather signify 'an acknowledgment of the desirability or need to change rather than its achievement' (Cleland 1995:192). We agree that it is necessary to remain critical of the validity of self-reported behaviour change, but we feel that he might be a bit too sceptical about change. We do not pretend to have found the 'objective index' or 'gold standard' against which reported sexual activity can be validated once and for all (Catania et al. 1993), and indeed, we doubt that it will ever be found. And we also realize that our sample was not really representative of Tanzanian men, or even Mwatex workers, but we do feel that our claim of substantial change is justified.

Although a more comprehensive study, including more comparative variables, might have led to more inconsistencies and thus a reduction in the number of respondents whose claim to have changed we have accepted as true, our analysis has shown that the combination of a longitudinal study and in-depth interviews was basically sufficient. The other factors (interviewing the spouse, seroconversion and clinical data on STDs) generally only served to confirm what we already suspected in almost all cases. It is only in three cases that general agreement between the follow-up questionnaires and the in-depth interview data were contradicted by the additional factor: one respondent seroconverted, one had an STD and one

respondent's wife said he had extramarital partners during the period they claimed to be faithful to a single partner. In addition, we have been rather critical in rejecting the claims of those respondents who might have changed (i.e. their claim to have changed was not directly contradicted) but whose data contained several inconsistencies. A more liberal interpretation would have led to the inclusion of some of these in the behaviour change group.[6] Our sample was not representative for all the workers because respondents who seroconverted and who had STDs were over represented. Because these men tended to be more promiscuous and less amenable to change, we do not think that our estimate that almost half of the workers have changed their sexual behaviour since 1991 is exaggerated.

Condom use

Twenty-seven out of 45 respondents reported consistently across all interviews that they had never used a condom. There were various reasons for this that are discussed below. One respondent had never used condoms during the study but had used them before the study to protect himself against STDs. He said he did not need them any more because he now stuck to one partner.

Five respondents reported using condoms, but the data from different sources were inconsistent. Three of these respondents reported using a condom in one of the follow-ups in 1992. In the in-depth interview they denied ever using them. Here, as in the case of reporting casual partners, the inconsistency may result from the fact that in the follow-ups the respondents were recalling behaviour of the previous month, whereas in the in-depth interview they had to recall behaviour (including incidental condom use) for the previous four years. One respondent said in the in-depth interview and the 1994 behaviour change interview that he used condoms to protect himself against diseases, but he never reported them in the four-monthly follow-ups. Finally, one respondent reported condom use in the follow-ups and in the in-depth interview he claimed that he had used a condom at home with his wife for family planning purposes for a whole year. His wife denied this, however, saying that she had seen her husband with condoms but that he never used them with her.

Table 2
Number of men reporting condom use/non-use during the study period, as determined by multiple data sources

Do not use a condom	Never used one	27
	Used previously, before the study	1
	Total	28
Use a condom	Claim to use, but sources inconsistent	5
	Regularly with wife for family planning	1
	Regularly with regular partner for family planning/protection	2

[6]We assume that, in a context in which multiple partnerships and extramarital sex are increasingly associated with negative consequences (AIDS) and in which interventions and IEC messages focus on reducing the number of sexual partners, there is bound to be some desirability effect in answering questions on numbers of partners and sexual behaviour change. Any statements on partner reduction and percentages of respondents claiming partner reduction should therefore be viewed as critically as possible. Because the percentage of those reporting behaviour change, even though it is lower than percentages reported in some surveys, still seems relatively high when viewed from the common-sense perspective of everyday experience, and because the workers in the Mwatex factory have probably been exposed to more information on the nature of behaviour change desired, we have been extra critical in rejecting claims to such change, hence our rejection of a man's claim to have changed if his wife contradicted this.

	Regularly with casual partners for protection	4
	Sporadically	5
	Total	17
TOTAL		45

For 12 respondents who claimed to use condoms the data were consistent. Seven of these used condoms regularly during certain periods, either with their wives for family planning (one respondent), with regular partners for family planning and/or to protect themselves from diseases (two respondents) or with casual partners for the sole purpose of protection against diseases (four respondents). The remaining five used condoms only sporadically.

In the longitudinal study 9.7 per cent of the men who claimed to have changed their behaviour said they used condoms nowadays (Ng'weshemi et al. forthcoming). Five out of 45 of our respondents had reported condom use as a form of behaviour change, in addition to reducing the number of partners, in the 1994 behaviour change interview; so this was confirmed when the quantitative and qualitative data were compared.

The reasons for change

Partner reduction

Which factors have played a role in the behaviour change described above? Have TANESA interventions in the factory contributed to change? And if so, to what extent?

Apart from the clinic, established in 1991, TANESA interventions in the Mwatex factory commenced in 1992 and have included video shows, focus-group discussions and informative seminars during which condoms were demonstrated. A drama group was set up and plays were performed in the factory. In 1992 thirty peer health educators were also trained. This was followed up in 1993 with further training.

During the in-depth interviews we asked respondents which TANESA activities they knew and what they thought of them. Everybody, without exception, was enthusiastic about the clinic. In fact, when we asked them about TANESA activities in general they always talked exclusively about the clinic. Most had never even heard of any of the other activities. Only the odd respondent had actually participated in these activities, usually by attending an information meeting or seeing one of the plays.[7]

The main reason that workers gave, directly or indirectly, for changing their behaviour was fear of AIDS, although apprehension about getting STDs, and in particular of passing these on to their wives, was also significant. This fear had been instilled primarily by visits to the clinic. Indeed, workers often said that they had changed since they 'joined TANESA', and here they were referring exclusively to attending the clinic. The mere fact of attending the clinic regularly, being examined and, if necessary treated, and receiving information about AIDS in the context of those activities, has instilled not only an awareness that some kind of change is necessary but a deep-seated fear of the disease.[8]

[7]The lack of coverage of these interventions may be due to the many factory closures, power cuts and other problems in the factory during this period. All our respondents obviously knew the clinic because they had been selected from attenders.

[8]The word fear is problematic here. We realize that there is a desire to formulate AIDS messages in positive terms, but it remains a fact that the simple fear of degeneration, isolation and death remains the prime mover of change with regard to AIDS.

> I used to like going after women but since attending the clinic I have become afraid. I have changed, though I haven't stopped altogether. In the past I couldn't go three days without a woman. It was very difficult. Now I can go without for a whole month. I've reduced the number of partners since 1992 when I joined TANESA and heard of the way AIDS is spread.
>
> Previously I could have more than five partners, but these days I only have my wife. I stopped having other partners completely because of fear of this incurable disease.

As part of the longitudinal study blood samples were taken from all clinic attenders during each four-monthly follow-up visit. Although 90 per cent of the participants still did not want to know the results of the HIV test by 1994, respondents in the in-depth interviews frequently expressed concern about the results. The simple fact that blood had been taken caused a deep anxiety that they might have 'the disease'.

> My problem is that I have not received the results [of the blood test].
>
> They have the secret but I don't know, and this gives me a headache. I requested the results but haven't heard anything. Not that I'm worried. I no longer have any dependent children. I asked the counsellor and she told me not to worry. Maybe she saw that I already had symptoms. Anyway, I'm not worried.
>
> If she told you not to worry then everything is okay.
>
> Then why am I loosing weight? First I weighed 65 kilo, then 60, then 59.
>
> It could be something else.
>
> I thought maybe it was malaria. I was worried a lot and I wasn't eating. Why can't they tell me?
>
> If you ask them they will tell you.
>
> Maybe they have reasons for not wanting to tell me?
>
> What kind of reasons might they have?
>
> Some of my children are young.
>
> No, that couldn't be a reason. If you want to be told then they have to tell you so that you can prepare.
>
> That's why I was asking; so that I can prepare my will.

Respondents sometimes used a religious idiom when describing how TANESA had 'helped' them to 'change'. There was frequent reference to Biblical condemnation of adultery. Some respondents also claimed that they had either stopped or greatly reduced drinking alcohol 'since joining TANESA'.

> When TANESA started I was an ordinary person. I used to drink and indulge in promiscuity (*mambo ya anasa*). But after you started here I became afraid and followed Jesus. I abandoned these activities and now I feel I am saved.
>
> I used to get many STDs, but then I heard of TANESA and God blessed me and I was cured. I decided to join and today I am here because of you.

It is striking, and perhaps relevant from an intervention perspective, that a religious idiom was used to denounce sexual promiscuity and alcohol but not the use of condoms[9]. Here there may be some resonance between the widespread activities of crusading 'born again' Protestant denominations preaching rebirth as a means to salvation, and AIDS interventions that also advocate change leading to salvation. The clinic, like the church, not only mediates between life and death, but also has the secret of who is saved and who is damned.[10]

There are, however, also sound economic reasons for cutting down on numbers of sexual partners and drinking. When discussing non-marital sexual relationships and the reasons for reducing the number of partners many workers complained about the cost of maintaining multiple partnerships.

> Extramarital partners are bad because they need money and if you don't earn much you must deprive your wife in order to pay them.
>
> A permanent mistress is always thinking of money and casual partners also always ask for money when you are with them. They cannot give sex freely.

Wages in Tanzania are not keeping up with the high level of inflation and this, together with layoffs and frequent closures of the Mwatex factory, have meant that workers have had less money to spend in recent years. Given the transactional nature of casual sex, the financial burden of keeping regular partners and the increasing price of beer, these are obvious targets for increased thrift: one respondent said quite explicitly that he would like to have continued having relationships with multiple partners but could no longer afford it. This would not affect condom use because they are distributed free.

We have examined some of the reasons for partner reduction as they emerged from the in-depth interviews. Now we must look briefly at the other side of the coin: why do men have multiple partnerships to start with and why do some continue to have them? One 44-year-old worker had reduced the number of extramarital partners, but he could not keep to one partner. His response is typical:

> I have changed. I used to go after every woman I saw, even if I didn't know her.
>
> And now?
>
> Now I might have sex with an outside woman once in two months.
>
> How many do you have at the moment?
>
> Only one.
>
> What prevents you from stopping altogether?
>
> Lust (*tamaa*).
>
> How many partners were you having previously?
>
> We used to meet in bars. When we drank we overdid it and this stimulated our desire. So when I saw a woman and I had money I would approach her and seduce her. But it was not on a daily basis; perhaps once a week.

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[9]Although 17 respondents reported using condoms during the study period, and most of those claimed to have used them to protect themselves against diseases, none said that they had started using condoms as a form of behaviour change because of TANESA interventions.

[10]This is not limited to the factory workers. One young fisherman who had just been trained as a TANESA peer health educator declared: 'The old Mayunga does not exist any more. There is a new Mayunga now.'

> When did you start reducing?
>
> April 1994.
>
> How many outside partners did you have during the last year?
>
> Maybe four...
>
> Is it acceptable for a man to have extramarital partners beside his wife?
>
> It is not acceptable, but men do it.
>
> Why do you do it when you know it is unacceptable?
>
> It is just lust (*tamaa*). You may see another woman and feel she is more beautiful than your wife and you may think there is a difference, but they are the same. When you see her she looks appealing, but when you have sex with her you find there is no difference. So it is just lust which misleads you. We have a saying: the meat at home never tastes good. You may leave meat at home to go and eat meat in a roadside restaurant, just for a change.

Another respondent said:

> Before I got married I was like a bull or a male baboon. I moved about without caring. I chased every woman I saw unless she was a relative.

Men tend to explain multiple relationships in terms of lust (*tamaa*). Although this does not apply to all men, and there were those who had always been faithful to a single partner or had serial monogamous relationships, multiple partnerships seem to be the norm rather than the exception. Only the odd respondent claimed to be faithful to his wife simply because he was not interested in other women.

Here we are not generalizing only from our interviews with 45 factory workers: this conclusion is also supported by the results of other research among fishermen (Pool, Washija and Maswe 1995) and school pupils (Nnko and Pool 1995).

In the discourse of the factory workers there was a tension between lust or desire on the one hand and anxiety about economic deprivation and, in particular, fear of disease on the other.

> I got married in 1988. Since then I've had no other partners.
>
> Why don't you have other partners?
>
> Because of the cost.
>
> Is that the only reason?
>
> And also if you have other partners there is the risk of diseases.
>
> TANESA has helped me to change. I still have desire. I plan to make a move but then I hesitate because of fear of being infected. Before these diseases you could have sex with anyone. I reformed since about 1991, when I got married. Now I only stick to my wife.

Those who have changed and now stick to one partner would like to be more promiscuous but can either no longer afford to or, more often, are afraid to. Although they all condemn adultery and pay lip service to the ideal of being faithful, they easily slip into a *macho* discourse of carefree lust and womanizing. Most of those who have changed have not done so because they are convinced that having a single partner is better. They have changed reluctantly, out of necessity and fear. Some avoid having to make this sacrifice by using a condom, but for those who do not trust condoms or who feel the pinch of recession there is no choice.

The tension between lust and risk is also related to the distinction between spouses, regular partners and casual partners. Basically regular partnerships involve a woman receiving regular financial support from a man in exchange for both sexual and domestic services. These relationships may last from several months to many years. Casual partnerships involve a more direct exchange of sex for material reward and are much shorter in duration, varying from single sexual encounters to affairs lasting several months. Although the exchange of money for sex is central in casual relationships they are not tantamount to prostitution. In practice these distinctions are often not clear and there is a continuum stretching from regular relationships through casual partnerships to prostitution.

For women the most important criterion in differentiating between regular and casual partners is the nature of material support. A regular partner is a man with whom you have sex regularly and who provides financial support when it is needed, that is, there is no direct exchange of money for sex. In casual relationships the exchange is more direct and women stress that they cannot rely on casual partners for support in case of illness or other emergencies (Mgalla and Pool 1995). For men the criteria are different. Although many of our male informants initially complained that all extramarital partners were the same because they were all after money, they did tend to make a distinction in terms of risk and control. Men have no control over casual partners, who may sleep around and then pass on diseases. Most men know that a healthy looking person can be HIV-positive and many know that a woman may have an STD about which the man may be unaware: one man said that he feared casual partners because they might carry 'the secret' (disease) without his realizing it. The only evidence men have to go on is the woman's behaviour: how promiscuous is she? Men have a better idea of what regular partners are up to and can estimate the risk. They talk of regular partners in terms of trust.

> With a regular partner you know she is there even if you don't visit her every day. A casual partner you just meet along the way and have sex with her. She moves everywhere and goes with everyone and you can easily get an STD if you have sex with that kind of woman. You cannot know whether she has the disease and afterwards she leaves you with the germs (*vidudu*).

> With a regular partner you know and you can trust each other. You can't trust a casual partner because you don't know her behaviour. She keeps changing partners. You can't know whether she has disease or not. She may give you AIDS or some other disease.

Of the 16 respondents in our study who have changed their sexual behaviour, ten now stick to a single partner. Why one partner rather than just a reduction in the number of partners, or a switch from many casual to few regular partners? At first sight it seems that one or two regular extramarital relationships would not pose any more threat of exposure to HIV infection than if the man was in a polygynous union. The main reason for preferring a single partner is that men expect their wives to be faithful, and although some wives are obviously not faithful (two of those interviewed admitted to having extramarital affairs) there are strong social sanctions against female marital infidelity. Although men would like their non-marital partners to be faithful, there is a consensus that this cannot be demanded, and they consider it quite normal that these women have other male partners in addition to themselves; although regular partners are expected to be more faithful than casual partners, if only because a man spends more time with a regular partner than he does with a casual one and so she has less opportunity to meet other men.

> How many partners do you have at present?
>
> None apart from my wife.
>
> How many did you have before?

> I had only one before I joined.
>
> What kind of partner was that?
>
> She was like a wife, because I had been with her for more than ten years. Last year I decided to leave her. I saw that people were dying and decided to remain with my wife only. TANESA helped by teaching us. They told us that 17% of the women in the factory have the virus, and 10% of the men. I realized it was dangerous...
>
> What's the difference between a casual and a regular partner?
>
> A casual partner is only for a short time, and she is only after money. A regular partner you know and trust because she has good conduct; you know she does not have other partners...
>
> Is it acceptable for married men to have outside partners?
>
> No.
>
> Why not?
>
> We have them, we do it secretly and we know it is a mistake, but we still continue. The mistake we make is that you can't trust the outside woman, because once you part you don't know what she is up to. She can go with other men and if she gets a disease then you can get it and pass it on to your wife at home.

Even though it is sometimes unclear whether a couple are 'really' married or not, for example when the husband has agreed to the brideprice but not yet actually paid it, the distinction between a wife and an 'outside partner' is quite clear: a wife is not permitted to have other sexual partners, whereas this is legitimate for a single woman, even if she is a regular partner of many years. Some wives do have extramarital affairs, of course, and husbands are aware of this, but in such cases a man has the power to demand an end to his wife's infidelities. If his authority is insufficient he can appeal to her family, to whom he has paid the brideprice. Involvement of the woman's father is generally sufficient to bring her back into line. The man who has not paid brideprice has no such sanction.

The major reason that the men gave for breaking with extramarital partners was their fear that other men would pass on diseases through these women (see also Mgalla and Pool 1995). The man cited above initially argues that his long-term mistress is 'like a wife' but he nonetheless broke with her because he was afraid of getting AIDS. Wives are a much safer bet, even if they are not always faithful. Some single respondents gave this as a reason for getting married. In the in-depth interviews five respondents reported getting married because of information about AIDS that they received from TANESA.

Condom use

Contrary to Caldwell's claim in a recent paper (Caldwell 1995), our data show that, at least for the men we studied, condoms are not the preferred mode of behaviour change. In the longitudinal study only 9.7 per cent of the men who claimed to have changed their behaviour reported using condoms, and in the in-depth interviews 27/45 of the respondents claimed that they had never used a condom in their lives. When these men decided to change their behaviour in response to AIDS they preferred a single partner to condoms. We have already discussed the preference for a single partner, but why are condoms not an option? Why should men who are used to having extramarital sex and multiple partners and who claim to have an almost insatiable sexual drive, be prepared to give all this up when they could continue their old ways protected from disease by a condom?

In addition to the religious motive suggested above there are several reasons. For one, many people in Tanzania do not trust condoms. The belief that they are impregnated with the HIV virus is widespread and has been stimulated by the media attention given to bogus American scientists who claim to have worked for the CIA when they developed the virus with the aim of depopulating Africa. The fact that most of the free condoms come from the United States is seen as supporting this. Perhaps this is one of the reasons why some people are prepared to pay for the commercial *Salama*-brand condoms rather than accept the free American condoms. The free condoms are clearly labelled as coming from the USA, whereas most people are unaware that *Salama* condoms are also funded by the USA. Many people also think that condoms have minute holes, purposely built in to let the virus through.

Another important reason for rejecting condoms is that they are associated with promiscuity and distrust. One man said that condoms were 'bad': you could not use them with your wife and carrying one was seen as a sign that you slept with prostitutes. Condom use within marriage for any other purpose than family planning is out of the question, and although condoms may be used at the start of what are defined as regular relationships, this soon becomes impossible as well, if only because the regular financial support that men provide is seen as incompatible with the transience and lack of responsibility implied by condom use. Regular relationships have a transactional component and condom use is seen as part of the exchange deal. Both men and women reason quite explicitly that the fact that the man provides regular and dependable financial support negates the need to use condoms. The women express this in terms of trust: a man who supports you like a husband must be trusted like a husband. However, they are often uneasy because they know that their 'trusted' partner is usually married to someone else and may have other partners beside. For the men the emphasis is more on payment: they enjoy sex less when using a condom and see their refusal to use a condom as being compensated by regular financial support. Men never see risk as something to which they expose their extramarital partners. Rather, they see risk as stemming from the fact that extramarital partners may have sex with other men who, like themselves, determine condom use or non-use. Men see dependable financial support as making it less necessary for the woman to have many other partners, thus making regular relationships safer and condom use unnecessary.

For many respondents the reasoning behind not using condoms was that they do not need them because they have changed their behaviour, and they did not need them before they changed their behaviour because there was no AIDS in those days.

Condom use is acceptable in casual relationships, and even though men may sometimes be unwilling to use them because of a hedonistic fatalism ('death is death' and 'death is just like sleep' are common expressions) or unable to use them because they are drunk, a few respondents nonetheless consistently reported using condoms with casual partners as protection against diseases. Four respondents reported using condoms regularly, mainly with casual partners, in order to protect themselves from disease. These men were younger than average (32.5 as opposed to 40 years old), married and very promiscuous.

One respondent said he had reduced the number of partners since being informed by TANESA (end of 1992), but he still had casual extramarital partners when his wife was away at teacher training college, though he claimed to use a condom.

> How many partners did you have previously?
>
> Innumerable.
>
> How many do you have at present?
>
> None.... But if your partner is away and you feel like doing it then you may do so, but using a condom.

Do you do that when your wife is away?

Yes, I do it when she is away at college.

How many partners did you have last year?

I can't remember.

And last month?

None, because my wife was home on leave.

And the month before?

With a condom.

How many?

About five...

Another respondent initially claimed to have changed by sticking to one partner. Later in the interview, in the context of a discussion about condoms, he contradicted himself:

Have you ever used a condom?

Yes.

What for?

To protect myself against diseases and for birth control.

Did you use a condom last year?

Yes, even right up to the present.

With whom?

My present partner/concubine, to prevent pregnancy.

Are there others with whom you use a condom?

Yes, when I have other partners I use a condom.

These other partners you just mentioned: how frequently do you have them?

Sometimes every couple of months, sometimes every week or two. Anytime.

How many partners have you had this year apart from your one regular partner?

About four.

What about recently?

I haven't had any during the last three weeks.

Do you use condoms with them?

Yes, because you can't know whether they have diseases.

So, in conclusion, there are more factors opposing condom use than supporting it. Sticking to your wife both is safe and absolves you of the necessity of using a condom. Only a few of the younger men who feel that they cannot go without sexual variety consistently use condoms with casual partners in order to protect themselves against diseases.

Conclusions

In this paper we have presented evidence of behaviour change in a group of urban factory workers. We have concluded that somewhat less than half of our respondents have changed their sexual behaviour during the last four years. This evidence, and our interpretations of it, are open to critical questioning, much of which will focus on validity and some of which will be justified. We do not claim to have objective proof of the exact extent and nature of behaviour change, and indeed, we do not think this is possible in the case of sexual behaviour. But we do claim that there has been a substantial reduction in the number of sexual partners among these workers.

Simply asking respondents whether they have changed their behaviour or reduced the number of partners is insufficient, and a combination of quantitative and qualitative methods seems to be the best option. The combination of a longitudinal study and in-depth interviews (especially when the interview transcripts are subjected to discourse analysis) were basically sufficient for validating behaviour change, although the other factors, interviewing the spouse, serological and clinical data also contributed to supporting or refuting respondents' statements. In addition, the in-depth interviews provided a wealth of data on the reasons for change or lack of it.

Fear of AIDS was the main motivating factor for change, followed by economic hardship: because AIDS is incurable and because sexual relationships have a substantial transactional component, workers see themselves as paying the price of promiscuity with their lives as well as their dwindling financial resources. The fear of AIDS has been instilled by AIDS campaigns generally and by the activities of the TANESA clinic in particular.

Respondents preferred partner reduction, and in particular sticking to a single partner, to condom use. Although condoms were an acceptable option for a few younger men who could not, or were unwilling to, reduce the number of sexual partners, they were not popular, mainly because of fears that they were impregnated with HIV and because of their association with promiscuous behaviour. The preference for sticking to a single partner was also related to a culturally specific classification of different kinds of sexual partner and attitudes to marriage and extramarital sex. Men consider their wives to be the safest sexual partners because extramarital sexual relationships are prohibited for married women whereas society does not so much frown on a single woman having multiple sexual partners, even if she has a long-term relationship with one man.

The activities of the clinic, the deep-seated fear of AIDS and the preference for sticking to a single partner were frequently expressed in a religious idiom, suggesting resonance with the popular Pentecostalism of proselytizing denominations.

Although we have presented evidence of substantial change, this change was reluctant. Those who have reduced the number of partners or stuck to one partner would like to be more promiscuous but can either no longer afford to or, more often, are afraid to. Those who use condoms also do so reluctantly. This seems to imply that if the present constraints were to be removed by improved economic position, or discovery of a cure for AIDS or vaccine against HIV, these men would be likely to revert to their previous behaviour.

References

Caldwell, J.C. 1995. Understanding the AIDS epidemic and reacting sensibly to it. *Social Science and Medicine* 41,3:299-302.

Catania, J.A., H. Turner, R.C. Pierce, E. Golden, C. Stocking, D. Binson and K. Mast. 1993. Response bias in surveys of AIDS-related sexual behavior. Pp. 133-162 in *Methodological Issues in AIDS Behavioral Research*, ed. D.G. Ostrow and R.C. Kessler. London: Plenum Press.

Cleland, C. 1995. Risk perception and behaviour change. Pp. 157-192 in *Sexual Behaviour and AIDS in the Developing World,* ed. J. Cleland and B. Ferry. London: Taylor and Francis.

Gumperz, J.J. 1983. *Discourse Strategies*. Cambridge: Cambridge University Press.

Mgalla, Z. and R. Pool. 1995. Sexual relationships and risk perception among female bar workers in Magu, Tanzania. Paper presented to the Ninth International Conference on AIDS and STDs in Africa, Kampala, 10-14 December.

Mishler, E.G. 1984. *The Discourse of Medicine. Dialectics of Medical Interviews.* Norwood NJ: Ablex Publishing Corporation.

Ng'weshemi, J., J.T. Boerma, R. Pool, et al. forthcoming. Changes in male sexual behaviour in response to the AIDS epidemic: evidence from a cohort study in urban Tanzania. *AIDS*.

Nnko, S. and R. Pool. 1995. Love, lust, deceit and money. Tanzanian school pupils and the discourse of sex. Paper presented to the Ninth International Conference on AIDS and STDs in Africa, Kampala, 10-14 December.

Pool, R. 1994. *Dialogue and the Interpretation of Illness. Conversations in a Cameroon Village.* Oxford: Berg Publishers.

Pool, R., J.T. Boerma, M. Maswe and S. Nnko. 1995. The use of multiple methods to assess changes in sexual behaviour. Unpublished paper.

Pool, R., N.R. Washija and M. Maswe. 1995. Promiscuity, acquiescence and exchange. Sexual relationships in the fishing villages of Magu district, Tanzania. Paper presented to the Ninth International Conference on AIDS and STDs in Africa, Kampala, 10-14 December.

Weinstein, K.L., S. Ngallaba, A.R. Cross and F.M. Mburu. 1994. *Tanzania Knowledge, Attitudes and Practices Survey*. Calverton MD: Macro International Inc. and Dar es Salaam: Bureau of Statistics, Planning Commission.

Forum: Health Transition Review 6, 1996, 223-224

Reasons for the decline in mortality in Sri Lanka immediately after the Second World War: a re-examination of the evidence, Appendix

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The appendix to which C.M. Langford's article made reference in the previous issue of *Health Transition Review* (6,1:3-23) is given here:

Appendix

Crude death rates (CDRs) per 1000 population and infant mortality rates (IMRs) per 1000 live births for Sri Lanka and the sub-zones of the wet and the dry zone of Sri Lanka; and maternal death rates (MDRs) per 1000 live births for Sri Lanka: 1900-1954

				Wet Zone						Dry Zone			
	Sri Lanka			I		II		III		Jaffna		Rest	
	CDR	IMR	MDR	CDR	IMR	CDR	IMR	CDR	IMR	CDR	IMR	CDR	IMR
1900	-	178	20.1	-	135	-	142	-	186	-	164	-	223
1901	27.7	170	18.2	26.6	135	22.6	135	29.8	182	23.7	162	32.1	204
1902	27.6	173	18.7	25.1	129	22.8	135	28.1	181	26.1	180	32.9	215
1903	26.2	164	17.5	24.3	127	22.0	132	25.0	171	33.3	202	29.7	190
1904	25.3	175	16.9	21.8	125	20.9	140	23.5	182	36.1	240	29.1	198
1905	28.7	176	17.5	23.7	116	24.0	138	26.7	172	24.2	173	38.1	238
1906	35.6	198	20.0	27.5	139	30.4	161	37.6	199	27.6	173	44.7	261
1907	30.8	186	17.8	29.2	130	24.9	145	29.2	183	30.8	220	38.0	239
1908	30.0	183	17.9	26.2	131	25.2	146	31.6	193	26.2	172	35.7	228
1909	30.8	202	19.0	26.6	140	24.7	159	33.1	208	25.2	181	38.0	266
1910	27.2	176	18.1	24.4	129	22.8	145	30.6	196	24.2	179	30.6	205
1911	34.9	218	23.3	25.9	130	30.3	184	43.9	260	23.1	163	39.3	268
1912	32.4	215	23.3	26.7	141	26.3	179	33.2	216	33.3	217	39.7	287
1913	28.7	189	20.3	27.2	149	22.3	149	30.4	206	30.3	191	33.3	227
1914	32.4	213	24.9	27.1	139	24.6	151	32.6	211	35.7	233	41.0	307
1915	25.8	171	23.3	22.7	128	21.1	136	25.0	172	32.7	221	30.4	212
1916	28.0	184	23.0	24.6	131	23.2	146	30.1	200	28.0	197	32.0	220
1917	26.1	174	20.4	25.3	136	22.1	144	27.6	182	26.5	202	28.9	202
1918	34.1	188	21.9	29.4	146	25.5	158	39.4	197	34.6	204	39.7	216
1919	38.1	223	22.7	29.0	142	29.5	174	35.4	202	29.1	214	54.9	328
1920	29.8	182	17.7	28.1	140	25.6	153	29.8	185	36.7	213	32.7	210
1921	31.3	192	21.0	25.0	119	25.1	150	30.2	184	32.9	213	40.4	260
1922	27.7	188	20.3	21.8	118	23.9	157	26.5	173	27.9	206	35.1	259
1923	30.5	212	21.6	23.8	136	26.2	173	28.2	198	27.3	205	40.5	298
1924	26.0	186	19.1	21.5	133	21.1	152	26.4	195	26.0	176	32.4	232
1925	24.4	172	18.5	21.2	135	20.7	141	24.2	174	26.2	184	29.2	205
1926	25.5	174	19.1	21.0	122	20.4	133	24.3	167	27.9	198	33.1	232
1927	22.7	160	17.5	19.8	123	18.9	128	23.4	167	24.6	167	26.7	192
				Wet Zone						Dry Zone			
	Sri Lanka			I		II		III		Jaffna		Rest	
	CDR	IMR	MDR	CDR	IMR	CDR	IMR	CDR	IMR	CDR	IMR	CDR	IMR
1928	26.2	177	19.2	20.7	118	21.4	137	26.3	175	23.2	169	34.1	240
1929	26.3	187	20.4	22.4	127	21.9	144	23.5	173	30.7	224	34.0	255
1930	25.6	175	21.4	22.3	122	22.3	143	22.9	163	27.3	188	32.5	235

1931	22.1	158	20.8	19.2	119	19.6	131	20.4	153	24.5	175	27.1	196
1932	20.5	162	19.2	16.4	109	17.4	132	18.2	156	25.2	190	26.6	205
1933	21.0	157	18.6	18.1	116	19.4	139	18.2	149	26.4	190	25.2	190
1934	22.9	173	20.1	19.8	131	20.6	150	21.3	167	24.0	186	27.9	206
1935	36.3	263	26.8	19.6	122	25.8	179	44.7	299	23.3	182	49.8	381
1936	21.5	166	21.6	16.5	113	18.3	131	18.6	158	24.0	179	29.3	221
1937	21.4	158	19.9	18.4	122	19.0	138	18.2	147	22.6	171	27.9	197
1938	20.7	161	20.1	18.0	121	18.5	137	17.5	149	22.2	166	26.9	209
1939	21.5	166	18.2	16.5	111	19.7	148	19.9	161	20.8	162	27.3	208
1940	20.2	149	16.1	17.2	106	19.0	136	17.8	136	20.6	161	25.0	188
1941	18.3	129	15.3	17.4	101	16.4	121	15.2	116	22.1	157	22.7	157
1942	17.9	120	14.4	16.7	99	15.7	105	15.2	113	20.8	120	22.5	148
1943	20.6	132	13.3	16.9	91	17.8	111	17.6	123	24.5	140	27.1	177
1944	20.8	135	13.7	17.7	99	19.4	122	18.4	126	21.5	125	25.7	174
1945	21.8	140	16.5	17.7	98	19.7	122	20.2	134	22.2	127	27.4	179
1946	20.4	141	15.5	16.2	97	18.1	109	18.1	132	17.1	106	27.7	214
1947	14.4	101	10.6	13.6	98	13.7	92	13.2	95	15.5	91	16.2	118
1948	13.3	92	8.3	12.6	81	13.2	91	13.2	93	12.7	77	13.9	100
1949	12.7	87	6.5	12.7	77	13.6	89	12.4	89	13.0	73	12.0	90
1950	12.8	82	8.7	12.6	72	13.6	88	13.1	86	12.8	67	11.8	80
1951	13.1	82	5.8	13.4	79	13.9	85	13.7	88	12.3	72	11.7	77
1952	12.1	78	5.8	11.4	70	12.0	74	12.4	86	12.7	72	12.2	79
1953	11.0	71	4.9	9.8	57	10.7	63	11.6	83	11.7	62	11.1	75
1954	-	72	4.6	-	60	-	65	-	84	-	66	-	72

Forum: Health Transition Review 6, 1996, 95-99

The International Conference on Population and Development, Cairo, 1994. Is its *Plan of Action* important, desirable and feasible?

A Postscript to Our Forum of Volume 6(1):71-122

We received two further contributions to the debate featured in the Forum in our last issue. The papers speak for themselves and I will not attempt any further synthesis, except to note that each brings up important issues not fully covered in the previous Forum.

John C. Caldwell

ICPD: What about men's rights and women's responsibilities?

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> The ordinary everyday feminist is content to suggest that men and women should be equals, but the thoroughgoing feminist holds that women should have the position hitherto enjoyed by men and men should have the position hitherto endured by women. (Russell 1931)

The general tone of the ICPD document is very much that of Russell's thoroughgoing feminist even if its vocabulary makes some cursory concessions to a more ordinary feminism. Indeed, this latter factor, the plethora of concessions, is one of the major problems with the document. It plays safe by anticipating every possible criticism through the expedient of saying a little bit about everything that anyone might consider important. One must therefore judge it by its tone and not by its specific recommendations. And, while the document does often use the language of gender equality and never once explicitly recommends a complete reversal of the *status quo*, its spirit is so decisively in favour of the latter that it is being read by feminists as well as by the establishment as the landmark in the otherwise agonizingly slow progress of the women's movement.

Perhaps this heavy emphasis on women's issues in an official document is warranted for national policies to move even a little in the direction of reducing discrimination against women within and outside the household and there really is no fear that the *status quo* will ever be reversed. But the one-sided rhetoric, besides being possibly negative for strategic reasons, also has a few crucial aspects which make it particularly bad for gender equality.

The thoroughgoing feminist stand of the ICPD is most evident in the overwhelming reference throughout the document to women's rights and men's responsibilities. Whenever men are mentioned separately, as they are in a whole section in Chapter 4 for example, it is always in the context of the responsibilities that they should be more encouraged to assume. The concept of reproductive health itself starts off being defined as a human or individual right, but soon confines itself in longer discussions to the rights and needs of women. And from this near-exclusive demand for female reproductive health, the document goes on to connect every aspect of the population and development question to gender issues. Page 86,

for example, which is part of a chapter on the need for more research, has the word 'women' five times.

But what about men's rights and women's responsibilities? By representing tensions as being almost entirely gender-based, the ICPD served an important symbolic function but failed to address the larger socio-economic and cultural issues important to the population and development debate. It is no use pointing to the document's obligatory references to poverty, environmental degradation, North-South relations, and such. These are seen by readers of the document as mere sideshows to the main event. More starkly, even though *human* rights are the major issue in the deliberations, men and boys get short shrift in the conference document. Thus, the gender difference in child mortality is seen as much more crucial than the high level of child mortality, male and female, in poor societies across the world.

This overriding concern with women as a central category means that no national population and development policy is going to feel worried about international opprobrium when it fails to pay even lip service to men's issues. In fact the new draft population policy of the government of India went as far as to recommend that a new Commission on Population should present annual reports to parliament and state legislatures on Population, Gender Equality and Quality of Life Improvement.

This new bias is grossly inegalitarian. Poor, illiterate, unskilled men may exploit their women at home, but at the hands of the state, the employer, the family planning program (one has only to recall India's sterilization program during the Emergency) and society at large, their situation can be described as advantageous only in very relative terms. Indeed, gender disparities are the smallest at these lower socio-economic levels as many Third World studies indicate, and the neglect of male reproductive health, male empowerment and male autonomy can only make things worse for them in a way that even their women are not likely to laud.

The 'errant' male who gives his wife or girlfriend or commercial sex partner an STD or even HIV infection must be infected himself to be able to pass on the infection. And his infection merits identification and treatment and prevention as much as his partner's, not only because this will reduce the chances of his partner's infection, but also because his own reproductive health should matter in a truly gender-blind policy. Thus the economic, cultural and public health constraints which lead to his practice of unsafe sex need a sympathetic analysis even if it is far easier today to focus on the patriarchy that allows him greater sexual freedom. That is, there is a case for comparing men with men and dealing with intra-male differentials (whether by class, caste, region or occupation) in the same way that male-female comparisons call for greater attention to female disadvantages.

The psychological strains of impotence and infertility are similarly great among men, even when they have access to the social mores and authority to acquit themselves and heap all the blame on barren wives. In any case these social mores cannot deal with the barrenness of subsequent wives and cannot deal with the local derision that sexually or reproductively inadequate (the latter is usually taken to imply the former) men continue to face and that often leads to their abuse of women in the first place. The sexually able, fertile male is much less likely to exploit his male prerogative to abandon or ill-treat his wife, just as he is less likely to suffer general insecurity in other spheres of life.

Quite apart from ethical considerations, there are too many operational difficulties in the 'men's responsibilities and women's rights' framework. How can one make men more responsible for their own fertility if one denies them rights in reproductive decision-making, which is what ICPD's female autonomy and empowerment model in effect implies? For the moment at least, pregnancy requires the collaboration of both sexes and the fertility outcome is common to both partners. Each partner acting on his or her own in the matter of reproductive choice can only heighten the conflict and decrease the co-operation inherent in

the 'co-operative-conflict' situation that characterizes interpersonal relations to the detriment of all — men, women and children.

The language of contraceptive methods is similarly confusingly antagonistic. When male methods are called for, it is so that men can take greater reponsibility for family planning instead of leaving it all to women. In the same breath, female-controlled methods are called for so that women have the freedom and the means to exercise reproductive choice and autonomy. What then is policy to do? Whom should it encourage more to take up contraception: men or women?

In any case, field data indicate that reproductive decision-making is more of a joint enterprise than the ICPD tone implies and there is little evidence that high fertility(or, for that matter, the fertility decline that several parts of the world are currently experiencing) is imposed on the unwilling woman by an overpowering male. First of all, other household members, often female, often override the views of the actual reproductive unit. Secondly, the conditions which increase the demand for children among men (such as economic insecurity, social insecurity, crisis insecurity, few alternatives to childbearing) usually go hand in hand with parallel conditions that increase the demand for children among women (such as low economic worth, low crisis security, few alternatives to childbearing); so that there is usually little theoretical or empirical justification for male-female differentials in desired family size.

As for the concept of female responsibility, the ICPD statements do not go far enough. If the conference document's censure of male irresponsibility has any basis (and I think it does), then it would appear that rights and responsibilities do not necessarily go together and that responsibility and accountability are not very much coveted attributes. In that case, there is no reason to expect that increased female autonomy and empowerment will automatically lead to increased female responsibility and the document should have made separate mention of policies designed to encourage the latter.

The cause of gender equality and human rights is better served by an idology that acknowledges that many men and boys all over the world continue to face acute disadvantages compared to better-off males, disadvantages that may often be greater than the disparities between men and women within a group, and that these disadvantaged men deserve to be included in the ICPD kind of discourse on reproductive health and reproductive rights.

Russell, Bertrand. 1978 [1931]. Dangers of feminism. In *Mortals and Others: Bertrand Russell's American Essays 1931-1935*, ed. H. Ruja. London: George Allen and Unwin.

ICDP *Plan of Action*: Its ideological effects

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The forum opened up a number of essential debates in the aftermath of the ICPD. First, a number of authors commented on the ideological nature of the ICPD Programme of Action, arguing that while it marks a step forward in putting women's rights and needs on the global agenda, in doing so it fails to assess, in realistic terms, the resources available for health, reproductive health, and family planning in particular.

The ideological effect of the ICPD cannot be underplayed. In the past, the overwhelming acceptance of population growth as the primary cause of poverty has allowed governments, aided and abetted by the international community, to frame their understanding of health priorities in population terms. Placing on the agenda questions of development, inequities in North-South economic relationships, and inequities in production and consumption patterns between and within countries, lays bare the underlying causes of resource shortages. In addition, placing the question of choice on the agenda, and asserting the powerful linkages on a health level between sexually transmitted diseases, family planning, maternal health, and information services, has issued a challenge. The scandal that family planning services are usually given higher priority than other services which are crucial to people's health and survival, ranging from water supply to prevention of AIDS, is highlighted. This priority is not based on an assessment of women's and men's perceptions of their needs and priorities, but on the assessment of the international community, through its funding mandates, and by and large undemocratic governments which accept this process. This challenge to the conventional wisdoms in the population field asks, were there a zero-budgeting exercise, what could be achieved? It challenges practitioners in the population field not to take the easy route, by focusing exclusively on family planning.

It cannot be denied that this challenge comes at a time of decreasing resources in the population field. But the role of an international conference of this kind is to create consensus on an international vision; something to strive for. In this, the conference was highly successful, for it put population pressures in the context of broader questions of equity and ethics, and afforded a critique of existing family planning programs, from the perspective of women, who have been at the receiving end of most of these programs, without having played a decision-making role in relation to their conceptualization, implementation or monitoring.

There is no doubt that the practical implications of the goal to shift from family planning to integrated reproductive health services, within primary health care, will be taken up more or less by different nations. The different forms of existing services, and the logistical and financial implications, are different in different countries. Those countries which are already expending resources on primary health care, and various components of reproductive health, will be in a better position to take on the challenges. If all the ICPD Programme does is cause funding agencies and governments to reflect on their options, this will have been a step forward. If it gives women's and community groups confidence to challenge unacceptable practices, this too will be significant. There are many examples where family planning programs could be improved, without any or substantial cost implications. In many cases, a useful start would be such simple interventions as an increased range of contraceptives, clear protocols to ensure that appropriate contraceptives are offered, training of health workers or

lay providers in listening skills, and clear protocols to identify sexually transmitted diseases. In the case of family planning providers, it can only be understood as outrageous that they are not in a position to advise pregnant women to go for an antenatal check-up or, better, to provide basic antenatal support in order to identify women at risk who require assistance in delivery. That in many parts of the world, delivery services are not available, does not mean that this essential goal should not be tabled, and all efforts directed towards achieving it. Already the challenges offered by the ICPD Programme have supported researchers and NGOs from such countries as India, Peru and South Africa, in working with governments to develop broader and better services. The perspective of the ICPD has facilitated the involvement of donor agencies in these processes.

Another question arising from the women-centred approach of the ICPD is the role of men. It is striking how, when for the first time in history, a population document manages to reflect the values and aspirations of women, who have been the targets of such documents, there is a backlash towards asserting men's centrality in the area of reproductive health. The fact, however, remains, that it is women's health which is most directly at risk from lack of access to contraception and maternal health services, and they are even more vulnerable in relation to HIV. It is also women who are lowest in the economic ranks, with least access to employment and other alternatives to childbearing; and women who are most vulnerable to violence and other controls which limit their ability to make or implement their own reproductive choices. For all these reasons, it is cost-efficient to focus what limited resources there are on meeting women's needs. Doing so also recognizes the unequal power relations between men and women, and seeks to bolster the power of women. Those in power, do not, after all, make a habit of giving it away. In no way does the ICPD program suggest ignoring men's needs, but these are not given equal priority.

The location of population pressure as one of many problems facing society, and the unravelling of the many and complex causes of such pressure, mark the ICPD program as a positive step forward in international thinking about global sustainability. That it cannot, of itself, alter the international order, does not negate its value in placing both equity, and women's concerns, centrally on the agenda.

Book reviews: Health Transition Review 6, 1996, 231-240

Book reviews

Girls' Schooling, Women's Autonomy and Fertility Change in South Asia. Edited by Roger Jeffrey and Alaka M. Basu. New Delhi: Sage Publications, 1996. 339pp. Hardback. Rs 225.

This absorbing collection of eleven papers, most of them originally presented at a workshop in New Delhi in 1993, attempts to explore the causal pathways (if any) behind the statistical relationship between schooling and fertility. In doing so, the book raises far more questions than it answers, which is fine; the answers themselves are often more problematic.

It has long been recognized that there is a powerful relationship between schooling and fertility and that women's autonomy is somehow involved. John Cleland and Shireen Jejeebhoy here present the census and demographic survey evidence for South Asian countries, and point out that the relationship is highly context-specific, varying by region, level of development and time as well as culture. They also suggest that where attitudes towards women make for indifference about their education, mass schooling policies are not likely to succeed in isolation. In a further paper Cleland, Nashid Kamal and Andrew Sloggett argue that the Bangladesh Fertility Survey has shown that exposure to formal schooling does give women greater independence and a greater role in family decisions, and that all this has an influence on fertility behaviour. They do however warn (p. 217) that underlying causality may be very different and that the more autonomous and 'educated' women may simply be in the vanguard of wider changes.

Disentangling the three key concepts in the book's title provides a major challenge in itself. The word 'schooling', as the editors point out in their stimulating introduction, covers a number of quite different pedagogic systems and time-frames. Moreover, schooling is not synonymous with 'education'; indeed the meanings of the two words pull in different directions. Alaka Basu's background paper which further expands the conceptual framework of the book expands on the schooling-education ambiguities, but adds explicitly (p. 49) '... in this paper I have been unable to always avoid using the two terms ... interchangeably'. Most of the other authors have also used the terms interchangeably, and without similar wariness.

Both Basu and Jeffrey also point out that different effects in 'fertility change' are highlighted by the use of different indicators. Completed family size was here the most commonly used variable, but some contributors chose children ever born, others desired family size and the remainder couple protection rates. Incidentally, even those variables commonly used to control for socio-economic conditions may be less helpful than they seem: Patricia and Roger Jeffrey (p. 153) and Sajeda Amin (p. 194) find that individual families often select certain daughters for education, while the rest, for various reasons, remain at home.

By far the greatest challenge, however, comes with definitions of and indicators for, women's autonomy. Dyson and Moore's (1983:45) construct was a popular starting point, but its inclusiveness offers almost endless scope for individual interpretations. Nevertheless, almost all the authors seem to have a Platonic picture of autonomy, as some sort of absolute independence, measurable by universal (conventionally feminist) standards.

The indicators which were chosen by the various authors to elicit degrees of autonomy or to establish mechanisms through which schooling and autonomy influence fertility frequently reflect this idealist approach. Questions about women's employment tend to assume that opportunities to do other than manual work and earn income actually exist, although evidence from several studies including those of Amin (p. 200) in two northern Bangladesh villages, and Leela Visaria (p. 246) using district-level data from surveys in Gujarat and Kerala shows that this was not always the case.

Where work is available, family poverty may be such that 'there is very little left to control after meeting the basic needs of existence in poor households' (Visaria, p. 240). In such circumstances, detailed questions about who decides on the use of resources are probably a waste of time. So too are questions about whether women retain or get any funds for personal use, which presuppose some sort of surplus disposable income.

Opportunities for schooling — especially for girls — in rural areas may also be limited, though seldom as deplorable as in Pakistan, which Zeba Sathar (p. 1330) describes using both survey data and rural fieldwork. Where health facilities are absent, or women may not travel to those which exist, neither schooling nor gains in autonomy will show a relationship to contraceptive use.

Faced with confusing, or even contradictory, results in their studies, most of the authors concluded that future investigations needed to be more flexible and culture-specific. Thus, for example, Rajan, Ramanathan and Mishra's assessment of a recent Kerala fertility survey found (pp. 275-276) conventional measures unsuitable for the assessment of autonomy among sections of the population with matriarchal traditions.

Nevertheless, the overall vision of 'autonomy' leaves most authors curiously unsympathetic to subtle degrees of change. Karuna Chanana's study of Punjabi women, refugees from Partition in New Delhi, and their daughters shows considerable differences between the generations in many aspects of their lives, including levels (and types) of schooling, in husband-wife communication and in decision-making. yet she concludes (p. 132) that 'the idological underpinnings of the seemingly altered family structure have barely been touched. The fact that women fail to perceive this ideological frame as a restricting straightjacket ensures that there is no questioning...' In other words, if women are still subordinate, any gains are irrelevant.

Even a study as careful as Patricia and Roger Jeffrey's examination of Jat and Sheikh communities in north India, reporting (pp. 157-161) both Jat and Sheikh women's exclusion from marriage consultation, disregards the almost universal use by the women themselves of phrases like 'in those days...', 'Previously ...'. Yet surely such language suggests that changes are taking place, or, at the very least, are now envisaged as possible.

Similarly, the Jeffreys' work (p. 152) and that of Carol Vlassoff (p. 230) among others indicate that women believe their schooling helps with child rearing; it enables them to tutor their children and to share their knowledge and experience. The implications of such a role, both for the mother's sense of self-worth or her position in the family, and in terms of kinds and amount of attention devoted to individual children, remain unexplored. Several authors record that schooling leads to improved husband-wife relationships, but here too the effects on family dynamics or on the woman's confidence and ability to raise issues she believes important are not examined.

The issue of what Srinivas (1962) called 'Sanskritization', the adoption by the upwardly-mobile of the values and behaviour of higher castes or classes, is raised (though somewhat superficially) in a number of papers. With increasing schooling enabling them to marry into higher-income families, in much of South Asia it appears that women become more

circumscribed: more subject to purdah, less likely to have income-producing jobs, and so on, than their poorer and illiterate sisters.

How much real autonomy those less advantaged sisters have is, of course, debateable; even if they can get about more easily and earn what passes for a living. Bruce Caldwell's thoughtful contribution on Sri Lanka argues that motivations for fertility in that country's decline have differed considerably between different groups. Women of the tea estate population had little autonomy and less education but experienced early and dramatic fertility declines. The value of their labour meant that their parents tried to postpone their marriage and that, once married, they spent as little time as possible out of the workforce. By contrast, reductions in fertility amongst other Sri Lankan women seem to have resulted from wide social change (including education), and especially from alterations in the roles and functions of the individual and family within society.

There is, quite clearly, a great deal more work to be done before we begin to unravel the connections between girls' schooling, women's autonomy and fertility change, even at the micro-level. At this point it seems unlikely that the specific pathways identified in particular societies will lead to a single over-arching theoretical model: given the limitations of existing theory even on the single issue of demographic transition, perhaps that is not surprising. All the same, the contributors to this collection have helped to move the debate along, and none more so than the editors with their wide-ranging introductory papers. Readers will, one hopes, be unlikely to tolerate in future multivariate analyses masquerading as theses which triumphantly demonstrate 'education' as the simple key variable in fertility control.

References

Dyson, Tim and Mick Moore. 1983. On kinship structure, female autonomy and demographic behaviour in India. *Population and Development Review* 9,1:35-50.

Srinivas, Mysore N. 1962. *Caste in India and Other Essays*. Bombay: Asia Publishing House.

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Human Ecology and Health: Adaptation to a Changing World. 1996. Maj-Lis FollŽr and Lars O. Hansson, editors. Department of Interdisciplinary Studies of the Human Condition, Section of Human Ecology, Gšteberg University. Paperback, 229 pp. US$20.

This edited collection on ecology and health grew out of a collaboration between human ecologists at a Swedish university, Goteberg University, and the National School of Public Health/Fiocruz in Rio de Janeiro, Brazil. Primarily developed as a reader for university students, it will also be of interest to researchers and health professionals.

The introductory chapter stakes out the multidisciplinary territory of human ecology and health: that space where environmental health, public health (including epidemiology), medical anthropology, medical sociology, and medical geography overlap. It probably does not attempt enough of a historical and critical review to be really helpful to students. Does it make sense to speak of a discipline composed in turn of several interdisciplinary fields? What can the concept of discipline mean under these circumstances, especially across international boundaries? The introduction does successfully introduce the papers to follow and it has a useful bibliography.

The ten papers were invited and written especially for this volume; nevertheless, they are quite dissimilar in breadth and purpose, ranging from reports of original research to broad reviews. At the broad end of the spectrum are the review by Lindgren on emerging infectious diseases and the closing paper on systems theory by GŸnther.

More interesting to most readers will be the reports on field research that combine an ecological approach to health with a heretofore unusual degree of attention to change in ecosystems. There are approximately equal numbers of biomedical scientists and ethnographers among the authors, but this division in their disciplinary origins is not prominent in the presentations, which share a biocultural perspective.

All but one of the papers are by Americanists, the only exception being Bernis's study contrasting reproductive patterns in Morocco and Spain. The papers by Freeman and McElroy on the Inuit partly overlap in ways that make it difficult to see why both were included. Freeman's main interest is the persistence of traditional foods; McElroy's, in all the health aspects of modernization, including dietary change. Freeman covers the Arctic from Greenland to Alaska; McElroy narrows her focus to the Eastern Arctic but is more systematic in looking at the history of contact.

Moving south to the Yucatan Peninsula of Mexico, we learn that the development of tourism at Cancun has brought wage labour to Mayan communities. Daltabuit's study of the community of Yalcoba indicates that transformation from subsistence agriculture to wage labour has not brought improvement in child nutrition or an epidemiological transition; high morbidity has the same causes as fifty years ago: infectious and parasitic diseases.

For the university teacher, the cluster of three papers from Amazonia afford an ideal set for comparison in classroom discussion and student papers. FollŽr and Garrett show how the Shipibo-Conibo responded to the 1991 cholera epidemic in Peru: a new disease elicited both traditional ethnomedical responses and acceptance of new biomedical explanations and therapies. Local primary health care workers were key figures bridging the gap. Boischio and Henshel explore a similarly dramatic health threat to the indigenous population along the Madeira River in Brazil: exposure to methyl mercury by eating fish from waters polluted through goldmining. The ethnoscientific classification of fish and adherence to food taboos influence the intake of mercury. Finally, Santos, Flowers, and their colleagues follow change in subsistence and demography from 1947 to 1990 among the Xav‡nte. The changes were neither simple nor unidirectional; for example, the amount of wild food collected increased at the same time that purchased food increased. This complexity emphasizes the need for longitudinal studies of human ecology: a central theme of the whole volume.

This book fills a niche as a supplementary reader for courses in medical anthropology and public health. Such case materials for teaching are needed badly, and these are particularly current. Two limitations of the book may hinder its use: one is the Americanist bias, the other is the uneven copy editing. Those of us who attempt to teach writing along with our subject matter will find our efforts undermined by some poor models for composition here, though most of the papers are well written and the book is attractively produced.

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Come Over and Help Us: A Doctor in Africa. By Leader Stirling. Dar es Salaam: AMREF Tanzania. 1995. 209 pp. Paperback. $10.

This new edition of the autobiography of Leader Stirling, the remarkable missionary doctor who became Minister of Health in independent Tanzania, will be of interest to Tanzanophiles and medical historians. Those prepared to search through the book will find much fascinating detail of Dr. Stirling's two careers, first as missionary doctor and then as politician. Born in Britain in 1906, he went to the then Tanganyika in 1935 and worked single-handed as a doctor for 24 years in remote areas in the south. Up to 1975, he continued practising in rural areas. His political career began in 1958, when he entered the pre-independence parliament as a representative of TANU, the nationalist movement. When Tanzania became independent in 1961, he took citizenship and remained in parliament, eventually becoming Minister of Health from 1975 to 1980.

Among Dr. Stirling's many achievements was the improved integration of church and government hospitals into a more unified health service. He was also much involved in training, first in pioneering education of basic-level health workers, and later developing an upgrading system. The national anti- tuberculous and leprosy service was developed through his efforts. In reading this book, one realizes how much mainstream health practice owes to the Tanzanian experience.

Dr. Stirling also documents the neglect of Southern Tanganyika by the British colonial government that pushed him into supporting the nationalist cause. It is a testament to the non-racism of that nationalism that he could be appointed health minister. Ironically, he had first obtained his parliamentary seat because of the British insistence on white representation.

One problem, possibly a virtue, with the book is that the author's modesty prevents us from gaining much insight into his character. His affection, however, for his fellow health workers and his devotion to his patients shine through, as does his strong Christian faith. But how did he cope as a single-handed doctor for 24 years and then emerge with the political skills to be a successful politician? His story cries out for a professional biographer. Likewise, many of the health policy issues would benefit from a more detailed and analytical treatment. One can only hope that historians have interviewed Dr. Stirling in depth.

As Minister of Health, he attended the Alma Ata conference on Primary Health Care (PHC). Coming from a country that had been practising it for years, he found it hard to accept the hullabaloo surrounding the adoption of the PHC philosophy. He laments the decrying of hospitals and doctors that advocates of the PHC philosophy sometimes indulged in. Of course, he was right. In the next decade, district health systems based on district hospitals were to become the new fashion.

What would Dr. Stirling think of the constantly changing fashions in international health policy in the past twenty years and the current fashion for health sector reform? Some answer comes in the Introduction by Julius Nyerere, first written to accompany the 1976 edition, and supplemented in 1995. The 1976 Intoduction is full of optimism and rightly points out the enormous advances made in the Tanzanian health system. The 1995 supplement is sobering; Tanzania's health services have deteriorated under the pressures of economic structural adjustment, increased poverty, and a reversal of the emphasis on Health for All. The result of the new fashions for cost- efficiency and cost-sharing is that the poorest can no longer afford even minimum health care.

Together, the words of these two great men — one a builder of health services, the other a builder of his country — testify to the optimism in Africa in the 1960s and 1970s. It is salutary to read them, as in the 1980s and 1990s there has been a tendency to rewrite the history of that period. We cannot turn the clock back, but the values of selfless service expressed in this book and the assumption that all have a right to health are surely still valid.

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AIDS and Society. By James Monroe Smith. Upper Saddle River NJ: Prentice Hall. 1996. Pp. 370+xiv. Paperback.

This impressive new book is broad, though US-based, intellectually subjective, and carefully researched: a sterling introduction to myriad topics. Smith was trained as a scientist and then lawyer, is an AIDS activist, and gay and pro-feminist, so the book is multidisciplinary in scope and bibliography, if not fully interdisciplinary. Smith has 'attempted to tell the truth about HIV/AIDS issues, albeit with some passion and with a degree of subjectivity' (p. xi), the truth being about both 'our consistent failure to understand the intransigence of human nature' (p. xi) and our too great reliance upon organizational solutions to sociomedical problems. Smith discusses the psychology of discrimination, the political economy of biomedicine, and the structural contradictions of organizations. His thesis is that we need to be a bit sceptical of what our great institutions, such as medicine, the law, the Church, and our great organizations, such as government and corporations, can do for us, largely because these organizations and institutions promote the *status quo*. In promoting the *status quo*, these organizations and institutions avoid controversy and resist reform and innovation (p. xii).

AIDS and Society is accessible for non-specialists, though its signs of scholarliness (dense referencing and tiny footnotes) might turn away some 'lay' readers. Each of ten chapters concludes with a summary and a full bibliography, is broken up by boxed commentaries on timely, though again primarily US-based topics, and contains uplifting personal testimonies from persons who relate that HIV-related illness has *improved* their lives. Chapter 1 discusses the dynamics of HIV infection and transmission and the natural history of 'HIV disease'. Smith teasingly hints at the nakedness (the scientific validity) of the Emperor's (biomedicine's) fashion statements (the politics of AIDS-related research), but too skimpily discusses 'alternative' explanations, skims too lightly over Peter Duesberg and others, and omits altogether discussion of both the Group for the Scientific Reappraisal of the HIV/AIDS Hypothesis and Robert Root-Bernstein's *Rethinking AIDS: The Tragic Cost of Premature Consensus* (1993, The Free Press).

The second and third chapters illustrate diverse people and peoples affected by HIV-infection and HIV-antibody seroprevalence, and discuss theories about stigma regarding and prejudice towards homosexuals, prostitutes, pregnant women, intravenous drug-users, and racial and ethnic 'minorities'. The fourth and fifth chapters could have been reversed, the latter discussing 'Morality Issues', and the former, 'The Medical and Public Health Establishments'. Neither Medicine nor the Church (both highly reified) goes unspared in Smith's critique, in the former case for wielding power sociomedically over bodies and persons and ignoring what are also moral issues (the existence of sexism, racism, and classism), and in the latter for treating morally (i.e., in terms of promiscuity and heterosexism) what is at base a sociomedical problem.

Chapter 6, 'Discrimination and Other Legal Issues', is perhaps this book's best. Smith cogently marshals relevant case law relating to HIV/AIDS issues such as insurance benefits, privacy and quarantine (e.g., he refers to *Kirk* v. *Wade*, 1909, involving a leprous missionary in Brazil who returns to South Carolina), and deploys both hypothetical and actual cases. The next two chapters discuss organizational politics in clear detail, and evince the author's catholic reading habits and training, moving easily between political science, sociology,

organizational psychology, and political economy. Chapter 8 is an extended case study application of the lessons of the preceding chapters, carefully analysing AIDS organization politics in the US, particularly those of ACT-UP, Queer Nation, and WHAM.

Chapter 9 discusses 'Economic Issues' with respect to treatment, not prevention, and documents various Acts, programs, and debates and their rationale, again, by presenting interesting case studies and controversies. Chapter 10 discusses far too briefly 'International Issues' of HIV/AIDS, and presents sketchy HIV antibody seroprevalence figures and projections by continent, region, and country without enough critique.

AIDS and Society is impressively referenced, fairly argued, clearly written; it is lively, punctuated by some seriously positive people, attitudes, and ideas, and will thereby appeal to many different kinds of students, activists, and educators; I look forward to using it in an upper-division anthropology course. Too many points, though, are made more than once, sometimes even on the same page (e.g. p. 259), and Smith could have paraphrased more and quoted less.

The nominalistically fussy anthropologist in me has a few quarrels. 'African Americans' constitute a race, but 'Latinos/Latinas' are an ethnic group (e.g. p. 80). 'HIV antibody' should often have been substituted for 'HIV', and 'HIV/AIDS' is too often a lazy conflation precisely when clearer expression is called for. Both 'AIDS' and 'HIV' are taken to be singular, unvarying entities, as in 'HIV infection' and 'AIDS vaccines'. HIV is referred to frequently as a disease in itself, and the 'Syndrome' part of 'AIDS' too often drops out (e.g. p. 288). Many reifications obscure more than illuminate, such as 'the African-American community' (p. 43), 'Native American spirituality' (p. 171), 'heterosexual transmission' (*passim*), and 'The Latina Female' (pp. 44-45).

Some claims are too categorical, such as that the 'diagnosis of AIDS is not complicated' and that such diagnoses have already been 'standardized' by the Centers for Disease Control (p. 218). Gena Corea, Root-Bernstein, Duesberg, and others show that such is not the case, and that standardization owes often more to courageous, persistent activists (e.g., regarding diagnoses of 'AIDS' in women) and to scientific mavericks, than to adherence to scientific principles and magic bullet-type thinking. My understanding of 'HIV/AIDS' is very different from Smith's, in that I believe in far greater variation in manifestation of 'HIV/AIDS' across time, space, mind, and body, in AIDS' 'reality' as an empirical *and* constructed entity.

These minor criticisms aside, Smith's intellect, knowledge, and experience are each laudatory. He challenges us to think more carefully about empirical, medical, conceptual, social, and political issues raised by HIV infection, transmission, and antibody-seroprevalance, and has clearly done his homework. *AIDS and Society* is critical but non-ideological, scholarly without being dense, surprisingly jargon-free, and thoroughgoingly positive. Smith is right: *together*, though not necessarily from our desks and purse-strings in top-heavy, bureaucratic organizations, we can figure this one out.

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Dorothy Broom (Ed.). 1994. Double Bind. Women Affected by Alcohol and Other Drugs. Sydney: Allen and Unwin.

I was asked by the *Health Transition Review* editors to review this book anonymously as a member of Alcoholics Anonymous and other Twelve Step fellowships.

When I first read the book I was somewhat chagrined at the light mention of Twelve Step fellowships. However, this is a book which is mostly about people who drink or drug because they have pain whereas alcohol and drug related Twelve Step fellowships are more often about people who have pain because they drink or drug. The two states are not discontinuous and as various passages in the book point out we all must work with these problems in the context of a national culture in which the public opinion of people who have such problems is often very low. The point needs to be made that harm minimisation techniques generally do not work sufficiently for the drinker/drug user with alcoholism/addiction problems until these people cease drinking/using addictive drugs altogether.

Prior to the 1980s most research on drug usage and abuse focused on men. This book addresses the need for an Australian book, for general distribution, to examine gender related drug issues focusing chiefly on women. Its interesting title of *Double Bind* refers to the Catch 22 situation women who use drugs can find themselves: women are under pressure to operate in a way perceived to be feminine and this itself may cause the woman to turn to drugs to ease the associated pressure and pain, whilst abuse of drugs may cause behaviour which is not feminine, thereby causing more pressure to use them. The drugs include nicotine, alcohol, minor sedatives, heroin, and other potentially addictive drugs.

The book is divided into three parts. The first provides useful statistics on drug usage, patterns of drug usage and behaviour relating to drugs amongst women and often includes similar statistics relating to men. Although this book is for general distribution, even with some scientific training, I found the book, especially its first section which is very statistically based, heavy reading, as it was often so technical. Chang presents data gathered by the Commonwealth Department of Health following two campaigns aimed at reducing drug abuse. The first campaign, 'I'm a woman' in 1989-90 was directed at younger women and is inferred to have contributed to a figure of 25% of 12 to 15 year old women who intended to reduce their rate of smoking. Following a second campaign, started in January 1990, directed at young women, the figure for those women intending to reduce their rate of smoking increased to 41%. Stevens and Wardlaw compare the adequacy of female illicit drug use statistics gathered from drug treatment centres and the police criminal records in the Australian Capital Territory (ACT). They found drug treatment centre statistics to be the most legitimate statistic of women's illicit drug use. Elliott and Lowrey, in a survey of Canberra women, found that women often do not know the safe level of drinking alcohol but if they do know then they generally moderate their drinking accordingly. They comment that women's alcohol consumption increased (as has nicotine consumption) as the Women's Movement changed women's roles within society to a more traditional male oriented role.

Part two of the book examines social factors influencing women's patterns of drug use. I felt this part of the book, being far less technical than the first few chapters, and including more personal comments relating to drug use, to be more readable by the general public than the first. Brady considers alcohol in relation to Aboriginal women. In a survey of Aboriginal women in the Northern Territory, about 80% of them abstained from alcohol, often citing Christianity as the reason. Low socioeconomic status is often cited as a cause of alcoholism amongst Aborigines, but, this is contradicted by the evidence of abstention just given.

In an interesting personal study, Davis comments about her own alcoholism in relation to the common denial of the problem and the portrayal of women in society by theatre. She also mentions other social factors,which may be involved in alcoholism, including childhood. Marsh and Loxley in a survey where half of their respondents were obtained from non-treatment sources, found there were two major female groups of injecting drug users. The group of women over 24 years old, especially over 30 years old, were much more likely to have been in treatment and use opiates daily, compared to the women under 24 years old. Dance, in a study which includes amongst others, the homeless and sex industry workers,

considered both dependent and non-dependent drug users of legal and illegal drugs, concerning minimising users' infection with HIV. The research includes interesting personal accounts by the drug users. The study concludes different causal factors for drug use exist for women compared to men, different associated health problems and the need for different services. Watson et al. discuss intoxication in relation to sex and risk taking behaviours, including HIV/AIDS. Zajdow, looks at the problems of the wives of alcoholic men, the culture in which men drink and families' problems with men's drinking which are mostly ignored in the drug and alcohol field.

Fraser, in her comprehensive and informative article, explores the issues surrounding codependency, briefly defining it as 'accepting the unacceptable'. She describes the rules of the dysfunctional family, and the very limiting roles of children in dysfunctional families. She also describes the attitudes of children and adult children of dysfunctional families summarized as: 'Don't talk, don't trust, don't feel'. She discusses the types of abuse including acculturation which includes race shaming and is defined by Diazo as 'a process of progressive adaptation to the dominant culture for the purposes of economic survival and mobility'. This is very relevant to an Australian audience with its multicultural and Aboriginal composition. She also includes discussion of shame - class shame, race shame, homophobia and homosexual shame, incest shame, rape shame, abuse shame and gender shame. This article is also very relevant to men who have been similarly abused.

Part three researches treatment options for women with a drug history, and again is quite suitable for general reading. It includes an introduction to a couple of the valuable services in the drugs and alcohol field which assist women in Canberra. Women's Addiction Recovery Service (WARS) provides counselling and informative services for women and children and accommodation for women with a drug/alcohol or mental illness problem. Karralika Therapeutic Community offers treatment for parents and their children including accommodation, that scarcest of commodities, treatment for both women and men with drug problems, and their children. The book advocates more treatment services targeted at women and gives statistics showing the limited involvement of women in the provision of drug and alcohol counselling services. There was a large increase to about 50% participation of women at the Karralika centre after the provision of childcare facilities and this increase also included many women who did not have children. Crawford and Elliott present research concerning women's, and also their children's requirements, of drug and alcohol services, and the needs of drug and alcohol workers and make recommendations concerning them aimed at improving drug and alcohol services. Bowler and Lea give an historical description of the National Campaign Against Drug Abuse (NCADA) and how it develops and operates its campaigns targeted at harm minimisation and sometimes prevention of drug usage.

Whilst this book is a valuable contribution to the neglected field on women and drugs, it may have benefited from having more material on methods of dealing with addiction and, given the limited resources, those methods found most useful in treating both female and male sufferers of addiction. Woden Detoxification Centre at the Canberra Hospital (Canberra's only medicated detoxification centre) send their patients to Twelve Step fellowship meetings, apperently because they are perceived to be the most likely route to realising abstinence, which is the only thing that seems to work for what Twelve Step fellowship members normally consider themselves to be: true addicts or alcoholics. On our side, it is common to hear an alcoholic/addict who has finally made it to treatment say that in the end they used alcohol/drugs for any reason under the sun but the reality is they used them because they were addicted to them.

Addiction is a primary illness and needs to be treated before addressing related problems such as causes, if, indeed, causes even exist. Despite that limitation and due to its scope, strong emphasis on women's needs, and useful statistics, the book should prove a valuable

resource in the study of women and their drug and alcohol use. It is well sourced with very a useful index and bibliography and so should prove to be of much benefit to the drugs and alcohol field.

Anonymous