COMMUNITY QUESTIONNAIRE AND THE COLLECTION OF COMMUNITY-LEVEL INFORMATION: WITH SAMPLE QUESTIONNAIRE FROM AN INDIAN STUDY

by

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* Prepared with the financial support of the United Nations Population Fund (UNFPA).

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May 1989
Preface

There is an increasing interest in, and use of, macro, community-level data by policy-workers, planners and researchers as they have come to recognize their many advantages. A previous working paper in this series (Bilsborrow and Guilkey, 1987) mainly concerned itself with conceptualisation and analytical issues of why and how community-level factors should be related to individual- and household-level behaviour such as fertility and family planning.

The present working paper is mainly concerned with problems in the collection of community-level data. It is based to a large extent on practical field work experiences associated with the development of a community questionnaire for inclusion in a large scale household survey conducted in India in 1988. We would like to mention that we benefitted greatly from discussions, comments and interactions with Dick Bilsborrow, and we would like to acknowledge his help here.

It was our feeling that previous community data collection exercises have been subject to a number of problems, some of which were avoidable. They have been much too cavalier about the type of information which they collected from particular key informants; there has been even less recognition in previous studies of the fact that the truth is many-sided and that each person may provide a different version of it; interviewers have rarely been specifically trained for administering community questionnaires; community questionnaires have paid insufficient attention to the time perspective and often have not collected information on what the situation was 5-10 years ago when fertility decisions were being made; previous studies have almost always ignored quality aspects, such as whether the health clinic is often closed, or only partially staffed, or has poorly trained staff, or has poorly maintained facilities; there has been virtually an exclusive emphasis on the availability of physical infrastructure variables in previous studies, such as electricity, road, and schools, and almost no concern with social relationships and structure, etc.

We have attempted in the community questionnaire under discussion to correct for many of the above problems. Interviewers were specially trained for our questionnaire and for the type of techniques required for collecting community-level data; our questionnaire has in-built instructions, probes and checks in order to encourage/force the interviewer into questioning certain responses; it is indicated on the questionnaire itself who the respondents/informants should be; group interviewing is used in an effort to improve the quality of the answers; information is collected on the social structure of the village; questions are asked separately of groups of informants for each major social group in the village which is particularly important given the Indian caste system; information is collected on the quality of government health and family planning facilities/services by visiting public health centres and subcentres; information is often collected for both the present and for the situation 5-10 years ago.
The resulting questionnaire(s) and field work techniques we developed are, it is hoped, an improvement on what has been done before - although still far from perfect as this is a new and difficult area of data collection. Still, we felt that it would be worthwhile to report on this experience, which is the genesis for the present working paper. We hope that others find it useful and we welcome comments on this experience and similar experiences elsewhere.

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1. Background

There has been in recent years a great deal of interest and even enthusiasm among researchers and policy-makers in community-level information. Researchers have increasingly come to recognise that individual and household-level behaviour are constrained and shaped by the community or macro environment in which people live. Policy-makers have realised that community-level data can provide a relatively inexpensive and quickly acquired source of information for planning purposes.

The present paper reviews the current state of knowledge on the collection of community-level data, especially for the study of fertility and family planning - through the use of community questionnaires. It includes discussions on the possible uses for community data; why community-level factors may affect fertility and family planning; the definition of community; techniques for the collection of community data; and selected problems and possible solutions in the collection of community data. Discussion is oriented toward, and examples are specifically taken from, a community questionnaire that was used in an important new survey in India.

This survey was conducted in 1988 by the Operations Research Group, India (ORG), in the states of Maharashtra, Uttar Pradesh and Gujarat. The household survey component of this enquiry is similar to so-called contraceptive prevalence surveys as it assesses existing levels of fertility and contraceptive knowledge, preferences and practices. The sample design of this household survey ensures that there are representative samples of households in sufficient numbers to obtain reasonably accurate estimates of contraceptive prevalence rates at the state level. As part of this important new survey, ILO has provided supplemental funds to ORG to collect community-level information for sample villages through community questionnaires.

Readers unfamiliar with India should be aware that Uttar Pradesh, Maharashtra and Gujarat States are very large indeed with populations of approximately 110, 63 and 34 million persons respectively in 1981.

These three states were purposely chosen so as to provide a wide range in levels of family planning, as the contraceptive prevalence rate in 1987 in Uttar Pradesh was estimated to be about 25 per cent of eligible couples, while it was estimated to be about 55 and 51 per cent respectively in Maharashtra and Gujarat. In all three states, sterilisation (male and female taken together) accounted for approximately 60 to 80 per cent of current contraceptive users in 1987.

Detailed information on the community questionnaire used in the Indian study is provided in appendices A and C. Appendix A provides an easy to follow listing of the information being collected on the community questionnaire. Appendix C reproduces the community questionnaire. In examining this community questionnaire, it is important for readers to be aware of the fact that fieldwork logistics required that the person responsible for completing the community questionnaire had to accompany (in a project vehicle), the interview team responsible for the household questionnaire in order to economise on transportation costs. (In addition to saving on operational costs, an added advantage of associating the person responsible for the community questionnaire with the team of interviewers for the household questionnaire was that it assured the
necessary supervision.) All of this implies that there was basically a one-day time constraint on the collection of most of the community-level information, since all household questionnaires in a sample village were completed within one day.  

Readers are also referred to another paper in this working paper series (Bilsborrow and Guilkey, 1987) for an excellent review of the analytical and conceptual issues of why community level factors should affect fertility and family planning although it is worth mentioning that empirical results on this from the research literature are somewhat inconclusive (Casterline, 1985; Casterline, 1987; Tsui, 1985; Bilsborrow and Guilkey, 1987).

2. **Why collect community data?**

   It is rather surprising that the interest in community questionnaires has lagged so far behind the interest in individual- and household-level questionnaires. After all, almost all survey data for households and individuals are aggregated up for purposes of presentation.

   One possible explanation is that the extensive use of household surveys began in industrialised countries at a time when community affiliation was believed to be weak due to high geographic mobility and large urban agglomerations; in addition, information on community facilities tended to be readily available and easily accessible from other sources in industrialised countries.

   There are a number of advantages for policy-makers and planners of community questionnaires and community-level data.

   1. Community-level information is at the level at which planning is usually done. Although planners may be concerned with the welfare of individuals, development projects and programmes are implemented at the area- and community-levels. It is at this level for example that schools and clinics are constructed and staffed; roads and electrification networks are built and maintained; dams, flood control and irrigation schemes are built.

   2. Community questionnaires are relatively inexpensive to complete relative to the number of persons on which they provide information. It is clearly much more efficient to collect information in a community questionnaire about the availability of services (such as roads, schools, clinics, etc.) than to collect such information from a large sample of persons in a community using individual-level or household-level questionnaires.

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1 It should be noted that provision was made for revisits when required to collect information on primary health centres (PHCs) and health subcentres. As the collection of information on health facilities/services often involved additional travel (because such facilities were often located in another village), it was not always possible to collect these health data within the time it took to complete all of the household questionnaires in a sample village.
3. Community questionnaires, being fewer in number than household questionnaires, are in theory relatively easy to process and thus theoretically can provide data relatively quickly to policy-makers. This advantage of community data should not be underestimated, since weak data processing capability (both hardware and software related) in the Third World, in combination with the inherent difficulty in processing household survey data, has led to enormous delays before household survey data become available.

4. It is often believed to be easier to collect meaningful qualitative information on a community questionnaire than on a household questionnaire. Indeed, this is one of the main justifications for the ILO's Key Informant System for labour market information (Richter, 1982). Although some important information can be easily collected using structured questionnaires with pre-coded answer categories, without doing injustice to the complexity of the situation, other important information is quite difficult to obtain using fixed, structured questions. In such situations free-flowing, open-ended questioning might be best (for example in determining under what conditions, for what persons and with what qualifications various jobs are available). Such questions may be easier to address to a group where a consensus can be reached, although one must always remain cognizant of the limitations of an unstructured approach.

5. Appropriately collected community-level data can be used to monitor and assess the feasibility of field projects and programmes, because community-level information can be obtained and processed quickly (point 3 above) and can easily include qualitative as well as quantitative information on the functioning of programmes (point 4 above). In the medical field, "rapid diagnostic" research has been used to monitor the performance of rural health clinics (Khan, 1984; Dick, 1985); teams of researchers and programme managers go into a community for a short period of time, usually from one day to one week in duration. Discussions are held with health personnel, and observations are made of the health system at work (discussions are also held with patients and normal villagers). Advocates of this data collection system feel that they are able to obtain a "reasonably" accurate picture of the situation at relatively low cost in a short period of time, thereby quickly feeding back information to policy-makers.

Persons familiar with short economic missions to the Third World might recognize the rapid diagnostic procedure. Formal questionnaires or field guides are not usually used, but questions are asked, observations are made and impressions are formed. Community leaders, employers, landlords, teachers, health officials, peasants and labourers are asked about their situation; whether their situation is improving or deteriorating; what major changes have occurred in recent years; what the main problems are; as well as specifically about the main interest of the expert - be it

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2 It is often several years before results of national surveys or censuses become available - greatly reducing the relevance and usefulness of the data when they do become available. For this reason, in one major developing country (which is not India) where one of the authors has recently worked, the government statistical office (which is responsible for the decennial population census, an annual labour force survey and numerous large surveys) hand tabulates some data in an effort to reduce the time required to produce usable information.
about availability and terms of credit, employment opportunities, malnutrition or food intake. Discussions take place in a free-flowing manner with considerable give and take and participation of groups of persons (see Knodel, Chamratrithirong and Debavalya, 1987, for an excellent example for Thailand). In this way, an opinion is formed about the situation in the country and this affects the expert's recommendations about what needs to be done.

Community questionnaires also offer a number of advantages to researchers in addition to their relatively low cost and policy-relevance as indicated above.

1. Community contextual factors are believed to be important in determining individual- and household-level behaviour. Employment and work-related decisions are constrained by labour market conditions in a community. Time allocation decisions are shaped by the availability of (or time required to obtain) water and fuel sources. Health and mortality rates are determined by climatic conditions, presence of disease vectors, food habits, food supplies and health facilities in the community. Fertility and family planning (which are taken up in detail in a following section) are determined by, among other factors, marriage traditions, inheritance practices, experiences of neighbours with contraceptive methods, and availability/accessability of modern contraceptives.

2. Community variables are outside the control of individuals and households and so are exogenous to them. This has led to an intense interest in community variables among economists interested in estimating empirical relationships using the theory of the so-called new home economics. According to the new home economics theory, households act rationally in allocating their resources of time, assets and income. This, in turn, implies that households make a series of inter-related decisions on, for example, how many children to have, how much to educate each child, how much to spend in time and money to ensure that each child survives, whether any (and if so, which) members migrate, whether the wife works in the labour force (and if so, where), how each household member spends his or her time, what items are purchased, etc. In such a view of the world (shown below in figure 1), household decisions are inter-related and it is consequently inappropriate to estimate empirically the relationships, say between A and B, A and C, or B and C, using ordinary least squares regression techniques.

**Figure 1:** Endogenous (i.e. simultaneous) relationship between three factors

\[
\begin{align*}
& \text{A} \\
& \rightarrow \text{B} \\
& \downarrow \text{C} \\
& \rightarrow \text{A}
\end{align*}
\]

The problem is that the estimated relationships between dependent (i.e. endogenous) variables such as A, B and C in our example are biased, since the disturbance (error) terms are correlated with the explanatory endogenous variables themselves. It is possible to get around this estimation problem and thus to obtain unbiased estimators in such a system of relationships by using indirect estimation techniques such as two-stage least squares. In order to apply such estimation techniques, however, it is necessary to have exogenous independent variables in the system of
relationships - with at least as many exogenous independent variables as endogenous dependent variables (Johnston, 1972). Community variables are widely believed by economists to be such exogenous, identifying variables (e.g. see Schultz, 1982; Bilsborrow and Guilkey, 1987).  

3. Accurate estimates of community information often cannot be made by aggregating information collected on individual or household-level questionnaires, because sample sizes are often too small, as typically 20-30 households are interviewed in a community. (This is the situation in the present Indian study where 20 households were interviewed in each sample village.) Of course, it is possible to increase the level of confidence in estimated community averages for contextual variables (i.e., reduce variance around the mean), by increasing the sample of households in each community. This would, however, have the undesirable effect of decreasing the level of confidence in estimates for larger units such as state, region or country (assuming, of course, no change in the total sample size of the survey), since it would imply fewer clusters of households. Thus, for a fixed sample size, there is a conflict between the confidence level of estimates for the entire study area and the confidence level of estimates for each community in the study. And, most policy-makers are more interested in country/study-wide estimates.

3 A few authors have noted that even community variables may not be exogenous (e.g. Blalock, 1985; Da Vanzo, 1985). They have raised the possibility that the location of community facilities may be in part determined by the behaviour of community members (thereby causing community-level and individual-level variables to be inter-related or endogenous). For example, if family planning facilities are located in more (less) receptive communities with higher (lower) acceptance rates, then the level of contraceptive use would be affected by the availability of family planning facilities in the village (people in communities with facilities would be more likely to family plan because facilities are available) and the probability that a community has family planning facilities would be affected by the level of family planning in the community (because of the decision criterion for placing family planning facilities which is being used). In another example, governments may place health facilities in areas with higher mortality and therefore a greater need for such services (see e.g. Eid and Casterline, forthcoming, for an example from Egypt).

4 Freedman (1974) dubbed community-level variable estimates based on the aggregation of individual or household-level data "contextual variables", as opposed to "global variables" (where data are collected directly at the community level). Also see Blalock 1985 for a discussion on the statistical implications of using "contextual variables".

5 For a study which is concerned with multi-level analysis and the effects community- and household-level variables have on fertility/family planning behaviour, Bilsborrow and Guilkey (1987) have proposed what they have called a "50-50 rule" - a sample of 50 households in each of 50 sample communities. The freedom to use such a study design is, however, limited in practice, since in most instances the collection of community-level information usually involves the piggy-backing of a community questionnaire on to an already planned household survey. Such a limitation is imposed, for example, in the Indian study under discussion here where 20 households were interviewed in each sample village.
4. Some community-level information cannot be obtained through household and individual-level questionnaires. In particular, individuals may be ignorant about the existence or operation of various community facilities or population size of village, or area of the village, etc. For example, particular individuals may not know whether there is a health clinic in the village, where the nearest clinic is located, or the availability of jobs outside the village; particular individuals are even less likely to know the hours when a clinic is open (especially if they do not use it), how the clinic is staffed or what are the qualifications of the clinic's staff.

However, individuals can be effectively asked on household questionnaires about their knowledge, use and opinions of these facilities. They can indicate, for example, whether in their opinion clinic staff are discourteous, whether doctors charge for supposedly free medicines, whether extension activities are taking place, etc. The usefulness of linking community-level information with individual household-level information for the express purpose of assisting policy-makers in assessing the strengths and shortcomings of their family planning delivery system has been argued effectively by Hermalin, Entwisle and Mason in a series of papers (e.g., Entwisle, Hermalin and Mason, 1982). They stress, in particular, the importance of investigating interactions between community-level and household-level relationships and how the effect of community-level variables differs according to the characteristics and behaviour of particular types of household.

5. Community-level information can be used effectively to help in the construction of individual- and household-level questionnaires. Individual and household-level questionnaires often include lists of community facilities which people are asked if they use, lists of crops and mechanical equipment which farmers are asked if they own or use, lists of consumer goods which individuals are asked if they own or wish to purchase. Community questionnaires can help researchers to identify the items which are appropriate to include in such lists.

6. Community-level information can be used to help in the editing of already completed household-level and individual-level questionnaires, especially for income and production-related data. When editing household questionnaires, it is useful to know the range in which answers should lie. For example, how many bushels of wheat per acre could a farmer in Community A have produced; how much could an agricultural labourer have earned in a day; how much could have been received for a litre of milk? Community data which indicate reasonable ranges for variables such as these can be used in the editing stage to identify suspicious-looking data requiring closer scrutiny.

7. Community-level information can also be used to analyse the degree of accuracy of household level information. For example, individuals' perceptions of health and family planning facilities (such as which facility is nearest and where the nearest facility is located) can be classified as correct or incorrect by comparing them with community-level information (e.g. on the existence and distance of the nearest health facility).

Whatever the reasons for the slow realisation of the usefulness of community questionnaires and community data, the fact remains that current interest in community data exceeds our knowledge on how to gather this information accurately. In the process, a good deal of confusion has been
created on how "community" should be defined; what types of questions should be asked and information should be obtained on community questionnaires; who should be asked these questions; and how many and what type of community members should answer questions; (as well as how these data should be analysed in combination with individual- and household-level data, an issue which is not addressed in the present paper).

The remainder of this paper takes up these issues, with a specific reference to, and emphasis on, the determinants of fertility and use of modern contraceptives. This discussion takes place within the specific context of rural India, since it is our strong feeling that the ways in which communities are located and organised should play a very important role in determining how (and what) community-level information should be collected. In our opinion, conceptualising the collection of community-level information in the abstract will often result in considerable misinformation and useless information. Indeed, a lack of concern for local conditions before formulating the collection of community information may have been an important contributing factor to the inability of some earlier research to find a relationship between community-level factors and fertility/family planning acceptance.

3. Community factors as determinants of fertility/family planning

It is widely accepted that community-level factors are important determinants of fertility levels and family planning acceptance rates. The World Fertility Survey, which was very restrictive in the socio-economic information it collected, had a separate community module (Freedman, 1974) and this module was used in 17 countries. The comprehensive review of knowledge on fertility determinants sponsored by the American National Academy of Sciences included a separate chapter on the influences of macro-level social and institutional factors (Bulatao and Lee, 1983).

Yet to date, the empirical evidence on community variables is not very convincing or very consistent (for reviews see Tsui, 1985; Casterline, 1985; Casterline, 1987; Bilsborrow and Guilkey, 1987). The seemingly obvious links between community-level variables and fertility/family planning appear to be a bit elusive. Despite somewhat disappointing results, many analysts remain optimistic about the value of community data while having become more realistic about their potential and the difficulty of collecting these data. For example, based on a review of WFS experience with the collection and analysis of community data, Casterline concluded:

The first analysts of WFS community data set out with expectations that these data would fill in much of the void in our measurement of the setting of demographic decisions, correcting our exclusive reliance on a structured set of individual and household socio-economic characteristics and region of residence. We now recognize the rather limited potential of community data compared to these initial expectations .... Yet we recognize the substantive value of these data, the weakness notwithstanding, because they allow us to address questions of national importance .... There is good reason for optimism that this approach might yet yield genuine contributions to our understanding of demographic behaviour (Casterline, 1987).
The most common explanations given in reviews for the inconsistent and inconclusive results are: (1) the relatively poor quality of community data (this appears to have been the case for the World Fertility Survey; for example, see Nizamuddin, 1983 for discussions of the low priority given to the collection of community data in the World Fertility Survey conducted in Pakistan); (2) confusion over the definition of community; (3) lack of information on social relationships and a concentration on the physical infrastructure in the community; (4) lack of information on facilities available in previous years; (5) lack of information on the quality of services, such as health services; (6) inappropriate statistical techniques; and (7) poor or non-existent conceptual framework. The latter (i.e. poor conceptual framework) is often said to be the most important (e.g. Casterline, 1985; Bilsborrow and Guilkey, 1987; Tsui, 1985).

3.1 Demographic transition and community-level determinants

3.1.1 Socio-economic development

In the rather loosely defined demographic transition theory - one might more appropriately say description - populations are seen as going through a transition from an equilibrium situation of a high fertility-high mortality regime to a low fertility-low mortality regime (Notestein, 1945). This demographic transition occurs over time. Along with socio-economic development, mortality rates fall due to better nutrition, health facilities, disease control and knowledge of health care. Fertility levels in a country fall, due to both higher survival rates and thus a reduced need for high fertility to achieve a given family size as well as to a lower desired family size caused by changes in social and economic organisations such that children become more expensive and women and men develop wider social and economic perspectives on life. As a result, fertility and mortality rates of countries are related to levels of socio-economic development. See Anker, 1978 for an inter-country analysis of these relationships.

Since there is a relationship between socio-economic development and fertility/family planning levels across countries, the next question is whether particular community variables are important within countries. For example is there a relationship between family planning and the existence of specific characteristics such as electrification or schools? (See for example Herrin, 1979 and 1988 on electrification.) It is also important to know if relationships are linear and whether there are thresholds, with respect to the size and duration, below which there are no effects. It is basically an empirical question as to which relationships are present and whether or not certain key community facilities/services, individually or in constellation are important determinants of the fertility and family planning of couples.

3.1.2 Social relationships within communities

Up to this point, the discussion has concentrated on the availability of facilities and services in a community. No mention has been made of social institutions and relationships within communities. Yet, much has been written about how important social relationships and social institutions are in determining fertility levels and family planning acceptance rates (e.g. Freedman, 1963; 1974). For example, fertility differentials across Europe continue to be explained in large part by religious patterns (Coale and Watkins, 1985); in the United States the
total fertility rate is almost twice the national average in the State of Utah where the Mormon religion predominates (Population Reference Bureau, 1984); in the Soviet Union the birth rate is approximately twice as high in the Central Asian Republics where there is a strong Islamic heritage as compared to that in the Russian SSR (Bodrova and Anker, 1985). There is also evidence that the fertility of minority groups is different from that of majority groups (Freedman, 1974); and there is the oft expressed opinion that the acceptance of family planning and a small family norm occurs much more rapidly in socially homogeneous populations than in socially heterogeneous populations since fertility/family planning is influenced by the norms of one's own social reference group (Retherford, 1983). Even if the above were not so, the opinion of leaders (of each social group) toward family planning might affect acceptance rates.

One often hears stories of unusual villages as regards family planning acceptance. When family planning acceptance rates in a country are relatively low, there are villages with unusually high acceptance rates; when overall acceptance rates are relatively high, there are villages with unusually low acceptance rates. One also hears stories of villages adopting family planning almost "overnight". While these may just be isolated incidents or tales that are greatly embellished in the telling, we do know from World Fertility Survey data that the variance in fertility rates across communities usually exceeds that across households within communities. In light of this, it would seem a reasonable hypothesis that fertility/family planning in atypical villages is determined in large part by unusual events or leaders. According to diffusion theory, social norms and behaviour change more rapidly in closely-knit and socially homogeneous populations and less rapidly in weakly-knit and socially heterogeneous populations (Retherford, 1987; Retherford and Palmore, 1983). As a result, everything else equal, one would expect a higher proportion of socially homogeneous villages as compared to socially heterogeneous villages to have unusual levels of family planning acceptance.

One might also expect minority and less influential social groups living in a village dominated by other social groups to feel less secure. This, in turn, could very well have an effect on the willingness of couples from such minority/less influential groups to limit family size by accepting modern contraceptives. This effect might apply in India to minority religious groups. Such an effect could result either because couples from minority and less influential social groups are less willing in general to accept new ideas/new procedures and/or because they feel that a larger family size affords them greater protection. On the other hand, it is possible to argue the opposite—that minority and less influential social groups might be quick to conform to majority behaviour for fear of the negative consequences associated with non-conformity; in

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6 Joelle Robert-Lamblin (1985) reports how in an East Greenland Eskimo community of approximately 2,300 population, the birth rate fell from 47 to 28 in two years, and from 48 to 17 in five years—after the introduction of a health clinic.

7 A mathematical formulation of this phenomenon has been proposed by Edlefsen and Ranney (1985). The underlying assumption in this formulation is that individuals pay a psychic cost by deviating from the norm (defined as the average behaviour) in their social group. Thus, as family size norms decrease, a snowball or bandwagon-type effect takes place in the Edlefsen and Ranney model.
India, this effect might apply to scheduled castes, scheduled tribes and backward castes.

Furthermore, it seems reasonable to hypothesize that there are cross-over effects whereby the opinions and behaviour of one social group in a village affects the behaviour and opinions of other social groups in a village. After all, villages are small places where people come in daily contact with one another, and poorer, less influential and less prestigious social groups may emulate the behaviour of other groups. It is an empirical question, however, how important the political power, economic power and population size of a social group is in determining the magnitude of these cross-over effects for them. It is also an empirical question whether or not cross-over effects from one social group to another social group are affected by the extent to which a particular social group is integrated or segregated in terms of their housing/living conditions.

Issues such as these will be investigated in the planned multi-level analysis of community- and household-level data from the present Indian study.

3.2 Socio-economic theory of fertility

In order to investigate and analyse the relationship between community variables and fertility/family planning across communities in Third World countries, it is necessary to have a conceptual framework which has more analytical content than Demographic Transition Theory and which at the same time lends itself to analysing the relationship between community- and individual/household-level variables. The Socio-Economic Theory of Fertility as first proposed by Becker (1960) and later extended by Easterlin (1969; 1975) and others (Schultz, 1973; Bulatao and Lee, 1983) is reasonably good for this purpose.

This theory is illustrated in figures 2 and 3 (with macro, community-level factors added). Parents are viewed as having a certain desired family size which is determined by taking into consideration the costs and benefits of children (psychic and pecuniary) in conjunction with the resources parents have available (time and money) and their relative preferences for children and other goods (value system). Parents are also seen as having a potential supply of surviving children which depends on the wife's age, age at which the wife began bearing children, infant and child mortality and factors which determine birth intervals in the absence of conscious fertility control. The motivation for family planning (and therefore desired/actual completed family size) is then determined by comparing desired family size with potential supply of children together with the costs (psychic and monetary) of using contraceptives or abortion to consciously control fertility.

The Easterlin framework as specified in for example Easterlin, Pollak and Wachter (1980) and Easterlin and Crimmins (1982) has been criticised as being untestable (e.g. Sanderson, 1980); for example, some of the crucial variables such as psychic cost of family planning, relative preferences for children, and desired family size are either unmeasurable or unlikely to be measured reliably. This framework is also said to ignore crucial questions of causation, interactions and simultaneity between its many explanatory variables. Still, the Easterlin framework is comprehensive and it does offer the possibility for conceptualising and tracing the paths through which community variables might affect the
fertility and family planning behaviour of couples. It is for example the framework used for the major review of fertility determination in developing countries done for the US National Academy of Science (Bulatao and Lee, 1983).

Community variables enter this framework (as depicted in figure 2) via their affect on more immediate determinants of fertility: on the demand for children (via affects on relative preferences/values for children and other goods/life styles; cost of children; benefits of children; potential resources of parents), on the supply of children (via affects on age at marriage; health/fecundity and breastfeeding), and on the costs of effective family planning (via affects on knowledge of modern methods; physical, monetary and time costs of family planning). In this view of the socio-economic theory of fertility, we have divided community variables into three sets. One set deals with the village setting in terms of available facilities/services (such as labour market conditions, health services, communication, transportation, electrification). A second set of community variables deals with the norms and experiences of social groups in the village (such as norms on marriage age and dowry, son preference, family planning, women's and children's work). A third set measures the social-economic-political-demographic position of each social group in the village; these variables are hypothesized to affect the strength of the relationships between fertility/family planning and other community variables/socio-economic characteristics of couples (via their effect on the speed of diffusion of values, ideas, norms and behavior, including the willingness of couples to adopt family planning and a small family size norm).

Figure 3 from Bilsborrow and Guilkey (1987) presents a more detailed "enlargement" of the linkage of community variables to the demand for children by indicating the ways in which community variables might affect the demand for children. For example, community variables are viewed as affecting wage rates which in turn are seen to affect the economic costs and benefits of children as well as the potential income of parents.

Table 1 takes the type of analysis shown in figures 2 and 3 one step further. It presents an indication of the reasons why the main topics/variables on which information is being collected in the Indian community questionnaire may affect the fertility and family planning of couples. As with any simplified presentation, it is illustrative only, as additional arrows and relationships could, of course, be hypothesized because of the interrelated nature of many of these relationships. None the less, we feel that the simple presentations in table 1 and figures 2 and 3 provide useful background frameworks on the subject.

Readers are also referred to the publication by Bilsborrow and Guilkey (1987) for detailed discussions on appropriate estimation techniques and general conceptual issues on how and why community-level variables should be related to the fertility and family planning of couples. Discussion in the Bilsborrow and Guilkey paper covers the following topics: availability and cost of contraceptive services; availability of health facilities; education facilities; existence of transportation, communication, electrification and other economic infrastructure; economic conditions for production, employment, etc.; basic demographic characteristics; and, social political situation. Reproduced in Appendix B of the present paper is a listing of relevant community-level variables provided by Bilsborrow and Guilkey (1987) along with an indication if such information were collected in a previous survey in the Philippines which used a community questionnaire and/or in any of 17 WFS surveys which used a community questionnaire.
Figure 2: Socio-economic theory of fertility with community-level factors/variables

- **Demand for Children**
  - Relative preferences for children and other life styles/goods
  - Cost of children, actual and perceived, e.g.:
    - Opportunity cost of parents' time education dowry stress on parents
  - Benefits of children, actual and perceived, e.g.:
    - Contributions to cash income contributions to household production old age support enjoyment of children extension of lineage
  - Potential resources of parents time income assets

- **Cost and Knowledge of Family Planning**
  - Knowledge of effective use of contraceptive
  - Costs, including:
    - Money cost
    - Money incentives
    - Time opportunity costs
    - Travel costs
    - Inconvenience of method
  - Fears of contraceptives and norm on acceptance

- **Supply of Children**
  - Age at marriage/union
  - Age
  - Breastfeeding practice/health and fecundity (Main other proximate determinants of supply of children)

- **Motivation and use of family Planning and consciousness of fertility control**
  - Additional births/children
  - Completed family size
Figure 3: Incorporating community-level variables into the demand for children part of the socio-economic theory of fertility model

<table>
<thead>
<tr>
<th>Topics</th>
<th>Measures</th>
<th>Some reasons for a possible relationship to fertility/family planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>1. Type of approach road connecting to village</td>
<td>1. Affects access/exposure to: (a) information (b) outside influences (c) labour market opportunities, (d) new ideas/perspectives (including possibly a willingness to family plan)</td>
</tr>
<tr>
<td></td>
<td>2. Distance from village to all-weather road/town/bus stop/government health services</td>
<td>2. Affects income from agriculture, cropping patterns, demand for labour and opportunity cost of time</td>
</tr>
<tr>
<td></td>
<td>3. Amount of time to reach all-weather road/town/bus stop/government health services by most common mode of transport</td>
<td>3. Affects costs in time and money to use services for health, family planning, school</td>
</tr>
<tr>
<td></td>
<td>4. Months of year when accessibility extremely difficult to nearest town/nearest bus stop/ nearest government health services</td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>1. Whether village electrified</td>
<td>1. Affects setting up of village industries and hence availability of non-agricultural wage employment and self-employed income earning opportunities</td>
</tr>
<tr>
<td></td>
<td>2. Proportion of houses having electricity connected</td>
<td>2. Affects exposure to mass media, TV (including community TV), radio (including community radio)</td>
</tr>
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<td></td>
<td></td>
<td>3. Affects access to consumer durables</td>
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<td></td>
<td></td>
<td>4. Affects access to labour saving devices such as tube wells, mills for grinding grain, household appliances, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Affects irrigation possibilities and hence demand for income and labour</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Affects placing of health facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Affects economic value of children by reducing child labour contributions to family</td>
</tr>
<tr>
<td></td>
<td>2. Quality of education proxied for by (a) number of female teachers (b) student to teacher ratio (by mistake 2b not collected)</td>
<td>3. Affects monetary cost of education</td>
</tr>
<tr>
<td></td>
<td>3. (If not available in village) (a) distance to nearest secondary school (b) mode of transport to nearest secondary school (c) time to reach nearest secondary school by most common mode of transport</td>
<td>4. Affects perceived cost of education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Affects safety considerations, especially for daughters (especially when schools not in or near village)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Increases age at marriage (especially important for girls)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. Increases cost of dowry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Widens perspectives, changes value system, raises expectations</td>
</tr>
</tbody>
</table>
# Table 1 continued

<table>
<thead>
<tr>
<th><strong>Marriage institutions, norms and dowry (by major social group)</strong>(J)</th>
<th><strong>Communication</strong>(D)</th>
<th><strong>Migration (by major social group)</strong>(J)</th>
<th><strong>Miscellaneous opinions/norms (by major social group)</strong>(J) (restricted to topics on which opinion questions asked in the community questionnaire)</th>
<th><strong>Agriculture</strong>(G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Norm on female age at marriage</td>
<td>1. Number of households owning TV</td>
<td>1. Outmigration of households</td>
<td>1. Preferred contraceptive methods</td>
<td>1. Land distribution</td>
</tr>
<tr>
<td>3. Affects age at first marriage</td>
<td>3. Number of households owning radio</td>
<td>3. Increases exposure to, and knowledge of, new ideas/perspectives (including family planning and small family size norms and migration)</td>
<td>3. Proportion of couples family planning</td>
<td>3. Use of powered equipment</td>
</tr>
<tr>
<td>4. Affects perceived economic cost of children</td>
<td>4. Number of shops keeping radio</td>
<td>2. Increases exposure to, and knowledge of, new ideas/perspectives (including family planning and small family size norms)</td>
<td>4. Son preference</td>
<td>1. Affects demand for women's and children's labour, and hence opportunity cost of women's and children's time</td>
</tr>
<tr>
<td>5. Affects relative preference for sons and daughters</td>
<td>5. Whether community radio available and working</td>
<td>2. Increases exposure to, and knowledge of, new ideas/perspectives (including family planning and small family size norms)</td>
<td>5. Norm on education for daughters</td>
<td>2. Affects willingness to innovate and try new ideas (including possible use of modern contraceptives)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Increases consumption aspirations</td>
<td>6. Perceived change in level of infant and child mortality</td>
<td>3. Affects income levels</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Changes values and preferences for alternative lifestyles</td>
<td></td>
<td>1. Affects age at marriage and cost of children (especially girls)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Increases interaction with other social groups</td>
<td></td>
<td>2. Affects willingness to innovate and try new ideas (including possible use of modern contraceptives)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. Affects income levels</td>
</tr>
</tbody>
</table>
(Table 1 continued)

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4. Extensiveness of irrigation</strong></td>
<td>1. Whether area is drought prone</td>
</tr>
<tr>
<td><strong>5. Proportion of households with child as agricultural labourer</strong></td>
<td>2. Whether area is flood affected</td>
</tr>
<tr>
<td><strong>6. Types of modern agricultural tasks done by children</strong></td>
<td>3. Topography of farm land</td>
</tr>
<tr>
<td><strong>7. Wage rates for children (boys and girls)</strong></td>
<td>1. Affects feelings of security, vulnerability and ability to control events</td>
</tr>
<tr>
<td><strong>8. Proportion of households with adult woman as an agricultural labourer (by major social group)</strong></td>
<td>2. Affects health, mortality and fecundity</td>
</tr>
<tr>
<td></td>
<td>3. Affects agricultural productivity, demand for labour and income levels</td>
</tr>
<tr>
<td><strong>Climate/environment (A)</strong></td>
<td>1. Panchayat (i.e. village council) support of family planning</td>
</tr>
<tr>
<td><strong>Social institutions (including: women's participation in women's clubs, community activities, family planning activities)</strong></td>
<td>2. District or taluka (i.e. country) support of family planning</td>
</tr>
<tr>
<td></td>
<td>3. Women's club activities (including support of family planning)</td>
</tr>
<tr>
<td></td>
<td>4. Women's activity in village council (by social group)</td>
</tr>
<tr>
<td></td>
<td>5. Taluka (i.e. county) and district panchayat support of family planning</td>
</tr>
<tr>
<td><strong>Non-agrarian/rural labour market/income earning opportunities (N/G)</strong></td>
<td>1. Occupational distribution (from census)</td>
</tr>
<tr>
<td></td>
<td>2. Industrial employment available</td>
</tr>
<tr>
<td></td>
<td>3. Industrial employment of village members (separately for children, adult men and adult women)</td>
</tr>
<tr>
<td></td>
<td>4. Industrial daily wage rate (separately for children, adult men and adult women)</td>
</tr>
<tr>
<td></td>
<td>5. Other regular employment opportunities (separately for children, adult men, adult women)</td>
</tr>
<tr>
<td></td>
<td>6. Income earning opportunities for work in the home and involvement of adult women and children in this work</td>
</tr>
<tr>
<td><strong>1. Affects status/influence of women in family/community</strong></td>
<td>2. Increases knowledge and effectiveness of family planning methods</td>
</tr>
<tr>
<td></td>
<td>3. Increases social acceptability of family planning and hence reduces psychic cost of family planning</td>
</tr>
<tr>
<td><strong>4. Increases incentive to family plan through monetary payment and social pressure</strong></td>
<td>1. Affects demand for child labour and hence value of children</td>
</tr>
<tr>
<td></td>
<td>2. Affects demand for female labour and hence opportunity cost of women's time</td>
</tr>
<tr>
<td></td>
<td>3. Affects exposure and access to modern consumer goods</td>
</tr>
<tr>
<td></td>
<td>4. Affects income levels and hence ability to purchase modern consumer goods</td>
</tr>
<tr>
<td></td>
<td>5. Affects access to/influence of new ideas (including small family size norms and possible use of modern contraceptives)</td>
</tr>
<tr>
<td>Health/family planning facilities/services and their quality(I/K/L)</td>
<td>1. Family planning extension type activities in village</td>
</tr>
<tr>
<td></td>
<td>2. Availability of government community health guide (CHG) in village</td>
</tr>
<tr>
<td></td>
<td>3. Availability of condoms in shops in village</td>
</tr>
<tr>
<td></td>
<td>4. Number of private doctors/health practitioners in village</td>
</tr>
<tr>
<td></td>
<td>5. Availability of health facilities in village</td>
</tr>
<tr>
<td></td>
<td>6. Bad experiences with family planning in village</td>
</tr>
<tr>
<td></td>
<td>7. Number of trained health staff available in health centres</td>
</tr>
<tr>
<td></td>
<td>8. Adequacy of supplies of contraceptives available at health centres</td>
</tr>
<tr>
<td></td>
<td>9. Quality of facilities and services in health centres</td>
</tr>
<tr>
<td></td>
<td>10. Expertise for IUD insertions in health subcentres</td>
</tr>
<tr>
<td></td>
<td>11. Number of family planning operations by PNC in past four years</td>
</tr>
<tr>
<td></td>
<td>12. Number of family planning camps held by PNC in past year</td>
</tr>
<tr>
<td></td>
<td>13. Number of extension worker visits to village in past year</td>
</tr>
</tbody>
</table>

| Social structure modern(homogeneity/heterogeneity of social groups, relative socio-economic-political position and size of social groups)(A) | 1. Whether sample household located in hamlet or in nucleus/mother village | 1. Affects speed of diffusion of new ideas (including possible use of contraceptives and acceptability of small family size ideals) |
| | 2. Relative size of each social group | 2. Affects exposure to (and influence of) opinions/behaviour of other social groups |
| | 3. Segregation/integration of housing by social group | 3. Affects feelings of security/insecurity/control over destiny |
| | 4. Relative economic strength of each social group | |
| | 5. Relative political strength of each social group | |

Notes:
a Capital letter in brackets alongside the topic title refers to the capital letter used in the community questionnaire which is reproduced in Appendix C. See community questionnaire in Appendix C for the specific questions used.
b Information for the "Measures" are often obtained for 5 or 10 years ago as well as for the present.
c Numbers under the headings "Measures" and "Some reasons for a possible relationship to fertility/family planning" do not necessarily match up with each other.
4. What is a community?

Before designing a community questionnaire, it is necessary to define "community". As will become clear in the following discussion, ambiguities and fuzziness on how community is defined has been a major problem in the collection of community data.

The Webster dictionary gives two quite different definitions for community - one based on physical boundaries and another based on social relationships:

"All people living together in a particular district, city, etc."
"A group of people living together as a smaller social unit within a larger one, and having interest, work, etc. in common." (Webster's New World Dictionary, 1975)

Freedman, in preparing the community questionnaire for the World Fertility Survey, adopted a broader, all-encompassing definition and in his discussion of community factors stressed both social and geographically related considerations:

"Any characteristic common to all persons living in the community." (Freedman, 1974)

In earlier work of one of the authors, use of the word "community" was purposely avoided; instead the word "group" was used (Anker, 1977; Anker and Anker, 1982). This made it possible to distinguish between individual-level variables and group-level variables, that is variables at different levels of aggregation - while at the same time steering clear of the strong geographical, administrative connotation embodied in the word community which was found in the research literature.

In practice, however, previous studies have generally ignored nuances in the definition of community, and physical, geographical boundaries have been used. Thus, administrative units such as village, district, county have generally been used, because they are easy to define and are identifiable in the field and at the sampling stage. Given that virtually all administrative data are organised on the basis of administrative units (such as villages), it is obvious that rural household surveys (with or without attached community questionnaires) will continue to consist of sampling points drawn from lists of administrative units such as villages.

In some parts of the world, households are scattered across the country-side. In such a situation, information from a community questionnaire may be less meaningful as each household has in fact a unique set of distances/times to the main community facilities/services. Also, in such sublocations, there may not be a clear central focal place in the area and so many households may find that facilities/services in other sublocations are closer and more accessible than those in their own administratively defined sublocation (on which community-level information will have been collected). Problems such as these are not likely to be important in the parts of India where the community questionnaire was used (Maharashtra, Uttar Pradesh and Gujarat States), since almost all people in these states live in centralised villages - although this problem may be important in the more remote hill areas of India.
By using an administrative/geographical definition of community in an effort to concretise the concept, two important community related aspects have tended to be ignored in previous studies. First, as in much of rural India, villages often have heterogeneous social structures consisting of different caste and religious groups. In contrast to the strong administrative/geographical connotation of the word "community" in the research literature, community has a strong social connotation in Indian villages. If Indian villagers were asked, "What community do you belong to?", they would indicate their caste or religion, not their village. Furthermore, administratively defined villages in India sometimes include a "nucleus" (or "mother") village and surrounding "hamlets" or "satellite" villages. In earlier work of one of the authors in India (Anker and Anker, 1982), for example, one sample village consisted of what was in essence three independent villages separated from each other by several kilometres of dirt roads; further complicating matters, the official administrative name used for this set of villages was that of the smallest of these villages.

Each of the above two points (social heterogeneity and existence of hamlets/satellite villages) is taken up below. Both of these are very important in the context of rural India. Other possible complicating factors such as the lack of a clear central focal point with households scattered across the countryside (see footnote 9) or high population density with continuous population agglomerations (see footnote 10) are not taken up here, since they are not critically important for most rural areas of the three sample Indian States in which the complete community-level questionnaire was administered. These latter issues (and others) would have to be confronted and taken into consideration in other settings.

4.1 Hamlets, satellite villages

As indicated above, administratively defined communities (i.e. villages) frequently consist of two or more independent units (Nizamuddin, 1983 for Pakistan; Anker and Anker, 1982 for India). These complex villages include a main unit (often called "mother village" or "nucleus village") along with "satellite villages" or "hamlets" that are often separated from the "nucleus village" by two or three kms. Hamlets/satellite villages in India are oftentimes small, isolated entities composed of poorer people such as scheduled caste people. Furthermore, community facilities/services are usually located in the mother village and facilities/services in the hamlet are usually quite poor. Given the relative isolation, small size and oftentimes social homogeneity of hamlets, it is quite conceivable that its members will exhibit unique behaviour patterns.

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10 On the other hand, in some parts of the World where rural population density is very high (e.g., Egypt and parts of Asia), villages are in such close proximity to other villages and to urban centres that it is difficult to think of each village as a separate entity. Rather, villages are, for all intents and purposes, part of a wider agglomeration and so villagers use nearby facilities. In such a situation, meaningful village-level information is very difficult to collect, since a complicated array of facilities/services is available. It is partly for this reason that Freedman (1974) recommended that community questionnaires not be used for urban areas or for communities with a population exceeding 10,000 persons although Bilsborrow, Oberai and Standing (1984) discuss its application to urban areas.
The implication of this situation for the collection and analysis of community-level data is that the community-level data collected for the mother village are not applicable, as is, to persons residing in a hamlet. Thus, it is important to know if administratively defined villages include hamlets and to know whether a sample household resides in a mother village or in a hamlet. In order to account for these possibilities in the present study, information was coded for each sample household questionnaire indicating whether the sample household was located in a so-called mother/nucleus village or in a separate hamlet/satellite village.\textsuperscript{11}

4.2 Social groupings within villages

Within villages, the degree of social homogeneity or heterogeneity as well as interactions between social groups may be important determinants of fertility and acceptance of family planning. Similarly, differing value systems, norms and customs across social groups may affect fertility and family planning. Yet, previous community data collection efforts and empirical analyses have almost entirely ignored social groups and social relations, partly because of the difficulty in obtaining useful information of this type using community questionnaires and partly because of an overemphasis on physical infrastructure variables.

A major effort is made in our community questionnaire to collect data on the caste/religious structure of sample villages along with information on the population size, economic power, political power and opinions of each major caste/religious group in the village. Readers are referred to the detailed discussion on this in section 6.2. It is important for readers to realize that information is recorded in the household questionnaire indicating the caste/religious group to which the sample household belongs.

5. Collecting community-level data

Community data can be collected by observation, from existing records (published and unpublished), from household surveys where community averages are estimated by aggregating individual/household-level data, as well as, of course, through the use of community questionnaires.

Actual observation should be used when feasible, since it usually provides accurate information - although practical considerations and time constraints limit its usefulness. In the Indian community questionnaire, interviewers were instructed to observe and record information on type of approach road to the village, distance from the village to the primary health centre (PHC) and distance from the village to the health subcentre in addition to information on the quality of the government health care delivery system. Interviewers were also instructed to probe when information provided by respondents was inconsistent with the interviewer's own observations.

\textsuperscript{11} It would be preferable to administer separate community questionnaires for each hamlet as well as for the mother village, since access to services and the availability of infrastructure facilities differ. This solution was, however, rejected for practical reasons, in the Indian study; while it would have greatly increased the cost of the study, the additional community-level data would have been relevant for relatively few sample households as hamlets tend to be small in size.
Obtaining village level estimates by aggregating individual- and household-level information collected on a household questionnaire can be a useful technique for generating community data. Its usefulness is, however, limited in studies such as the present one where only 20 households were interviewed in each sample village. In such circumstances, village-level estimates based on an aggregation of household-level data will have large confidence intervals; in addition, such community-level estimates will not be completely independent of the individual- and household-level estimates on which they are based.

Collecting community information from published and unpublished records can be a valuable source of data. The usefulness of this source, however, is limited for developing countries. First of all, there is a paucity of such information. Secondly, published and unpublished community data are sometimes of dubious quality. Thirdly, even when such data are available and of reasonable quality, their collation may be very time consuming and costly because it may require fairly extensive travelling and consistency checking. Published and unpublished data were only used in the present community questionnaire to provide information on the village's population size, occupational structure in the village and visits of health workers to the sample village. Also, interviewers were instructed to request village leaders and government officials to consult (when necessary) their records as an aid in providing information such as on number of households by caste/religion, extensiveness of electrification, irrigation, and schools as well as government health staff to consult their records as an aid for providing information such as on staffing, population/villages covered, and number of family planning camps held and operations performed in the past year.

In Indian villages, records are kept, such as on number of persons, number of households and land ownership by a talati (i.e. revenue officer) or lekhpal (government officer). However, since such persons are responsible for several villages, we found in our field work that they were often unavailable on the day that interviewing took place. Our experience in India, thus, reinforces the fact that the presence of official records/data does not necessarily imply that such data are easy to access during the data collection stage.

Most of the community-level information collected in the present Indian study, however, is collected using a community questionnaire where groups of informants/respondents are asked to answer prescribed questions. The remainder of the discussion in this section is concerned with this situation.

5.1 Respondent

It is possible to collect community-level information using community questionnaires, from:

1. one key informant (for example, village headperson);
2. several key informants interviewed separately (for example, teacher, police person, mayor, doctor, etc.);
3. several persons interviewed in group interview(s).

Information on household surveys are typically collected on a one-to-one basis where one interviewer asks questions and one responsible member of the household - usually the person identified to be the head of the household (although in fertility and family planning surveys the
respondent is usually a currently-married person in the reproductive age group) - answers questions. In order to ensure confidentiality, an attempt is usually made to hold the interview in a private setting without the presence or interference of other persons - although in reality confidentiality is not often achieved (and therefore it is generally a myth that there is one respondent) either in industrialised countries (Silver, Abramson and Anderson, 1986) or in Third World countries (Casterline and Chidambaram, 1984; Anker, Khan and Gupta, 1988; Anker and Anker, 1988).

Community data collection also has generally tried to use this traditional, ideal interviewing procedure of a one-to-one relationship between interviewer and respondent. The interviewer has typically located a village leader (often the village headperson) and tried to collect the required information from him or her. Exclusive use of this traditional one-on-one technique for the collection of community data can result in exacerbating the following problems.

5.1.1 Lack of knowledge and unavailability of one key informant

Community data tend to be wide-ranging, including topics such as, in the present study, on health, family planning, agriculture, education, transportation, communication, employment, social norms and opinions. It does not take much imagination to realise that one informant will rarely possess detailed knowledge on all of these topics.

One obvious way to alleviate this difficulty would be to interview a different key informant for each topic - and this procedure has been recommended (see e.g. Anker, 1980; Bilsborrow, 1985). There is, however, a practical limit on how many different key informants it is feasible to interview in a community. First of all, it will not always be clear who in the community is the most knowledgeable for each subject. Second of all, the most knowledgeable person may not be available on the day of the interview. Third of all, the most obvious informant for a subject (e.g. school teacher on education, nurse or doctor on health) may not reside in the community. Fourth of all, the amount of time required to identify and locate each of the key informants may be prohibitively high. In short, it is necessary to balance the time cost of many separate interviews with different key informants against the total interview time available and the possible loss of accuracy from not following this approach.

5.1.2 Incorrect answers may be provided deliberately

Informants may not tell the truth. First, they may deliberately hide the truth, as, for example, when there are illegal activities (e.g. whisky distilling) or conflicts between social groups. Second, informants may also purposely attempt to please the investigator by providing socially acceptable answers. Third, informants may try to impress the interviewer with local problems in the hope that future government assistance will be based on results from the data gathering exercise.

There is relatively little that can be done about this problem when data are collected in a short visit such as in the present study. Nonetheless, it is important for researchers to be cognisant of the types of information that are likely to be inaccurate and so exclude such questions from the enquiry. Or, alternatively for such topics, consideration should be given to longer duration enquiries where good rapport in the community is established and/or where observations are made of actual behaviour.
5.1.3 Biased view of key informant

A community leader may provide answers on a subject with which he or she is knowledgeable and which are correct as far as he or she is concerned. (In other words, for heuristic purposes, we assume that the previous two problems do not exist.) Even still, the information provided may be only partially correct as the informant may be indicating what is true from his/her perspective or for his/her social group. For example in answer to a question on the most common mode of travel to the nearest clinic five kilometres away, the answer might be private vehicle, bus, bike or foot, depending on the socio-economic status of the respondent. When asked about available employment opportunities in the village, men may fail to mention activities where women predominate; landlords may talk of labour shortages; landless labourers may talk about the lack of job opportunities. When asked about the extent of electrification in the community or the proportion of adults who can read or the proportion of children who attend school, informants may indicate the situation for their social reference group. Indeed, we observed in collecting information on wage rates for men, women, boys and girls in our Indian study that large landowners and agricultural labourers tended to give different responses.

Because the truth is often multi-faceted and conditions often vary between social groups, it is important to be conscious of the social composition of the communities and the topics for which information should be collected from and about each major social group. It is also important for interviewers and informants to be clear for which population groups/subgroups information is being collected.

5.2 Use of structured questionnaires

Survey questionnaires are highly structured instruments where the interviewer reads out the questions word for word as printed on the questionnaire. Structure is imposed in order to maximise the comparability of responses by standardising the conditions under which questions are posed. Adhering too strictly to structured questionnaires with fixed wordings and specified routings (e.g. depending on the answer to question C1, either questions C1a or C2 would be asked) will often be inappropriate for collecting community-level data where there are differing viewpoints, experiences and knowledge of community experiences, facilities, services and norms. For this reason, investigators need to be allowed some freedom in asking questions when administering a community questionnaire. On the other hand, the data gathering exercise needs to retain a significant degree of structure so that comparable data are collected across communities.

5.3 Person who collects community data

As should be obvious from previous discussion, collecting useful and accurate data using community questionnaires is far from easy. Yet, in the population field, previous studies with community questionnaires attached to household surveys, have tended to treat the collection of community data as a side issue (Casterline, 1987). As a result, the person responsible for collecting community data has usually had other responsibilities— for example, this person has often been the field supervisor or an interviewer who has finished his or her quota of household questionnaires for the day. Furthermore, extensive training in the peculiar aspects of collecting community information which is
different from those for collecting individual- or household-level data has usually not been provided.

It should also be obvious that the collection of accurate community-level data is more complicated and more difficult than the collection of household-level data. Identification of appropriate respondents, facilitating and encouraging the give and take of group discussions, and obtaining the respect and participation of village leaders require experience, maturity and poise. For these reasons, interviewers for community questionnaires should be in general older and more experienced than interviewers for household questionnaires. Also, persons responsible for the community questionnaires should undergo extensive training and completing community questionnaires should be the major, or only, responsibility of this person. This should include extensive pilot testing, and the training period should include practice in conducting semi-structured group discussions.

5.4 Group interviews

Disenchantment with community data provided by key informants in response to interviewers using structured questionnaires has led some researchers to the use of focused-group interviews (Pramaskute, Sporne, Chamratrithirong, Sarvaengdee, 1985; Knodel, Chamratrithirong, Debavaiya, 1987). The main strengths of the focused-group approach are said to be: (1) the free flow and non-structured nature of the discussion; (2) the use of several key informants; (3) the group atmosphere where the incorrect answers of one informant can be corrected by another informant thereby leading to a consensus among participants.

By moving away from a structured questionnaire to a free flowing format as in group interviews, one runs a number of risks however - risks that originally led to the use of the structured questionnaire format. Some of these possible problems are discussed below. It is important to note here that there will need to be considerably greater experience in the use of group interview techniques before it will be possible to draw definitive conclusions about its superiority/inferiority (and under what circumstances) to the traditional structured questionnaire approach.

5.4.1 Possibility of interviewer directing the group discussions

The interviewer in a focused-group interview (who has been dubbed "group discussion leader") is supposed to keep the discussion going, to direct it towards the questions included in the questionnaire, and to ensure that contradictory statements and opinions are resolved. While exercising this control on the discussion, the group discussion leader is supposed to stay neutral, never to criticise opinions expressed in the meeting, or to divulge his or her own opinion. The intention is for informants to resolve all of their differences of opinion and to come up with answers which are acceptable to all participants.

It does not take much experience in surveys to realise that the group discussion leader is crucial to the success of the focused-group interview - or to realize how difficult the discussion leader's task really is. Putting it negatively, group discussion leaders can greatly influence responses.
5.4.2 Possibility of one informant dominating group interviews and extra persons taking part in group interviews

Group discussions can be led or greatly influenced by one or a few individuals in the group. There can be a person with a dominant personality or a person with influence or authority to whom others defer. One of the most important tasks of the group discussion leader is to ensure that this domination does not occur. Without stifling discussion, the group leader is supposed to say that he (or she) is interested in hearing other persons' opinions and to specifically try and bring more participants into the discussion by also asking for their opinion and by asking them whether they agree with what has just been said. Another problem faced by interviewers, such as in the present study, is that due to villagers' curiosity it is very difficult to isolate a particular social group when collecting information on this social group. Persons from other social groups are likely to stand nearby, and thus influence responses by their presence, if not by their vocal responses.

While in theory it is possible to eliminate or greatly reduce the influence of one or a few talkative and dominant persons, and to ensure the active involvement of several participants, these problems will always persist to a lesser or greater degree depending on the skill of the interviewer and the personalities of the informants. Also, in a village setting, it is extremely difficult to isolate social groups for interview without raising suspicion.

5.5 Procedures used in Indian Survey

Readers are referred to Appendix C which reproduces the community questionnaire used in the present study.

Five types of respondents were identified during pretesting:

(1) elected leader (e.g. member of panchayat, other elected body);
(2) government official (e.g. talati, VLW, Munsif, revenue collector, block development officer, agricultural development officer);
(3) general opinion leader other than above (e.g. teacher, social worker, other influential person, social worker, caste/religious leader);
(4) common person;
(5) health staff personnel (VHG, AWW, subcentre, PHC).

On page 1 of the community questionnaire (see Appendix C), the preferred respondent type(s) for each type of information (i.e. section of the questionnaire) is indicated. Space is also provided on page 1 of the questionnaire for interviewers to indicate how many of each respondent type actually provided information for each section of the questionnaire. By indicating on the questionnaire itself, the preferred respondent type, we hoped both to increase the comparability of data across communities as well as to increase their accuracy.

As mentioned above, there is a danger that key informants will provide information which applies more to themselves and/or their own social group than to the village as a whole. This may be a particularly vexing problem in socially/economically heterogeneous villages such as in much of rural India where elected officials, government officials and village opinion leaders are often from higher income/higher social strata. Such informants may, for example, indicate that autorickshaw is the most common
mode of transport to the nearest town even though most villagers take a bus or that almost all families own a radio, even though this is true for only the wealthier families.

In an effort to minimise this problem, the following was done. First, probes and follow up questions were built into the community questionnaire. For example, when informants indicated that more than 50 or more per cent of households in the village have (or had 10 years ago) an electric connection or a radio-transistor, a probing question was to be asked (e.g. question C2a):

It was indicated that a high proportion of households have an electrical connection. Is this meant for the total village as a whole including all caste groups such as for scheduled caste people and poor people like agricultural labourers?

This probing type question emphasises and reminds informants and interviewers that we are interested in information for the village as a whole and not for the informant himself/herself or for the informants' own caste/religious community.

The training sessions for interviewers stressed the need to encourage the participation of several people in the collection of the community data and to solicit the opinion of different informants during the group interviews by asking other informants if they also agree with the answer already provided. A minimum of three persons was required to form a group. It was felt that through open group discussions, and letting participants discuss among themselves for some time that consensus answers (which are less likely to reflect the bias of one particular person or group) would result.

6. Some other selected problems and issues in collection of community data

Discussion in the previous sections has covered theories, definitions and techniques for collecting community-level data.

Discussion in the present section concentrates on some of the more important difficulties encountered in collecting community data in rural India, specifically on: quality of services, social groups in the village, time dimension and retrospective data, nearest available services/facilities/opportunities, and migration; also provided are the "solutions" devised for the present survey. References to particular questions in this survey are made by indicating their section and question number. Readers are again referred to Appendix C where the complete community questionnaire is reproduced.

6.1 Quality of health and family planning services available

Previous community questionnaires have been almost exclusively concerned with the presence or absence of facilities and services. Very little attention has been given to the quality/efficiency of these facilities or services. Thus, for example, information is usually collected on the presence in the community of a clinic; and if a clinic is not available in the community, the distance to the nearest clinic. Information is not usually collected on the hours the clinic is open, whether medicines and contraceptives are available, whether the staff is
professionally qualified and trained, whether there are female doctors, whether the clinic is clean, how long waiting time is, etc. Yet, it is often the quality of services that determines its use, as presence of facilities is a necessary but not a sufficient condition for use. For this reason, we feel that it is important to collect information on the quality of some key services provided by rural health centres such as primary health centres and health sub-centres.

A major effort was directed toward collecting information on the size and quality of health and family planning facilities/services in the present study. For this purpose, separate questions were developed for collecting information on the village's primary health centre (PHC) and health subcentre (see sections K and L in the community questionnaire reproduced in Appendix C) and separate visits were made to each village's PHC and health subcentre.

Such separate visits presented their own set of problems. In a number of health subcenters the ANM (i.e. nurse) responsible for the subcenter was not present on the day of the interviewer's visit. As a result, information for these subcenters in the Indian study had to be obtained from the responsible PHCs. Some difficulty was also encountered in the Indian study in the collection of PHC information since computer based records were not always accessible on the interview day, due to computer malfunctions or absence of the computer person responsible for keeping these files.

An average primary health centre in India is presently responsible for an area with approximately 50,000 population, although this coverage differs across and within states; for example, in tribal areas a PHC is expected to cover 20,000 persons. Typically, PHCs include a small operating theatre and are staffed by a medical doctor and other trained medical personnel. In India, PHCs are the main government health facility for villagers.

Family welfare centres attached to PHCs are responsible for organising and conducting family planning services, including performance of sterilisation (vasectomy, laparoscopy, tubectomy or minilap), as well as providing IUDs, condoms and pills. Nowadays, PHCs usually have trained staff for performing sterilisations and inserting IUDs.

Health subcentres in India service a population of between 3,000 and 5,000 persons. Subcentres are generally staffed by a trained female nurse (ANM) or a multipurpose worker (MPW) who is usually male as well as by a birth attendant (dai) who is almost always female. The subcentre is provided with medicines to treat minor health problems. More serious health problems are referred to the PHC under whose jurisdiction the subcentre falls. The subcentre is also closely involved in health and family planning extension work, including outreach work. This outreach work concerns, in particular, maternal and child health (MCH) and family planning. It is for this reason that the main health workers in subcentres are women. The main role of subcentre staff in family planning is to motivate people to accept contraception, to accompany them to a family planning camp or to the PHC, and to do follow up work as required.

Two types of information on the quality of health facilities/services are collected in the Indian community questionnaire: (1) size of PHCs and health subcentres (in order to obtain measures of the services/facilities
which are available); and (2) direct measures of the quality of services/facilities (as well as information on distance/time from the village to the health facility).

The size of PHCs and health subcentres is measured by the number of personnel in position (separately for doctors, trained supervisory level personnel, trained worker level personnel); number of staff personnel trained for and engaged in the insertion of IUDs; number of family planning camps organised in the past year (by type of method); number of visits to the sample village by subcentre workers. Either the absolute size of these efforts or their size relative to the population base being served (on which information is also collected) can be related to family planning acceptance of individual couples - depending on whether one believes that it is the availability of facilities and trained personnel per se or the amount of services per capita (or per village) which is more important.

In terms of measures of quality of services, the information collected on the community questionnaire is very specific to the situation found in the rural Indian health programme. The type of information on quality of health services in another country would undoubtedly be very different. Information was collected on: the adequacy and regularity of family planning supplies in both PHCs and subcentres; availability and working condition of fridges, thermocold boxes and operating theatre equipment as well as the number of inpatient ward beds in PHCs to provide an indication of the quality of available health facilities; availability of vehicles in working condition in PHCs, since vehicles are used to promote family planning and to bring prospective acceptors to the PHC; hours and days a health subcentre is usually open; where the ANM from the subcentre lives; and the cleanliness and condition of various facilities in the subcentre.

6.2 Social groups in village

The above discussion on definition of community (section 4) made the point that communities defined on the basis of administrative and geographic boundaries frequently contain separate social groups. This discussion also made the point that certain information should be collected separately for each social group in the community and certain other information should be collected on the social framework and social relationships within the community.

This type of information has not been collected on previous community questionnaires. Indian villages are, however, far from homogeneous socially, as they are almost always comprised of different Hindu castes and possibly other religious groups such as Muslims. Each caste and religious group has a different set of social norms and experiences as well as a separate set of leaders. This type of social arrangement has some very important implications for the collection of community level data. First of all, it implies that information on social norms, opinions of so-called opinion leaders and certain factual information on experiences and opportunities available in and around the village will be quite different for each social group. This, in turn, implies that these data, if they are to be meaningful, need to be collected separately from and for each social group. Second of all, it implies that certain minimal information on social structure in the village might be useful in explaining fertility behaviour and family planning acceptance.
In the community questionnaire used in the present study, the following information was collected and procedures followed in order to take into consideration the social heterogeneity of Indian villages. At the beginning of the community questionnaire, information was collected on the social structure of the village (Section A). This included information for each caste/religious group on the number of households in the village, the number of households owning 10 or more acres of land, the number of persons (male and female separately) elected to the panchayat (i.e., village council) and the degree of segregation in housing from other caste/religious groups. Based on these data, caste/religious groups in the village were ranked according to their relative political influence (based on their relative control of the panchayat), their population size, and their economic position (based on their ownership of large farms). We found little difficulty in collecting this information in the Indian study.

A second set of information (see Section J), on which we felt responses would differ greatly by caste/religion was collected in separate group interviews with persons from each of the three largest caste/religious groups. (Readers should remember that the household questionnaire used in the present study is somewhat limited in the number of socio-economic oriented questions which are included.) This included information on outmigration from the village (J1 and J2) to indicate influences and contacts outside of the village; on agricultural labour by women and children (J3 and J4) to indicate the extent to which the norm is for women and children to engage in economic/labour force activities. 

12 Caste structure in India is very complicated. To simplify matters, we identified on the community questionnaire the following major groups: scheduled caste, scheduled tribe, caste Hindu, Muslim, other religion; and informants in each village were asked to identify the largest four Hindu caste groups in the village.

13 In many areas of the Third World, community-level information should also be collected on immigration into the village. We did not collect these data, because there is relatively little immigration (besides female migration for marriage) into the villages of Uttar Pradesh, Maharashtra and Gujarat States where these data were collected.

14 It would be very useful if labour force data for women and children were collected on the household questionnaire, since the decision whether or not to have family members engage in economic/labour force activities is an important household-level decision. At the same time, however, it is also important to collect community-level data on the labour market opportunities and norms for children and women, since household-level decisions on the labour market activities of its members are greatly constrained and conditioned by social norms and macro labour market opportunities. In any case, due to interview-time constraints, such household-level data were not collected in the household schedule in the present study.
activities; on the extent of family planning and the most preferred contraceptives (J6 and J7); and on the number of males and females (in and out of the specific caste/religious group) who have promoted/encouraged others to family plan (J8, J9); on son preference norms (J6); on norms for age at marriage for daughters (J10); on the financial burden of dowry (J11); on educational norms for daughters (J12); and on perception of trends in infant and child mortality (J13).

We encountered considerable difficulty in collecting these social group specific data in the separate group interviews in our Indian study. There were a number of reasons for this difficulty. First, we found it nearly impossible to isolate a social group for its group interview. While it was easy to constitute each group (consisting of at least three persons), it was difficult to discourage persons from other social groups from attending and by their very presence affecting responses. Second, villagers did not always appreciate the value of the questions posed to them and so sometimes lost interest. It seems that villagers assembled with high expectations that the interviewer would listen to the group's problems and then possibly do something to correct them. Third, the questions on agricultural wage labour activity by women and children (J3 and J4) were felt to be insulting by some upper caste social groups. Fourth, groups sometimes experienced difficulty understanding the abstract concept presented by some of our questions and as a result sometimes provided socially acceptable responses (e.g. for J6 on son preference and J10 on female age at marriage). We feel that collecting softer, opinion type questions in a group setting requires a controlled atmosphere where participants are carefully chosen, outside influences and persons are excluded and where a small set of clearly inter-related questions are posed - something that is very difficult to accomplish in a general group interview in a village setting.

6.3 Time dimension

When investigating current behaviour, it would be sufficient to collect community data on conditions, services and facilities prevailing at the time of the survey (for example, approach road, nearest clinic, highest level of school available, availability of electricity, employment opportunities) if one were able to make the assumption that current

15 In other parts of the World, one might also want to collect information on the extensiveness of rural nonagricultural employment for women and children. We concentrated on agricultural employment in the present study because it is the much more important indicator in Indian villages.

16 Information on preferred contraceptives is based on spontaneous responses, without prompting from the interviewer (i.e. he/she is not supposed to ask about specific methods). In this way, we hope to avoid getting a long list of contraceptive methods which are known.

17 We felt that it was important not only to know how many persons in the village promoted family planning but also to know how many of them were women, since it is likely that women are much less openly active in this regard as compared to men; that is, a woman's public promotion of family planning could have a major psychological impact in promoting family planning acceptance.
behaviour is not affected by the amount of time a facility or service has been available - in other words, that there is no lag between the installation of a facility, or commencement of a service, and its effect on behaviour. This assumption, however, is unlikely to be correct.

For example, it takes time for electrification of a village to attract non-agricultural enterprises and to change consumption patterns. It takes time for public health and family planning clinics to gain the trust and confidence of community members. At the very least, there is a lag of approximately one year before there can be any effect on fertility because of the nine month gestation period between conception and birth. And in India where sterilisation is the dominant method of family planning, retrospective community information takes on added importance for current use of family planning since many users would have been sterilised a number of years ago.

When one is interested in understanding retrospective behaviour - such as number of births a woman has had, timing of family planning, migration history, employment career, survival of children, it is obviously necessary to have retrospective community data. Previous behaviour and previous decisions simply could not have been affected by community facilities which have just been installed. It is not enough to know if a community has an all-weather approach road or electricity at present. It is also necessary to know how long the facility has been there.

The need for retrospective data greatly increases the quantity of community data collected as well as decreases its quality; the latter is especially important. Partly because of the latter (the data quality issue), group (as opposed to individual) interviews with community leaders have been proposed (Knodel, Havanorn and Pramulalratna, 1984). (See section 5 for discussion on this.)

A major effort is made in the Indian community questionnaire to collect retrospective information. This includes information on when certain facilities first became available (e.g. all-weather approach road to the village, private TV, community TV, secondary school, women's clubs, health facilities) as well as what the situation was like 10 years ago as regards: extensiveness of child labour, extensiveness of family planning, number of sons felt to be required, norm on age at marriage for daughters, perceived level of infant and child mortality, population size, number of houses with electrification, cropping patterns, use of mechanised farm equipment and irrigation, availability of industrial employment.18

It is difficult to know what is the best reference period on which to collect retrospective information. We felt that less than 5 years ago was too recent and more than 10 years ago was too distant. We settled on 10 years ago as reasonably far back but not too far back. In any case, we were mainly interested in "10 years ago" or "5 years ago" as indicative reference "points" for obtaining information on the situation in the not too distant past.

19 When a sample village was near a town, some difficulty was encountered in the Indian study in collecting information on the degree of change in the availability of non-agricultural employment within a 15-20 kms radius of the village. It seems that there were so many non-agricultural employment opportunities that informants did not feel that they were able to judge the degree of change in recent years.
Respondents often did not know exactly how many years ago facilities became available, although they often had a rough idea. The further back in time that a facility became available the less certain informants seemed to be about when the facility became available. For this reason, we indicated on the community questionnaire itself that we were not interested in exactly when a facility became available if it was 10 or more years ago. This procedure helped to reduce frustration and difficulty for informants as well as reduce interview time without greatly affecting the usefulness of the data collected, since the marginal effect on behaviour of each additional year beyond ten of a facility should be relatively small.

It is important for readers to note that only minimal retrospective information was collected on government health facilities/services available in PHCs and health subcentres. We felt that it was not possible to collect reasonably accurate retrospective information on staffing and quality of PHC or health subcentre facilities mainly because high staff turnover meant that current staff members were unlikely to have been present in this same PHC (or subcentre) 5 years ago; in addition, records are often incomplete and inaccurate.

This difficulty in collecting retrospective data on government health facilities/services is made more serious by the fact that the government health system has been greatly expanded in many areas in India in recent years. Indeed, the current goal of the government health system is to expand facilities such that PHCs cover 30,000 to 50,000 persons rather than 100,000 persons as previously and that health subcentres cover 2,000 to 3,000 persons rather than 5,000 persons as previously. The resulting rapid expansion of health facilities in recent years (albeit unevenly across India) has one very important implication for our study - it implies that many of the PHCs and subcentres that are presently responsible for sample villages were not responsible for the sample villages several years ago (or possibly were not even in existence several years ago). So, even if we were able to collect retrospective information for the health subcentres and PHCs presently responsible for our sample villages, these data might not apply to the past situation of our study villages.

In order to obtain some retrospective information on facilities/services for India's rapidly expanding health programme, information was collected on whether or not the presently responsible subcentre (and PHC) was responsible for our study village five years ago. If not, interviewers asked for information on the distance between the previously responsible PHC (and/or subcentre) and the sample village. Based on these data, it will be possible to know for five years ago the distance from the sample village to its PHC and to its subcentre as well as the population base this PHC and subcentre served. There will not, however, be any retrospective information on the quality of health facilities/services per se in such circumstances.

6.4 Migration and facilities/services in previous villages

Geographic movement (i.e. migration) is common. For example, household A in community A may have migrated recently from community B, or during the year household A in community A may have lived for some time in community C. The implications of migration for the present discussion is that community data may be only partially relevant for in-migrants
(especially for retrospective behaviour such as cumulative number of children and births).

One could, of course, collect detailed community data on all of the communities in which sample households and individuals have lived. This is, however, impractical. Not only might sample households have lived in many different communities, but in addition it is highly unlikely that the individuals involved would possess detailed retrospective information for each of these previous communities.

In light of the practical difficulties involved, two possible alternatives come to mind. First, one could collect rudimentary information on the household questionnaire on one or more previous communities in which household members have resided - perhaps on population size since this is usually a reasonably good proxy for the availability of infrastructure facilities such as health clinic, family planning clinic, electrification and approach road. It is our feeling that although migrants will not have an exact idea of how many persons were living in their previous residence(s), that they will have a rough idea of its relative size. Second, in the analysis stage, migrant households could be given special treatment. Either they could be dropped from the analysis (perhaps depending on how long they had lived in the sample village) or they could be analysed separately (perhaps with time as explanatory interactive variable), since community characteristics of the present community have probably affected the behaviour of migrants (especially recent migrants) differently than that of non-migrants, especially when partially retrospective behaviour such as cumulative number of births is concerned.

The above two possibilities are, however, ignored in the community questionnaire used in the Indian study for two reasons. First, we knew that information on migration was not collected on the household schedule due to limitations on interview time. Second, inmigration into sample villages (other than by women upon marriage) is not very common in the states where the study was completed. In areas where non-marriage-related migration is important, however, considerably more thought would need to be given to issues on how to collect information on previous residences and then to incorporate these data into the analysis.
7. **Summary and conclusions**

This paper has been concerned with the collection of community-level information through the use of community questionnaires, especially for use in understanding the determinants of fertility and family planning. This discussion has been set, to a large extent, within the context of the situation in rural India and the community questionnaire used in a large 1988 household community survey conducted in the States of Uttar Pradesh, Maharastra and Gujarat. Discussion focused on: (1) advantages of community-level data for policy-makers and researchers; (2) how and why community-level factors may be related to the fertility and family planning of couples; (3) theoretical and practical considerations in defining what is meant by "community"; (4) techniques for collecting community-level data; and (5) in-depth discussions of some of the more important problems in collecting accurate and relevant community-level information. Appendix A provides a list of the community-level information collected in the survey; this also includes an indication of what the authors consider to be a core set of community-level variables for fertility/family planning oriented surveys. Appendix B provides a list of the types of community-level variables collected in previous community surveys such as the World Fertility Survey. Appendix C reproduces the community questionnaire used in the present study.

It should have been clear from the discussion in this paper that community-level data are a potentially valuable source of information for planners/policy-makers and researchers interested in a broad range of economic, social and demographic issues. It should also have been clear from these same discussions that there are serious difficulties in collecting accurate and relevant community-level data through community questionnaires and that experience in doing this satisfactorily is somewhat limited. It is for this reason that we have devoted considerable attention to difficulties encountered in the collection of community-level data and to the procedures/"solutions" we adopted for collecting these data in our study. While the discussion was oriented toward the situation in India, the procedures/"solutions" adopted should have more general applicability. These include the following aspects that we feel are important and somewhat unique for collecting community-level data:

1. Considerable attention is devoted to defining "community" and clarifying differences between the physical/geographic aspects as opposed to the social aspects of "community". While concluding that it is necessary to define "community" on the basis of physical boundaries such as village (as given in administrative records), for practical reasons associated with sampling, we also concluded that it is important to consider major social variation within villages (castes and religious groups in India). For this reason, information was collected in the Indian study on the number of households in each caste/religious group in the village along with information that indicates each group's social, economic and political influence in the village. Information was also collected on the norms, opinions and experiences of the three largest caste/religious groups through separate group interviews with each of the three largest castes/religious groupings - although it is important to note that we encountered difficulty in collecting information on norms and opinions in these separate group interviews in our Indian study.
2. Discussion in the text brings out the fact that villages in India oftentimes consist of two or more units that are separated from each other by a kilometre or more of a dirt road or path. And, access to certain facilities/services such as schools and roads are different for persons living in a mother village as compared to the situation for persons living in a hamlet (satellite village). Also, hamlets and mother villages tend to be quite different in terms of size and social structure. For these reasons, information was recorded on the household schedule indicating if a sample household was located in a mother (nucleus) village or in a hamlet (satellite village).

3. The preferred type of informant/respondent for each section of the community questionnaire was indicated/printed on the community questionnaire used in the Indian study. This was done in order to guide the interviewer, since it was felt that previous community questionnaires have paid too little attention to who provides the information and this is an important short-coming of previous studies as the truth is many-sided; in any case, one person cannot possess all the wide-ranging community-level information which is usually collected.

4. All interviewing was done using group interviews in the present study. (In any case, it is very difficult in rural areas of most developing countries to conduct private one-on-one interviews.) A minimum of three informants was required to form a group. We felt that the free flow and give-and-take of group discussions were well suited to collecting community-level data as we were interested in information for the village (or caste) as a whole and not in the situation of one person. We also felt that retrospective information, such as when facilities/services were installed/began, was more likely to converge toward the truth based on group discussions than based on the responses of one key informant. It is worth noting our feeling, however, that use of this group interview approach worked out better for the collection of factual information than it did for the normative and opinion questions that were collected in the separate social group interviews.

5. Interviewers conducting the community interviews in the present study were specially trained and only responsible for completing the community questionnaire. We found that it was important for these interviewers to be older, more mature and more experienced than usual in order to be able to more effectively deal with groups of informants; we also found that it was useful to encourage interviewers to probe and so go beyond the constraints of a structured questionnaire. These interviewer-related aspects differ from many previous studies where supervisors or interviewers, who had other responsibilities, were not given any special training and completion of the community questionnaires was an additional work item. We feel that the difficulties associated with collecting accurate community-level data require specialised training and exclusive responsibility.

6. Retrospective information was collected for many topics in the present study. Such information is important, since current behaviour is undoubtedly affected with a lag by the availability and accessibility of facilities/services. For example, it takes time for people to learn about, to trust, and to accept the services provided by a health clinic; it takes time for the electrification of a village to affect life through its effect on employment and income earning opportunities, use of radios and TVs, etc. In any case, cumulative type behaviour such as the number of births a couple has had or current use of contraception, must have been affected by the past availability of community facilities/services.
7. The community questionnaire in the Indian study has built-in/printed probes in order to force interviewers into questioning the validity of certain responses. We feel it is important to encourage and stimulate interviewers to question responses, to engage in a dialogue with informants and not necessarily accept answers as provided, to remind informants that the interviewer is interested in responses that apply to the entire village (or caste group as applicable) and not to someone's own opinion or experience, and to have several informants actively participate in the group discussions.

8. Separate visits were made, and interviews held, in the present study in order to collect information on government health and family planning facilities/services. This entailed a major investment of survey time and money, since government primary health centres (PHCs) and health subcentres are centrally located and so are, in most instances, some distance from our sample villages. This meant that it was often necessary for the interviewer responsible for the community questionnaire to revisit a study site just to collect the PHC and health sub-centre information, since the study team responsible for completing the household schedules had moved on to another area.

9. The major investment of survey time and money required for these separate visits to PHCs and health subcentres was felt to be worthwhile, because it enabled us to collect information on the quality of the health and family planning services. We feel that data on the quality of health services/facilities (which unfortunately has been collected in only a few previous community questionnaires) is important, since the quality of services/facilities is at least as important as proximity per se in explaining utilisation.

We hope that others find the community questionnaire and the associated discussion contained in this paper to be useful, since we feel that there is considerable potential both for using community-level data in policy-research as well as in population planning and development planning, yet much still to be learned about how to collect community-level data. In particular, researchers must become more attuned than they have been in the past to the characteristics and peculiarities of the local setting as well as to the inherent difficulties in collecting community-level data if accurate and relevant community-level data are to be collected.
Appendix A: Listing of information collected in community questionnaire used in Indian study

As an aid to understanding what information was being collected on the community questionnaire, the following outline was put together. It both indicates what information was collected as well as what we consider to be a core set of information for community questionnaires where the interest is in fertility, family planning and population-development issues; this is indicated by the following mark: >.

Before completing the community questionnaire, interviewers had to indicate the types of persons who answered the questions posed in each section of the questionnaire. As an aid to interviewers, five types of respondents were identified (elected leader, government official, general opinion leader other than above, common people, health staff), and the preferred type(s) for each section was (were) printed in the questionnaire itself.

Readers might also be interested in inspecting Appendix B where a listing of relevant community-level variables (and whether they were collected in other surveys) is reproduced from Bilsborrow and Guilkey (1987) as well as table 1 in the main body of the text which indicates reasons for the expected relationships between community-level variables and fertility/family planning.
A. Population size and village setting (Note: Information was collected for main village, excluding hamlets that are isolated by more than one km distance from the main or mother/nucleus village. Each sample household has a coded value attached to it which indicates if the household is from a nucleus village or from a hamlet.)

1. Total population

   -------> Presently
   *1981 (from census handbook)
   *1971 (from census handbook)

2. Occupational distribution (*1981 from census handbook which indicates number of cultivators, agricultural labourers, household industrial workers, other main workers, marginal workers, non-workers). Note that this information is recorded in section G.

3. Households:

   -------> Total presently
   -------> Broad breakdown by religion and for Hindus for casted, scheduled caste, scheduled tribe (also further breakdown by main casted Hindu castes)

4. For each main caste/religious group (up to maximum of nine groups including five largest casted Hindu groups as defined by village leaders):

   Degree of segregation in housing
   Number of households owning 10+ acres of land
   Number of male and female panchayat (i.e. village council) members
   Number of households from where a male has temporarily emigrated (for largest three social groups only as collected in Section J)
   Number of households which have moved out of village in past 10 years (for three largest social groups only as collected in Section J)

5. Whether village regularly affected by:

   Floods
   -------> yes or no
   when last occurred

   Drought
   -------> yes or no
   when last occurred for three consecutive years in past 10 years

6. Type of village

   -------> Whether nucleus village or hamlet
   -------> Whether health facilities available (i.e. whether village has PHC, or health subcentre, or dispensary)
   -------> Topography of agricultural land (i.e. plain area, hill area, or desert area)
B. \textbf{Transportation}

1. Approach road connecting to village

\begin{itemize}
  \item type of road
  \item (if all-weather road) year first in operation
  \item (if not all-weather road) distance to nearest place with all-weather road; time to walk this distance
\end{itemize}

2. Nearness of other places

\begin{itemize}
  \item Bus stand
    \begin{itemize}
      \item distance
      \item most common mode of transport to get there
      \item average time to get there by most common mode of transport
      \item parts of year place is extremely difficult to reach
    \end{itemize}
  \item Town
    \begin{itemize}
      \item distance
      \item most common mode of transport to get there
      \item average time to get there by most common mode of transport
      \item parts of year place is extremely difficult to reach
    \end{itemize}
  \item PHC, primary health centre \textit{(Note: this information is collected for both the closest PHC and the administratively responsible PHC)}
    \begin{itemize}
      \item distance
      \item most common mode of transport to get there
      \item average time to get there by most common mode of transport
      \item parts of year place is extremely difficult to reach
    \end{itemize}
  \item Health sub-centre \textit{(Note: this information is collected for both the closest subcentre and the administratively responsible subcentres)}
    \begin{itemize}
      \item distance
      \item most common mode of transport to get there
      \item average time to get there by most common mode of transport
      \item parts of year place is extremely difficult to reach
    \end{itemize}
\end{itemize}
C. Electricity

1. Whether electrified for domestic use
2. When electrification first installed
3. Proportion of households electrified now
4. Proportion of households electrified 10 years ago
D. Communication

1. Ownership of radio/transistor
   -----> Number of households owning radio
   Number of shops keeping radio where people can listen
   -----> Whether community radios available
   -----> Whether community radio works

2. Ownership of TV
   -----> Number of households owning TV
   -----> When first household owned TV was purchased
   -----> Whether community TV available
   -----> When community TV was first installed
   -----> Whether community TV works
E. Education (Note: Information was only collected on secondary schools, because we felt that secondary as opposed to primary schools have an important effect on fertility/family planning. In many countries, others, however, may feel that it is also important to collect information on primary schools. Also note that by mistake no information was collected on male and female enrolment in the Indian study; it is important to collect this information.)

-----> Whether available in village
-----> If available in village:
        since when available
        number of male and female teachers
If not available in village:
        distance to nearest school
        mode of transport to nearest school
        time to nearest school by most common mode of transport
-----> whether available within 2km

-----> If not available in village but school is available within 2 km: since when it is available
F. Social Institutions

1. Mahila Mandal (women's club) or other women's group
   - Whether present
   - Since when functioning
   - Number of members
   - Activities undertaken
   - Frequency of meetings
   - Whether does any activities to support FP
   - What activities done to support FP

2. Village Panchayat (town council)
   (Note: number of male and female panchayat members for each religious/caste group was collected in Section A)
   - Whether any activities done to support FP
   - What activities are done to support FP
   - Whether gives any special financial incentives to FP acceptors
   - Size of these incentives to FP acceptors

3. Taluka and district Panchayat
   - Whether gives any financial incentives to support FP
   - Size of these incentives
G. Agriculture

1. Number of households owning 5-9 acres (Note that the number of households owning 10+ acres of land was recorded in Section A. Also, note that the land size categories used need to be adjusted for each country in light of local conditions.)

2. Two main crops for each growing season
   ----> Presently
   ----> 10 years ago

3. Children (ages 6-14) as agricultural labourers
   Number or proportion of households with a child as an agricultural labourer (for three largest caste/religious groups only as collected in Section J)
   Change in number of households (i.e. increase, same, decrease) with a child as an agricultural labourer over past 10 years (for three largest caste/religious groups only), as collected in Section J
   ----> Amount of pay received per day
   Types of modern agricultural tasks performed

4. Women as agricultural labourers
   Number or proportion of households with an adult woman as an agricultural labourer (for three largest caste/religious groups only as collected in Section J)
   ----> Amount of pay received per day
   Types of modern agricultural tasks performed

5. Powered equipment (tractor, thresher, harvester separately)
   Number of pieces of equipment being used now
   Number of pieces of equipment being used 10 years ago
   Number or proportion of households using this equipment now
   Number or proportion of households using this equipment 10 years ago.

6. Irrigation
   ----> Extensiveness of irrigation (i.e. proportion of cultivatable land irrigated)
   Major changes in irrigation in past 10 years (for canals and tubewells separately)
   whether any change introduced in past 10 years
   year change introduced
   whether considerable increase in past 10 years
H. Non-agricultural Job Market

1. Industrial employment in village
   - Whether any jobs available
   - Approximate number of jobs available
   - Approximate number of persons from village employed in such jobs (separately for children, adult women, adult men)

2. Industrial employment outside village within 15-20 kms area
   - Whether any jobs available
   - Approximate number of jobs available
   - Approximate number of persons from village employed in such jobs (separately for children, adult women, adult men)

(Note: for core form Q, above information should be collected for inside and outside village all together and not separately done here)

3. Aspects of the available industrial employment inside and outside the village (taken together)
   - Whether it has increased or decreased over past 10 years
   - Whether it is available seasonally or around the year
   - Approximate number of women and children from village who work in these jobs
   - Usual daily wages of adult men, adult women, boys, girls

4. Other regular employment opportunities (other than as agricultural labourer or industrial worker or in emergency employment schemes)
   - Types of employment which are available
   - Approximate number of adult men, adult women, boys, girls
   - Whether employment is available seasonally or around the year

5. Work done in home to earn money
   - Whether available
   - What type of work available
   - Approximate number of households doing this
   - Whether women are doing this
   - Whether children are doing this
I. Health and Family Planning Services

1. Family planning extension programmes organised in village in past one year
   - Group meetings
     - yes or no
     - (if yes) number of times last year
   - Opinion leader training
     - yes or no
     - (if yes) number of times last year
   - Film show
     - yes or no
     - (if yes) number of times last year
   - Drama/puppet show
     - yes or no
     - (if yes) number of times last year
   - Immunisation camp
     - yes or no
     - (if yes) number of times last year

2. CHG (community health guide)
   - Whether CHG in village and he/she provides services
   - Whether CHG is male or female
   - Whether CHG advises couples on FP
   - Whether CHG provides condoms and/or pills to couples
   (If no CHG) Whether CHG existed in past and if so last year he/she worked; whether man or woman; whether pills and/or condoms were stocked

3. Stocking of condoms in shops
   - Number of shops stocking condoms
   - Number of shops stocking condoms (by type of shop)
   - Types of condoms stocked (by type of shop)
   - Reasons why shops do not stock condoms (by type of shop)

4. Private doctors and health practitioners
   - Total number
   - Number of qualified allopath doctors
   - Number of qualified ISM/RPM doctors
   - Number of unqualified practitioners/compounders

5. Health facilities in village
   - Anganwadi centre
     - yes or no
     - (if yes) when first established
   - PHC
     - yes or no
     - (if yes) number of years in operation
   - Dispensary
     - yes or no
     - (if yes) number of years in operation
   - Health sub-centre/MCH center
     - yes or no
     - (if yes) number of years in operation
6. Any cases in village of serious injury to health because of adoption of FP
   Yes or no
   (if yes) what happened
   (if yes) when happened
   (if yes) which FP method was involved

7. Any cases in village of woman becoming pregnant after sterilisation in past five years
   Yes or no
   (if yes) number of cases in past five years
J. Opinions on health and family planning of caste/religious community leaders for their community (to be collected by separate group interviews for each of the three largest religious/caste groups in the village, with restriction that to be eligible group must comprise at least 20 households and 10 per cent of village household population). Note that unless otherwise indicated all questions in this section refer to the particular caste/religious group being interviewed. Also note that no questions in this section are indicated as candidates for a core short form questionnaire because of the difficulty of conducting separate group interviews with several different social groups within a village.)

1. Migration
   Number of households with a male member living away
   Number of households migrated out of village in past 10 years

2. Women working as agricultural labourer
   Extent to which women work as agricultural labourers
   Change in this in past 10 years

3. Children (10-15 years of age) working as agricultural labourer
   Extent to which women work as agricultural labourers
   Change (increase, same, decrease) in this in past 10 years

4. Level and change in family planning (FP)
   How common FP is now
   Perceived extent of change (increase, same, decrease) in FP in past 5 years

5. Sons
   Number of sons considered essential now
   Number of sons considered essential 10 years ago
   Number of daughters couples willing to have to ensure a second son

6. Most preferred contraceptive methods (spontaneous responses without any prompting)

7. Promotion of family planning (FP)
   Number of persons (for men and women separately) from their community in village who have promoted FP
   Number of persons (for men and women separately) from other communities in village who have promoted FP

8. Marriage age for daughters
   Age daughters normally get married now
   Age daughters normally got married 10 years ago

9. Dowry
   How heavy dowry is felt to be
   Whether its payment delays female age at marriage

10. Perceived change in infant and child mortality in past 10 years

11. Education of girls
    Usual level now
    Reasons for not sending girls to a higher level
    Usual level 10 years ago
K./L. Information on health sub-centre and PHC (collected in separate visits) Note that questions in this section are not indicated as candidates for inclusion in a core, short form questionnaire, because separate visits to health and PHC are required - even though it would be good to include some information (perhaps from centre records and observation) in a core, short form questionnaire.

1. Name

2. Year established

3. Distance (by observation, and as reported in Section B)

4. Coverage
   Population (total) covered
   now
   5 years ago
   Villages (total) covered
   now
   5 years ago
   Number of subcentres under PHC
   now
   5 years ago

5. Number of visits to study village by health workers in past 3 months (for subcentre only)
   (Note: This information should be taken from health worker's diary)

6. Staffing by gender
   Number of general health workers (for subcentre only)
   Number of doctors (for PHC only)
   Number of supervisory health workers (for PHC only)
   Number of extension workers (for PHC only)

7. Insertion of IUD
   Number of ANMs (i.e. registered nurses) or MPWF (female multi-purpose workers) trained for this (also for LHV for PHC)
   Whether any ANMs/MPWFs doing this (also for LHV for PHC)
   Number of insertions done in last one year (for subcentre only)

8. Family planning camps held in past one year (for PHC only)
   Number of vasectomy camps
   Number of tubectomy/minilap camps
   Number of laparoscopy camps
   Number of IUD camps

9. Fixed day for vasectomy/tubectomy/laparoscopy/minilap (for PHC only)
   Whether there is a regular fixed day for this
   (If yes) interval
10. Number of operations done in past two years and past four years (for PHC only)
   - Tubectomy
   - Laparoscopy
   - Minilap
   - Vasectomy

11. Number of doctors trained for the following (PHC only)
   - Vasectomy
   - Tubectomy
   - Laparoscopy
   - Minilap
   - IUD
   - MTP

12. Supply position of contraceptives
   - Condom
   - IUD, CuT and Lippi's loop
   - Pill

13. Number of vehicles available and in working condition (for PHC only)

14. Situation 5 years ago if PHC (or subcentre) was not responsible for study village
   - Distance to study village from previously responsible PHC or subcentre (if not same PHC or subcentre 5 years ago)

15. Quality of subcentre services (in addition to relevant above information)
   **BY OBSERVATION WHETHER**
   - open on day of study visit
   - separate subcentre building
   - clean
   - has water facility
   - building in need of repair
   - examination table available
   - situation in village is easily accessible
   - there is sitting arrangement outside for waiting
   **BY ASKING COMMON PEOPLE IN SUBCENTRE VILLAGE**
   - hours usually open
   - days usually open
   - whether ANM lives in subcentre village or area

16. Quality of PHC services (in addition to relevant above information)
   - number of fridges in working order
   - number of thermocold boxes in working order
   - availability and in working condition in operation theatre of oxygen cylinder
   - water facility
   - autoclare for sterilising surgical instruments
   - shadowless lamp
   - in-patient facilities
   - whether available
   (if available) number of beds
Appendix B: Listing of community information collected in community questionnaires used in 17 World Fertility Surveys and Bicol Philippines Survey

The following table from Bilsborrow and Guilkey (1987) is reproduced in order to provide readers with a general perspective on the types of community-level information other researchers feel have important effects on the fertility and family planning acceptance of couples.
<table>
<thead>
<tr>
<th>Item</th>
<th>WFS(^b) Surveys (out of 17)</th>
<th>NSol(^c) Philippines Survey</th>
<th>Other Recommended Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of Family Planning Clinic</td>
<td>Yes (7)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>If not, distance to nearest</td>
<td>Yes (6)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Time to nearest</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Whether available in past (e.g., 5 years ago)</td>
<td>Egypt</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Methods available now</td>
<td>Egypt</td>
<td>No</td>
<td>Cost of methods</td>
</tr>
<tr>
<td>Methods available in past</td>
<td>No</td>
<td>No</td>
<td>Time cost of obtaining method</td>
</tr>
<tr>
<td>Cost of methods</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Hours and days open</td>
<td>Partial (2)</td>
<td>Yes</td>
<td>Treatment of patients (waiting room, privacy considerations), toys or child care available for older children</td>
</tr>
<tr>
<td>Personnel available</td>
<td>No</td>
<td>Partial</td>
<td></td>
</tr>
<tr>
<td>Number of clinics</td>
<td>Malaysia</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Other source of family planning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital or health clinic</td>
<td>Yes (6)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Yes (4)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Doctor</td>
<td>Yes (5)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Field workers (Outreach)</td>
<td>Yes (3)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Use levels of family planning methods</td>
<td>Yes (3)</td>
<td>No</td>
<td>Need by ethnic, SES, etc., group</td>
</tr>
</tbody>
</table>

**Health Facilities**

| Availability of hospital/health clinic | Yes (all 17) | Yes |  |
| If not, distance to nearest | Yes (11) | Yes |  |
| Time to nearest | Mexico | Yes |  |
| Personnel | No | Yes |  |
| When became available | No | Yes |  |
| Other availability of doctor, nurse, midwife | Yes (11) | Yes |  |
| Numbers of each | Egypt | Yes |  |
| When became available | No | Yes |  |

<table>
<thead>
<tr>
<th>Item</th>
<th>WFS&lt;sup&gt;b&lt;/sup&gt; Surveys (out of 17)</th>
<th>Bicol&lt;sup&gt;c&lt;/sup&gt; Philippines Survey</th>
<th>Other Recommended Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Facilities (continued)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of pharmacy</td>
<td>Yes (14)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>If not, distance to nearest</td>
<td>Yes (11)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Whether vaccination campaigns</td>
<td>Yes (2)</td>
<td>No</td>
<td>When conducted?</td>
</tr>
<tr>
<td>Water treatment, availability of potable water</td>
<td>Yes (12)</td>
<td>Yes</td>
<td>Percent of houses with access to treated water</td>
</tr>
<tr>
<td>Percentage of households with piped water</td>
<td>Yes (4)</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Most prevalent diseases, illness</td>
<td>Yes (2)</td>
<td>No</td>
<td>Prevalence of fertility-inhibiting diseases</td>
</tr>
<tr>
<td>Number of infants dying in one-year period</td>
<td>Malaysia</td>
<td>No</td>
<td>Rates of infant/child mortality; whether generally considered lower than five or ten years ago</td>
</tr>
<tr>
<td>Whether recent epidemics (and natural disasters)</td>
<td>Bangladesh</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Whether sewage treatment</td>
<td>Yes (4)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Percentage of households with</td>
<td>Ecuador</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Educational Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of primary, secondary school</td>
<td>Yes (all)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>If not, distance</td>
<td>Yes (14)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>If not, time cost</td>
<td>Yes (1)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Number of primary schools</td>
<td>Yes (3)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Attendance level</td>
<td>Yes (3)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Enrollment rate</td>
<td>Malaysia</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>When school became available</td>
<td>Nigeria&lt;sup&gt;d&lt;/sup&gt;</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td>Egypt</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Complete or incomplete school?</td>
<td></td>
</tr>
<tr>
<td>Item</td>
<td>WGB Surveys (out of 17)</td>
<td>SocioPhilippines Survey</td>
<td>Other Recommended Information</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------</td>
<td>-------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td><strong>Educational Facilities (continued)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of other educational institution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher education institution</td>
<td>Yes (4)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Adult literacy program</td>
<td>Yes (2)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Educational attainment of adults</td>
<td>Yes (1)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td><strong>Transportation, Communication, Electrification, Other Economic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
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<td>Transportation facilities</td>
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<tr>
<td>Within community</td>
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<td>Roads</td>
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<td>If not, distance to nearest</td>
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<td>Other, within community</td>
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<td>Transport linkages with larger cities, market centers</td>
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<td>Roads</td>
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<td>Item</td>
<td>WFF (^{b}) Surveys (out of 17)</td>
<td>Bicol (^{c}) Philippines Survey</td>
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<td>Prevalence or use level</td>
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<td>Economic Conditions:</td>
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<td>Occupational distribution (at least partial)</td>
<td>Yes (4)</td>
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<td>Changes in production levels in past 5 years</td>
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<tr>
<td>Nonagricultural establishments</td>
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<td>Seasonal employment outside</td>
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<td>Ownership of wealth (land)</td>
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<td>Yes</td>
<td>Other ownership of wealth (e.g., mills, factories)</td>
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<td>Percent households owning</td>
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<td>Proportion sold, consumed</td>
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<td>Livestock</td>
<td>Thailand</td>
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<td>Fruit, vegetable gardens</td>
<td>Egypt</td>
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<tr>
<td>Item</td>
<td>WFS&lt;sup&gt;b&lt;/sup&gt; Surveys (out of 17)</td>
<td>Bicol&lt;sup&gt;c&lt;/sup&gt; Philippines Survey</td>
<td>Other Recommended Information</td>
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<tr>
<td>-------------------------------------------</td>
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<td><strong>Agricultural technology</strong></td>
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<td>Yes (2) Malaysia</td>
<td>Yes</td>
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<td>Mostly irrigated or not</td>
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<td>Ditto, other technology</td>
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<td>?</td>
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<tr>
<td>Proportion using</td>
<td>Yes (4)</td>
<td>?</td>
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<td>Use of new seeds</td>
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<td>Prevalence of child (by sex), female employment. How close to home?</td>
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<td>Proportion planting</td>
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<td>Changes in past 5 years in employment</td>
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<td>?</td>
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<td>Visits from agricultural extension workers</td>
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<td>Who do extension agents visit? Coverage?</td>
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<td>Of agricultural worker</td>
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<td>By major age/sex group</td>
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<td>Availability of consumer items</td>
<td>Nigeria</td>
<td>No</td>
<td>Changes in wages.</td>
</tr>
</tbody>
</table>

**Basic Demographic Characteristics**

- Population size: Yes (2) Yes
- Total land (or arable land): Yes (3) Yes
- Population density: Yes (2) Yes
- Religions, ethnic composition: Yes (5) No
- Extent of in/out-migration: Yes (2) No
- Regulation of births/deaths: Egypt ?
<table>
<thead>
<tr>
<th>Item</th>
<th>WPS&lt;sup&gt;b&lt;/sup&gt; Surveys (out of 17)</th>
<th>Bicol&lt;sup&gt;c&lt;/sup&gt; Philippines Survey</th>
<th>Other Recommended Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social/political</strong></td>
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<td>Political leadership</td>
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<td>Locus of power</td>
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<td></td>
<td>Attitudes toward family planning</td>
<td>No</td>
<td>No</td>
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<tr>
<td></td>
<td>Special development or social</td>
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<td>No</td>
</tr>
<tr>
<td></td>
<td>policies at local level</td>
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<td>Community organizations</td>
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<td></td>
<td>Cooperatives</td>
<td>Mexico</td>
<td>Yes</td>
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<tr>
<td></td>
<td>Political parties, participation</td>
<td>Bangladesh</td>
<td>Yes</td>
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<tr>
<td></td>
<td>Social, religious, women's groups,</td>
<td>Yes (1)</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>etc.</td>
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<tr>
<td>Community self-help programs</td>
<td>No</td>
<td>?</td>
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</tbody>
</table>

<sup>a</sup>Data indicated as available are global or obtained from sources other than sample households, for reasons given in IV.8. They are thus not "contextual" variables (aggregated across sample households) in the sense of Freedman (1974): see IV.8.

<sup>b</sup>Based largely on Singh (1984), pp. 85-98. Some sort of community-level data collection was carried out in 17 of the 41 developing countries participating in the WPS program. Only in two (Mexico and Cameroon) was any data collected for urban communities, and only in Mexico did this amount to anything significant. The numbers of countries for which the data were collected are indicated in parenthesis. Whenever the data was collected only for a single country, that is indicated explicitly.

<sup>c</sup>Based largely on Popkin et al. (1982) and personal communications with Barry Popkin, for which we are especially grateful. The Bicol (regional) survey was a multi-purpose survey designed to collect data to evaluate the impact of a variety of regional development projects supported by the World Bank, AID, etc. Since it included extensive community data and also a fertility history, it lends itself well to contextual analyses of the determinants of fertility. It was carried out in 1978 and again in 1983 on roughly 1500 households in 100 sample communities.

<sup>d</sup>The only WPS country which determined whether the facility existed in the community five years earlier was Nigeria. Egypt obtained retrospective details on certain items.

<sup>e</sup>Mexico obtained also ejido or communal land ownership.

<sup>f</sup>Only Ivory Coast obtained such details on use levels by ethnic, etc., group.
Appendix C: Full community questionnaire used in Indian Survey

The attached community questionnaire was administered in villages in three Indian states - Maharashtra, Uttar Pradesh and Gujarat. Readers interested in what we consider to be a reasonable shortened version of the community questionnaire are referred to Appendix A for an idea of which questions we feel should be retained in a shortened version. The main changes are the dropping of questions on the short form questionnaire on caste/religious structure in the village; the dropping of opinion questions and separate interviews with each of the main caste/religious groups; the dropping of separate visits to and interviews with health officials at PHCs and subcentres; less detail for a number of questions.

The community questionnaire is divided into sections A - L. Information for sections A, C, D, E, F, G, H are to be collected mainly from elected village leaders and government officials. Most of this information is factual in nature and requires broad knowledge of the village over the years. These questions also serve a secondary purpose as they allow the interviewer to introduce to village leaders the aims and purposes of the household survey. Sections B, part of G and I are also mostly factual in nature but the informants are not supposed to be elected village leaders or government officials, partly because village leaders will have already spent somewhere over one hour providing information and we felt that it was impractical to expect them to give more of their time or for their attention span to remain high for a longer period of time; we also felt that some of the questions in sections B and G should be answered by the so-called common people. Section J which is concerned with the opinions/norms/experiences of the three main caste/religious groups is supposed to be answered by separate groups of opinion leaders and common persons from each of these three largest caste/religious groups. Sections K and L are to be answered by health staff from the primary health centre (PHC) and the health subcentre respectively.
COMMUNITY INFLUENCES ON COUPLES' FERTILITY BEHAVIOUR
(AN ILO SPONSORED STUDY)

COMMUNITY SCHEDULE

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<td>Project Code</td>
<td>C</td>
<td>F</td>
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<tr>
<td>State</td>
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<td>Maharashtra</td>
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<tr>
<td>District</td>
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<td>Taluka/Tahsil/PS</td>
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<tr>
<td>Type of Village</td>
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<td>Status</td>
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</tr>
<tr>
<td>Topography</td>
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<td>Name of Investigator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of Interview</td>
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OPERATIONS RESEARCH GROUP
DR. VIKRAM SARABHAI ROAD
BARODA — 7

59
<table>
<thead>
<tr>
<th>Section Description</th>
<th>Preferred R Types *</th>
<th>Actual R Types</th>
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<td>R1 Type</td>
<td>R2 Type</td>
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<tr>
<td>B Transportation</td>
<td>3, 4</td>
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<td>C Electricity</td>
<td>1, 2</td>
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<td>D Communication</td>
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<td>F Social Institutions</td>
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<td>G Agriculture</td>
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<td>H Non-agricultural job market</td>
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<td>I Health &amp; Family planning</td>
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<tr>
<td>J Opinions (separate for largest caste communities)</td>
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<tr>
<td>K Sub-centre level (separate visit)</td>
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<tr>
<td>L PHC level (separate visit)</td>
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</table>

* Codes:
1. Elected leader (panchayat, other elected body)
2. Government official (talati, VLW, Munsif, revenue collector, BDO, agricultural development officer, etc)
3. General opinion leader other than above (such as teacher, other influential person, social worker, caste/religious leader)
4. Common knowledge people
5. Health staff (PHC, sub-centre, VHG, AWW)
A POPULATION SIZE AND VILLAGE SETTING

A1 Population size of the village according to 1971 and 1981 Population Censuses

Total Population : 1981 : ________________
1971 : ________________

A2 What is the total population of the village at present? ________________

(INS: Enter A 3 Information in Table 1)

A3 a) What is the total number of households in this village?

b) Among caste Hindus what are the main castes and what is the number of households belonging to each caste group? Begin entering information in Table 1 by starting with the caste which is largest in number, then second largest caste, then third largest caste, then fourth largest caste and fifth largest.

c) How many scheduled caste and scheduled tribe households are there?

(NOTE: Put all other Hindus not yet recorded all together in other caste Hindus category)

d) How many Muslim households are there?

e) Do they live in clusters and are segregated from other caste/religious groups or do the caste/religious members live together with other/religious groups in mixed way.

f) How many households are there in each caste/religious group who own 10 or more acres of land?

g) Who are the panchayat leaders and which caste/religious group do they belong to?

h) Are any of these panchayat leaders women? Which caste group do they belong to?
**TABLE 1**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Main caste and religious groups</th>
<th>No. of HHs in the village</th>
<th>Segregation of caste / religious groups</th>
<th>No. of HHs owning 10+ acres land</th>
<th>No. of panchayat members</th>
<th>1st 3 ranks for</th>
<th>Pop. size (Based on a to d)</th>
<th>Ex- postion (Based on f)</th>
<th>Political influence (based on g)</th>
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<td>Total HHs</td>
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</tr>
</tbody>
</table>

* Start with first largest caste group among Hindus other than SC & ST

** 1 No segregation, Most are spread over different areas of village / Most are mixed with other caste groups

2 Some segregation. Some living in clusters. Some not

3 Nearly total segregation. Most of them are living separately

0 Less than 20 HHs

Note: In rural areas average HH size should usually be between 6 to 7 i.e. Total Popn. / Total No. HHs = 6 to 7.
A4 Does this village fall in a drought prone area?
   1 Yes (GO TO A6)  2 No

A5 a) Has this village experienced drought for three consecutive years in the past 10 years?
   2 Yes  2 No (GO TO A6)
   b) In which years did it happen last? ______________________

A6 Is this village in a flood affected area?
   1 Yes  2 No (GO TO SECTION B)

B TRANSPORTATION

B1 What is the type of road leading to or connecting to the village?
   (OBSERVE AND RECORD)
   1 Village is not on road
   2 Kutcha road
   3 Pucca road in bad condition
   4 Pucca road in good condition
   5 State/National Highway

   a) Nearest place from where all-weather road is available?
      Distance __________ Kms.
   b) How much time is required to walk to this all-weather road?
      1 Less than 15 min.
      2 16-30 mins.
      3 31-59 mins.
      4 1-1.59 hrs.
      5 2+ hrs. (GO TO B2)
   c) Since when or for how many years has the village had this all weather approach road?
      ______________________ years

INS: ASK B2 (a) TO B2 (d) FOR EACH PLACE MENTIONED IN FIRST COLUMN OF FOLLOWING TABLE-2 AND RECORD THE ANSWERS IN RELEVANT COLUMNS.

B2 a) How far is each of the following places (in Kms)?
   b) Generally what mode of transportation is used by most of the people to get there?
   c) How long does it take for common people to get there?
   d) Is there any part of the year when it is extremely difficult to get there? (IF YES)
      In which months?
### TABLE-2

<table>
<thead>
<tr>
<th>Place/location</th>
<th>Estimated distance in Kms-Mark 00 if located in village itself</th>
<th>Most common mode of transportation for most of the people to get there 1)</th>
<th>Average time required by the most common mode of transportation to get there 2)</th>
<th>Months of the year when the place is extremely difficult to reach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nearest Town</td>
<td>68</td>
<td>B2 (a)</td>
<td>B2 (b)</td>
<td>B2 (c)</td>
</tr>
<tr>
<td>Place from where one can get bus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHC Nearest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsible administratively</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-centre-Nearest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsible administratively</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


2) 1. 15 minutes or less  2. 16-30 minutes  3. 31-45 minutes  4. 46-60 minutes  5. 61-90 minutes  6. 91-120 minutes  7. 121 minutes+

### C ELECTRICITY

C1 Are the houses in the village electrified?

1 Yes  2 No (GO TO SECTION D)

(a) How many years ago was it first installed?

11 0 4
C2 How many households (or what proportion of households) have domestic electricity connection? ________________ HHs

(if approximate number is not available, use following codes)

0 None
1 Very few (less than 5%)
2 Few (6-15%)
3 Some (16-35%)
4 Many (36-65%)
5 Most (66-85%)
6 Almost all/all (86+ %)

(PROBE IF GREATER THAN 50%)
(a) It was indicated that a high proportion of households have an electrical connection. Is this meant for the total village as a whole including for all caste groups such as scheduled caste people and poor people like agricultural labourers? (IF NOT CORRECT RESPONSE ORIGINALLY; INDICATE CORRECT RESPONSE HERE)

C3 Ten years back, about how many households (or what proportion of households) had domestic electricity connections? ________________ households

(if approximate number is not available, use the following codes)

0 None
1 Very few (less than 5%)
2 Few (6-15%)
3 Some (16-35%)
4 Many (36-65%)
5 Most (66-85%)
6 Almost all/all (86+ %)

(PROBE IF GREATER THAN 50%)
(a) It was indicated that a high proportion of households have electrical connections. Is this meant for the total village as a whole including for all caste groups such as scheduled caste people and poor people like agricultural labourers?

(IF NOT CORRECT RESPONSE ORIGINALLY; INDICATE CORRECT RESPONSE HERE)______________
D COMMUNICATION

D1 How many households own a radio/transistor ? ____________HHs

(If approximate number is not available, use the following codes)

0 None
1 very few (Less than 5%)
2 Few (5-15%)
3 Some (16-35%)
4 Many (36-65%)
5 Most (66-85%)
6 Almost all/all (86+ %)

(PROBE IF GREATER THAN 50%)
(a) It was indicated that a high proportion of households own radio/transistor. Is this meant for the total village as a whole including all categories such as scheduled caste people and poor like agricultural? (IF NOT CORRECT RESPONSE ORIGINALLY, INDICATE CORRECT RESPONSE HERE) ____________HHs

D2 Do any shop owners keep their radio/transistor where people can come and listen to news, etc.? 

1 Yes 2 No (GO TO D3)

a) How Many ____________

D3 Is there a community radio in the village?

1 Yes 2 No (GO TO D4)

a) Does it work?

1 Yes 2 No

D4 Does any household own a TV?

1 Yes 2 No (GO TO D5)

a) How many HHs & own a TV? ____________

b) When was the first TV set purchased? 19 ____________

D5 Is there any Community TV?

1 Yes 2 No (GO TO E1)

a) When was it installed? 19 ____________

b) Does it work?

1 Yes 2 No
**E \ EDUCATION**

(RECORD RESPONSES FOR E1 IN TABLE-3 FOR EACH LEVEL OF SCHOOL)

E1 Does the village have the following educational facilities (If YES) Since when? How many male and female teachers are there? (IF NO) Distance to nearest place where available? Started how many years ago? Most common mode of transport to get there? Time required for majority of students to get there?

TABLE-3

<table>
<thead>
<tr>
<th>Level of School</th>
<th>Available in the village</th>
<th>No. of teachers</th>
<th>If not available in the village</th>
<th>Time for majority of student to travel there</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Yes 2 No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-For boys and girls (combined)</td>
<td>56</td>
<td></td>
<td></td>
<td>63</td>
</tr>
<tr>
<td>-For girls only</td>
<td>64</td>
<td></td>
<td></td>
<td>71</td>
</tr>
<tr>
<td>1 Foot</td>
<td></td>
<td></td>
<td></td>
<td>2)</td>
</tr>
<tr>
<td>2 Cycle rikshaw</td>
<td></td>
<td></td>
<td></td>
<td>1 15 minutes or less</td>
</tr>
<tr>
<td>3 Cycle</td>
<td></td>
<td></td>
<td></td>
<td>2 16-30 minutes</td>
</tr>
<tr>
<td>4 Auto rikshaw</td>
<td></td>
<td></td>
<td></td>
<td>3 31-45 minutes</td>
</tr>
<tr>
<td>5 Bus</td>
<td></td>
<td></td>
<td></td>
<td>4 46-60 minutes</td>
</tr>
<tr>
<td>7 Others (Specify)</td>
<td></td>
<td></td>
<td></td>
<td>5 More than one hour</td>
</tr>
</tbody>
</table>
F SOCIAL INSTITUTIONS

F1 Does the village Panchayat undertake any activity to support family planning?

1 Yes
2 No (GO TO F2)

IF YES (a) What? ____________________________

F2 Are there any special incentives being offered by the village Panchayat to family planning acceptors?

1 YES
2 No (GO TO F3)

IF YES (a) What incentives are given?

i) (If cash) How much? ____________________________

ii) (If kind) What? ____________________________

How much is its value in Rs.? ____________________________

F3 Is the village covered by any incentive scheme to family planning acceptors financed by the district or taluka panchayat?

1 Yes
2 No (GO TO F4)

IF YES (a) What incentives are given?

i) (If cash) How much? ____________________________

ii) (If kind) What? ____________________________

How much is its value in Rs.? ____________________________

F4 Does the village have a Mahila Mandal or similar organisation/club for women?

1 Yes
2 No (GO TO SECTION G)

(THIS INFORMATION SHOULD PREFERABLY BE ASKED TO ANY MEMBERS OR OFFICE BEARERS OF MAHILA MANDAL/WOMEN PANCHAYAT MEMBER)

a) Since when is it functioning? ____________________________

b) What is the number of its members? ____________________________
c) What activities are undertaken?

__________________________________________________________________________

__________________________________________________________________________

d) How frequently does it meet?
   i) per month ________________
   ii) If less frequent, number of times in a year? ________________

e) Are there any activities to support family planning?
   1 Yes
   2 No (GO TO SECTION G)

IF YES, get details

__________________________________________________________________________

__________________________________________________________________________

G AGRICULTURAL ACTIVITIES

GI (FILL IN FOLLOWING TABLE-4 FROM DISTRICT CENSUS HAND BOOK FOR ADULT MALES)

TABLE - 4

<table>
<thead>
<tr>
<th>a)</th>
<th>1981 Adult Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutivators</td>
<td>35</td>
</tr>
<tr>
<td>Agricultural labourers</td>
<td></td>
</tr>
<tr>
<td>HH Industrial workers</td>
<td></td>
</tr>
<tr>
<td>Other main workers</td>
<td></td>
</tr>
<tr>
<td>Marginal workers</td>
<td></td>
</tr>
<tr>
<td>Non-workers</td>
<td></td>
</tr>
</tbody>
</table>

FOR OFFICE USE

29
30
31
32
33
34

SEE TABLE
(b) Earlier you indicated the number of households owning 10 or more acres of land. Could you please tell me how many households in the village own 5–9 acres of land?

G2 We are interested to know the cropping patterns in your village.

(a) What are the two main crops grown on village land in each growing season?
(b) What about 10 years back, what were the three main crops in each season? (RECORD RESPONSES IN TABLE-5)

<table>
<thead>
<tr>
<th>TABLE - 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Season/Order of importance</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Kharif</strong></td>
</tr>
<tr>
<td>First crop</td>
</tr>
<tr>
<td>Second crop</td>
</tr>
<tr>
<td><strong>Rabi</strong></td>
</tr>
<tr>
<td>First crop</td>
</tr>
<tr>
<td>Second crop</td>
</tr>
</tbody>
</table>

G4 When children (aged 6–14 years) and adult women do work as agricultural labourers which of the following activities do they do? (RECORD IN FOLLOWING TABLE-6)

<table>
<thead>
<tr>
<th>TABLE-6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activities</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1 Applying Chemical fertilizer</td>
</tr>
<tr>
<td>2 Spraying pesticides</td>
</tr>
<tr>
<td>3 Operating powered (Diesel) Tube Wells</td>
</tr>
<tr>
<td>4 Operating water (diesel) Engines</td>
</tr>
</tbody>
</table>
G5 How much are adult men and women, boys and girls (aged 6-14 yrs) paid per day as agricultural labourers? (RECORD IN FOLLOWING TABLE-7)

<table>
<thead>
<tr>
<th>Population sub-group</th>
<th>Payment in cash per day</th>
<th>Payment in kind per day (specify &amp; indicate value per day)</th>
<th>(And columns one and two to obtain total value of payment per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td></td>
<td>75</td>
<td>76</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td>77</td>
<td>78</td>
</tr>
<tr>
<td>Boys (6-14 yrs)</td>
<td></td>
<td>79</td>
<td>80</td>
</tr>
<tr>
<td>Girls (6-14 yrs)</td>
<td></td>
<td>12</td>
<td>13</td>
</tr>
</tbody>
</table>

G6 Are any forms of powered equipment (e.g. tractors, threshers, harvesters) available in the village or in the neighbouring areas to rent?

1 Yes
2 No (GO TO G8)

(If yes)
(a) How many are being used now?
(b) How many were being used 10 years back?
(c) About how many households (or proportion of households) are presently using this equipment?
(d) About how many households (or proportion of households) were using this equipment 10 years back?

(RECORD INFORMATION IN TABLE-8)

<table>
<thead>
<tr>
<th>Type of powered equipment available for use</th>
<th>*Tractor</th>
<th>Harvester</th>
<th>Thresher</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Number used now</td>
<td>14</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>(b) Number used ten years back</td>
<td></td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>(c) Number of farmers using it now</td>
<td></td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>(d) Number using it ten years back*</td>
<td></td>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>

*If approximate number is not available, try try to assess whether it is
0 None 1 Very few (less than 5%) 2 Few (6-15%) 3 Some (16-30%) 4 Many (31-65%) 5 Most (66-85%) 6 Almost all/all (86+%)
G7 About what proportion of the cultivable land in this village is irrigated?
(If approximate number is not available use following codes)
0 None (depends entirely on rain)
1 Very little (less than 5%)
2 A little (5-15%)
3 Some (16-35%)
4 About half (36-65%)
5 Most (66-85%)
6 Almost all/all (86%+)

G8 We are interested to know whether during the last years, has there been any major changes in irrigation for this village?
Have irrigation canals or any major government tube well been introduced to provide irrigation to the village land?
1 Yes
2 No (GO TO G9)

a) In what year they introduced?

G10 Has there been a considerable increase in the number of tube wells in the past 10 years?
1 Yes, considerable increase
2 No

a) In what year were they considerably increased?

H. NON-AGRICULTURAL JOB MARKET

H1 Is there any industrial or manufacturing unit in the village which provides employment to people in the village?
1 Yes
2 No (GO TO H2)

IF YES (a) About how many people in total are employed in these industries altogether? ____________ persons.
(If approximate number is not available, use following codes)
0 None
1 Less than 10
2 10-19
3 20-49
4 50-99
5 100-199
6 200-499
7 500-999
8 1000+
(b) About how many people from this village are employed in these industries? ________ persons.

(If approximate number is not available, use the following codes)
0 None
1 Less than 10
2 10-19
3 20-49
4 50-99
5 100-199
6 200-499
7 500-999
8 1000 +

H2 Are there any such industries outside of the village but within 15-20 kms. area from here where people from this village can get employment?
1 Yes
2 No (GO TO H3)

IF YES (a) About how many persons are working in these industries? ________ persons.

(If approximate number is not available, use the following codes)
0 None
1 Less than 10
2 10-19
3 20-49
4 50-99
5 100-199
6 200-499
7 500-999
8 1000 +

H2 b) About how many people from this village are employed in these industries? ________ persons.

(If approximate number is not available, use following codes)
0 None
1 Less than 10
2 10-19
3 20-49
4 50-99
5 100-199
6 200-499
7 500-999
8 1000 +

(INS: IF NO INDUSTRIAL EMPLOYMENT IN OR AROUND VILLAGE IS INDICATED ABOVE, GO TO H7)

H3 Has there been any change in industrial employment in the village and in the area as compared to 10 years back?
1 Yes changed
2 No changes (GO TO H4)

IF YES a) Has it increased a lot, increased a little, decreased a little, or decreased a lot in the past 10 years?
1 Increased a lot
2 Increased a little
3 Decreased a little
4 Decreased a lot
H4 Is the available industrial employment seasonal or round the year?

1 Mostly seasonal
2 Some seasonal, some round the year
3 Mostly round the year

H5 Do any women or children from this village work in these industries? If yes, how many women? How many children?

Women

Children

(If approximate number is not available, use following codes)

0 None 1 Less than 10 2 10-19
3 20-49 4 50-99 5 100-199
6 200-499 7 500-999 8 1000 +

H6 How much does a man or a woman worker or a boy or girl generally get as an industrial labourer per day in the most common job available for them?

<table>
<thead>
<tr>
<th>CASH</th>
<th>KIND</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult: Men</td>
<td>Rs.</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>Rs.</td>
<td></td>
</tr>
<tr>
<td>Child: Boy</td>
<td>Rs.</td>
<td></td>
</tr>
<tr>
<td>Girl</td>
<td>Rs.</td>
<td></td>
</tr>
</tbody>
</table>
H7 Are there any other employment opportunities (other than agricultural labourer, industry or emergency employment schemes such as drought relief available for men, women or children in and around the village? For example, employment in brick-making, construction activities, tending shop, etc.? We mean jobs which even if seasonal, are available each year.

1 Yes 2 No (GO TO H8)

IF YES a) What? (Specify)

b) In this employment available seasonally or year-round?

1 Mostly seasonal
2 Some seasonally, some round the year
3 Mostly round-the year

c) About how many men, women, boys girls are generally employed in such activities?

Men ____________

Women ____________

Boys ____________

Girls ____________

(If approximate number is not available use following codes)

0 None 1 less than 10. 2 10-19
3 20-49 4 50-99 5 100-199
6 200-499 7 500-999 8 1000 +
What about work which can be done in the home to earn money: for example, handicrafts for selling or weaving, spinning, papad making etc. for selling or at wage. Are such opportune available in the village?

1 Yes 2 No (GO TO NEXT SECTION)

IF YES
a) What type of work is this?

b) Approximately how many households are engaged in such activities?

c) Are women engaged in such activities?

d) Are children engaged in such activities?

TABLE-8

<table>
<thead>
<tr>
<th>Nature of work done in home</th>
<th>Approximate No. of households engaged in such work*</th>
<th>Whether women are involved</th>
<th>Whether children are involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>(b)</td>
<td>(c)</td>
<td>(d)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Yes 2 No</td>
<td>1 Yes 2 No</td>
</tr>
</tbody>
</table>

* If approximate number is not possible, indicate if:

0 None (100-199) 2 Less than 10 3 10-19
4 20-49 5 50-99 6 100-199
7 200-499 8 500-999 9 1000+
I HEALTH & FAMILY PLANNING

I 1 During the last one year how many of the following family planning extension programmes were organised in this village?

TABLE 10

<table>
<thead>
<tr>
<th>Educational campaign</th>
<th>Number of times the activity was done in past one year in village</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group meeting</td>
<td>73</td>
</tr>
<tr>
<td>Opinion leader training</td>
<td>75</td>
</tr>
<tr>
<td>Film show</td>
<td>77</td>
</tr>
<tr>
<td>Drama / Puppet Show</td>
<td>79</td>
</tr>
<tr>
<td>Immunisation Camp</td>
<td>12</td>
</tr>
</tbody>
</table>

I 2 Does the village have a CHG / VHG?

1 Available and provides service

2 Available but does not provide services

3 CHG / VHG is not available.

( GO TO 12 (d) )

( APPLICABLE ONLY IF CODE 1 OR 2 IS CIRCLED IN I 2 )

a) Is the CHG / VHG a man or a woman?

1 Man 2 Woman

b) Does he / she advise people on family planning?

1 Yes 2 No

c) Does he / she stock condoms and / or pills and provide them to couples who want for use?

Condom ? 1 Yes 2 No

Pills ? 1 Yes 2 No
(APPLICABLE ONLY IF CODE 3 IS CIRCLED IN 12)

d) Did the village have a CHG / VHG in the past?
   1 Yes  2 No (GO TO 13)

e) Upto which year did he / she work as a CHG / VHG?

f) Was the CHG / VHG a Man or a Woman?
   1 Man  2 Woman

g) Did he / she stock condoms and / or pills and provide them to couples who wanted to use them?
   Condom  1 Yes  2 No
   Pill  1 Yes  2 No

13 How many shops of the following types are there in the village?
   (Visit each shop of pharmacy, general stationery, grocery and pan shop and fill up the following information.)
   How many of these shops stock condom?
   What types of condoms do they stock?
   (If not stocking condoms) Why are condoms not stocked?

**TABLE 11**

<table>
<thead>
<tr>
<th>Type of shop</th>
<th>Total No. in the village (a)</th>
<th>No. of shops stocking</th>
<th>Types of condoms stocked* 1) (c)</th>
<th>Reasons for not stocking condoms 2) (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy (Chemist's shop)</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>Grocery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Stationery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) 1 Nirodh 2 Nirodh Delux 3 Other
2) 1 Insufficient demand 2 Owner feels shy 3 Customers feel shy 4 Profit margin is low 5 Grocery shop does not keep these items 6 Gets damaged sometimes 7 No representative come to supply 8 Other / no specific reason.
I 4 How many doctors/private practitioners are there in the village?

Qualified allopath doctors

Qualified ISM/RMP doctors

Unqualified village practitioners/compounders

5 Does the village have the following institutions located in the village? (IF YES), since when has it been in operation? (VISIT CLIENTS IF POSSIBLE AND FILL UP REMINDER OF TABLE)

<table>
<thead>
<tr>
<th>Health and FP institutions</th>
<th>1 Yes</th>
<th>2 No</th>
<th>No. of years ago first established (Give exact number of years if less then 10 years. If more than 10 years, code 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Anganwadi Centre</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Upgraded PHC/PHC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Dispensary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Upgraded sub-centre/SC/MCH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Other (Specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I 6 In your village has there been any case of serious injury to health because of adoption of FP?

1 Yes 2 No (GO TO I 7)

a) give details, what, when and due to which method?

What

When

Method

I 7 During the last five years has any woman in the village become pregnant after getting her self sterilised?

1 Yes 2 No (GO TO NEXT SECTION)

a) How many such cases have there been?
**OPINIONS OF CASTE / RELIGIOUS COMMUNITIES**

(The following opinion section is to be completed (at most) for each of the three most population subgroups in the village (see Table 1 in Section A for listing of subgroups). To be eligible, population subgroups must have at least 20 households and at least 10% of village HHs)

Name of the Caste

**INS:** GROUP INTERVIEW MUST BE USED

J 1 How many households from your community have moved out of the village past 10 years?

J 2 What about when one or more male member of a household move away for work? Are there any such households in your community?

1 Yes
2 NO (GO TO J 3)

a) How many such households are there?

J 3 About how many households from your community are there in the village where at least one woman works as an agricultural labourer to earn income in cash or kind?

(If approximate number is not possible to obtain, use the following codes)

0 None
1 Very few (less than 5%)
2 Few (5-15%)
3 Some (16-35%)
4 Many (36-65%)
5 Most (66-85%)
6 Almost all / all (86 + %)

* Repeat for three largest caste / religious groups in order of population size.
J4 About how many households are there in your community where at least one child works as an agricultural labourer to earn income in cash or kind? 

(If approximate number is not available, use the following codes)

0 None
1 Very few (less than 5%)
2 Few (5-15%)
8 Some (16-35%)
4 Many (36-65%)
5 Most (66-85%)
6 Almost all/all (86+%)

a) Has the extent of such employment of children in your community increased, decreased, or remained the same in the past ten years?

1 Increased
2 Remained the same
3 Decreased

J5 How common is the use of FP among your caste?

0 None
1 Very few (less than 5%)
2 Few (5-15%)
3 Some (16-35%)
4 Many (36-65%)
5 Most (66-85%)
6 Almost all/all (86+%)

a) Do you think there is an increase or decrease or no change in the use of family planning during the last 5 years among your caste people?

1 Increase 2 No change (Go to J6)
3 Decrease
b) Has this increase/decrease been, very little, some or considerable?

1. Very little
2. Some
3. Considerable

J 6 How many sons are generally considered essential by members of your community?

1. One (GO TO J 7)
2. Two sons
3. Three sons
4. Four or more sons

a) Does it mean that if a person has one son and continue to get daughters generally he would continue to try to get the second son regardless of how many daughters he gets or would he stop when he would have a certain number of daughters?

0. Not interested in second son
1. One daughter
2. Two daughters
3. Three daughters
4. Four daughters
5. Will try regardless: five or more daughters

b) How many sons were generally considered essential 10 years ago by members of your community?

1. One son
2. Two sons
3. Three sons
4. Four sons
J7 What contraceptive methods are more preferred by the people of your community? (DO NOT PROMPT. TAKE ONLY SPONTANEOUS ANSWERS) (MULTIPLE ANSWERS ALLOWED).
1. Vasectomy
2. Tubectomy / Minilap
3. Laparoscopy
4. IUD
5. Condom
6. Pills
7. Other (Specify)

J8 Has any member of your community taken part in promoting family planning?
1. Yes 2. (GO TO J9)

(a) How many such people are there in your community?_____

(b) Are any of these women?
1. Yes 2. No (GO TO J9)

(c) How many?__________

J9 Have any members of other communities in the village promoted family planning?
1. Yes 2. No (GO TO J10)

(a) How many such people are there?____________

(b) Are any of them women?
1. Yes 2. No (GO TO J10)

(c) How many?____________

J10 Generally at what age does a girl of your community get married and start cohabiting with her husband?___________

(a) At what age were girls of your community generally getting married 10 years ago?___________
J 11  How is the dowry system in your community considered. Is it felt to be very heavy, heavy, normal or nominal or is it that no dowry has to be paid ?

1  Very heavy
2  Heavy
3  Normal or no dowry ( GO TO J12 )
4  Nominal or no dowry ( GO TO J12 )

(a) Does demand of dowry force parents to postpone marriage of their daughters ?

1  Yes forces delay of marriage - often - sometimes
2  Yes, forces delay of marriage - sometimes
3  No does not force delay of marriage

J 12  In your community generally up to what level / class are girls educated ?

____________________ Class

( ASK IF LESS THAN SSC )

(a) Generally why are they not sent for a higher level of education than what you have stated now ? ( MULTIPLE RESPONSE ALLOWED )

1  Poverty, cannot afford, too costly
2  No school available in village
3  No school available in immediate area
4  Caste / religious norm
5  No good reason as girls will marry and place is in home
6
7

J13  Have the chances of infants and children dying early in life changed in this village in the past 10 years ?

1  Yes  2  No (FINISH)

IF YES (a) Has this been by just a little or has it been quite noticeable to people in your community ?

1  Changed just a little
2  Change has been quite noticeable
**OPINIONS OF CASTE/RELIGIOUS COMMUNITIES**

(The following opinion section is to be completed (at most) for each of the three most population subgroups in the village (see Table 1 in Section A for listing of subgroups). To be eligible, population subgroups must have at least 20 households and at least 10% of village HHs)

Name of the Caste ________________

INS: Group interview must be used

**J 1** How many households from your community have moved out of the village past 10 years?

**J 2** What about when one or more male member of a household move away for work? Are there any such households in your community?

1 Yes

2 NO (GO TO J 3)

a) How many such households are there?

**J 3** About how many households from your community are there in the village where at least one woman works as an agricultural labourer to earn income in cash or kind?

(IF approximate number is not possible to obtain, use the following codes)

0 None

1 Very few (less than 5%)

2 Few (5-15%)

3 Some (16-35%)

4 Many (36-65%)

5 Most (66-85%)

6 Almost all/all (86+ %)

* Repeat for three largest caste/religious groups in order of population size,
J4 About how many households are there in your community where at least one child works as an agricultural labourer to earn income in cash or kind? ____________

(If approximate number is not available, use the following codes)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>Very few (less than 5%)</td>
</tr>
<tr>
<td>2</td>
<td>Few (5-15%)</td>
</tr>
<tr>
<td>3</td>
<td>Some (16-35%)</td>
</tr>
<tr>
<td>4</td>
<td>Many (36-65%)</td>
</tr>
<tr>
<td>5</td>
<td>Most (66-85%)</td>
</tr>
<tr>
<td>6</td>
<td>Almost all/all (86+%</td>
</tr>
</tbody>
</table>

a) Has the extent of such employment of children in your community increased, decreased, or remained the same in the past ten years?

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Increased</td>
</tr>
<tr>
<td>2</td>
<td>Remained the same</td>
</tr>
<tr>
<td>3</td>
<td>Decreased</td>
</tr>
</tbody>
</table>

J5 How common is the use of FP among your caste?

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>Very few (less than 5%)</td>
</tr>
<tr>
<td>2</td>
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</tr>
<tr>
<td>3</td>
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</tr>
<tr>
<td>6</td>
<td>Almost all/all (86+%)</td>
</tr>
</tbody>
</table>

a) Do you think there is an increase or decrease or no change in the use of family planning during the last 5 years among your caste people?

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Increase</td>
</tr>
<tr>
<td>2</td>
<td>No change (Go to J6)</td>
</tr>
<tr>
<td>3</td>
<td>Decrease</td>
</tr>
</tbody>
</table>
b) Has this increase / decrease been, very little, some or considerable?
   1 very little
   2 Some
   3 Considerable

J 6 How many sons are generally considered essential by members of your community?
   1 One (GO TO J 7)
   2 Two sons
   3 Three sons
   4 Four or more sons

a) Does it mean that if a person has one son and continue to get daughters generally he would continue to try to get the second son regardless of how many daughters he gets or would he stop when he would have a certain number of daughters?
   0 Not interested in second son
   1 One daughter
   2 Two daughters
   3 Three daughters
   4 Four daughters
   5 Will try regardless: five or more daughters

b) How many sons were generally considered essential 10 years ago by members of your community?
   1 One son
   2 Two sons
   3 Three sons
   4 Four sons
J7 What contraceptive methods are more preferred by the people of your community? (DO NOT PROMPT. TAKE ONLY SPONTANEOUS ANSWERS) (MULTIPLE ANSWERS ALLOWED).
1 Vasectomy
2 Tubectomy / Minilap
3 Laparoscopy
4 IUD
5 Condom
6 Pills
7 Other (Specify)

J8 Has any member of your community taken part in promoting family planning?
1 Yes 2 (GO TO J9)
(a) How many such people are there in your community?
(b) Are any of these women?
1 Yes 2 No (GO TO J9)
(c) How many?

J9 Have any members of other communities in the village promoted family planning?
1 Yes 2 No (GO TO J10)
(a) How many such people are there?
(b) Are any of them women?
1 Yes 2 No (GO TO J10)
(c) How many?

J10 Generally at what age does a girl of your community get married and start cohabiting with her husband?
(a) At what age were girls of your community generally getting married 10 years ago?
J 11 How is the dowry system in your community considered. Is it felt to be very heavy, heavy, normal or nominal or is it that no dowry has to be paid?

1. Very heavy
2. Heavy
3. Normal or no dowry (GO TO J12)
4. Nominal or no dowry (GO TO J12)

(a) Does demand of dowry force parents to postpone marriage of their daughters?

1. Yes forces delay of marriage – often – sometimes
2. Yes, forces delay of marriage – sometimes
3. No does not force delay of marriage

J 12 In your community generally up to what level / class are girls educated?

______________________ Class

(ASK IF LESS THAN SSC)

(a) Generally why are they not sent for a higher level of education than what you have stated now? (MULTIPLE RESPONSE ALLOWED)

1. Poverty, cannot afford, too costly
2. No school available in village
3. No school available in immediate area
4. Caste / religious norm
5. No good reason as girls will marry and place is in home
6. 
7. 

J13 Have the chances of infants and children dying early in life changed in this village in the past 10 years?

1. Yes 2. No (FINISH)

IF YES (a) Has this been by just a little or has it been quite noticeable to people in your community?

1. Changed just a little
2. Change has been quite noticeable
J  OPINIONS OF CASTE/RELIGIOUS COMMUNITIES *

( THE FOLLOWING OPINION SECTION IS TO BE COMPLETED (AT MOST) FOR EACH OF THE THREE MOST POPULATION SUBGROUPS IN THE VILLAGE (SEE TABLE 1 IN SECTION A FOR LISTING OF SUBGROUPS), TO BE ELIGIBLE, POPULATION SUBGROUPS MUST HAVE AT LEAST 20 HOUSEHOLDS AND AT LEAST 10% OF VILLAGE HHs )

Name of the Caste __________________________

INS : GROUP INTERVIEW MUST BE USED

J 1 How many households from your community have moved out of the village past 10 years? __________

J 2 What about when one or more male member of a household move away for work? Are there any such households in your community?
   1 Yes
   2 NO (GO TO J 3)

a) How many such households are there? __________

J 3 About how many households from your community are there in the village where at least one woman works as an agricultural labourer to earn income in cash or kind?

( IF approximate number is not possible to obtain, use the following codes)

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6 Almost all/all (86 + %)

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1 Very few (less than 5%)  
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6 Almost all/all (86+%)

a) Has the extent of such employment of children in your community increased, decreased, or remained the same in the past ten years? 

1 Increased 
2 Remained the same 
3 Decreased

J 5 How common is the use of FP among your caste? 

0 None  
1 Very few (less than 5%)  
2 Few (5-15%)  
3 Some (16-35%)  
4 Many (36-65%)  
5 Most (66-85%)  
6 Almost all/all (86+%)

a) Do you think there is an increase or decrease or no change in the use of family planning during the last 5 years among your caste people? 

1 Increase 2 No change (Go to J 6) 
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b) Has this increase / decrease been, very little, some or considerable?

1. very little
2. Some
3. Considerable

J6 How many sons are generally considered essential by members of your community?

1. One (GO TO J7)
2. Two sons
3. Three sons
4. Four or more sons

a) Does it mean that if a person has one son and continue to get daughters generally he would continue to try to get the second son regardless of how many daughters he gets or would he stop when he would have a certain number of daughters?

0. Not interested in second son
1. One daughter
2. Two daughters
3. Three daughters
4. Four daughters
5. Will try regardless: five or more daughters

b) How many sons were generally considered essential 10 years ago by members of your community?

1. One son
2. Two sons
3. Three sons
4. Four sons
J7 What contraceptive methods are more preferred by the people of your community? (DO NOT PROMPT. TAKE ONLY SPONTANEOUS ANSWERS) (MULTIPLE ANSWERS ALLOWED).

1 Vasectomy
2 Tubectomy / Minilap
3 Laparoscopy
4 IUD
5 Condom
6 Pills
7 Other (Specify) _______________________

J8 Has any member of your community taken part in promoting family planning?

1 Yes 2 (GO TO J9)

(a) How many such people are there in your community? ______

(b) Are any of these women?

1 Yes 2 No (GO TO J9)

(c) How many? _______________________

J9 Have any members of other communities in the village promoted family planning?

1 Yes 2 No (GO TO J10)

(a) How many such people are there? _______________________

(b) Are any of them women?

1 Yes 2 No (GO TO J10)

(e) How many? _______________________

J10 Generally at what age does a girl of your community get married and start cohabiting with her husband? _______________________

(a) At what age were girls of your community generally getting married 10 years ago? _______________________

FOR OFFICE USE
J11 How is the dowry system in your community considered. Is it felt to be very heavy, heavy, normal or nominal or is it that no dowry has to be paid?

1 Very heavy
2 Heavy
3 Normal or no dowry (GO TO J12)
4 Nominal or no dowry (GO TO J12)

(a) Does demand of dowry force parents to postpone marriage of their daughters?

1 Yes forces delay of marriage - often - sometimes
2 Yes, forces delay of marriage - sometimes
3 No does not force delay of marriage

J12 In your community generally up to what level / class are girls educated?

Class

(a) Generally why are they not sent for a higher level of education than what you have stated now? (MULTIPLE RESPONSE ALLOWED)

1 Poverty, cannot afford, too costly
2 No school available in village
3 No school available in immediate area
4 Caste / religious norm
5 No good reason as girls will marry and place is in home
6
7

J13 Have the chances of infants and children dying early in life changed in this village in the past 10 years?

1 Yes 2 No (FINISH)

IF YES (a) Has this been by just a little or has it been quite noticeable to people in your community?

1 Changed just a little
2 Change has been quite noticeable
K SUB-CENTRE UNDER WHICH THE SELECTED VILLAGE FALLS (SEPARATE VISIT REQUIRED TO SUB-CENTRE)

K1 (a) Name of sub-centre village___________

(b) Distance from study village (BY OBSERVATION)_________ Kms.

K2 Year of establishment of sub-centre__________

K3 (a) Number of villages presently falling under this sub-centre__________

(b) Number of villages 5 years ago falling under this sub-centre__________

K4 (a) Total population presently covered under the sub-centre__________

(b) Total population which was covered under this sub-centre 5 years ago__________

K5 How many male and female health / FP workers are posted in this sub-centre?

<table>
<thead>
<tr>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

K6 a) Is the ANM/MPW (F) trained in inserting IUD?

1 Yes  2 No (GO TO K7)

(b) Does the ANM/MPW (F) actually insert IUD?

1 Yes  2 No (GO TO K7)

(c) How many IUDs were inserted in last year?__________
### K7 Supply position of conventional contraceptives

<table>
<thead>
<tr>
<th>Contraceptive</th>
<th>Regular &amp; adequate</th>
<th>Regular &amp; inadequate</th>
<th>Irregular &amp; adequate</th>
<th>Irregular &amp; inadequate</th>
<th>No supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>IUD/Cu-T/loop</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Pill</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>31</td>
</tr>
</tbody>
</table>

**K8** How often has _______ (our sample) village been visited by sub-centre workers in the past three months? (NOTE: Will need to look in to the DIARY)

**K9** Five years ago was this sub-centre responsible for _______ (our sample village)?

1. Yes (Stop interview)
2. No

IF NO

(a) Which sub-centre was responsible for _______ (our sample village) five years ago?

(b) Where was this old sub-centre and approximately how far was it from this old sub-centre to _______ (our sample village)? _______ Kms.
K 10 What is the condition and situation of the sub-centre? (By Observation)

<table>
<thead>
<tr>
<th></th>
<th>Clean</th>
<th>Yes</th>
<th>Some what clean</th>
<th>Not clean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Water Facility</th>
<th>Available</th>
<th>Not available</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Building in need of repair</th>
<th>Yes</th>
<th>No</th>
<th>No sub-centre building</th>
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</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Examination table available</th>
<th>Yes</th>
<th>No</th>
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<tr>
<td>4</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Situated in village and easily accessible</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Sitting arrangement outside for waiting</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

INS: K11-K-13 SHOULD BE ASKED ONLY TO COMMON PEOPLE IN SUB-CENTRE VILLAGE

K11 How often is the sub-centre usually open?

1. Open 7 days a week
2. Open 6 days a week
3. Open 5 days a week
4. Open 3-4 days a week
5. Open 1-2 days a week
6. Open less than one day a week
7. Often closed
8. Usually closed

K12 During what hours is the sub-centre usually open on days when it is open?

---

97
K13 Where does the ANM live?

1. Living in the sub-centre building itself
2. Living elsewhere in sub-centre village
3. Living in sub-centre area, but not in sub-centre village
4. Living outside sub-centre area

K14 INTERVIEWER: On day of your visit, was the sub-centre open or closed?

1. Open
2. Closed

FOR OFFICE USE

PHC UNDER WHICH SAMPLE VILLAGE FALLS (SEPARATE VISIT TO PHC REQUIRED)

L1 (a) Name of PHC Village

(b) Distance from study village (BY OBSERVATION) Kms

L2 Year of establishment

L3 (a) Number of villages presently falling under this PHC

(b) Number of villages falling under this PHC 5 years ago

L4 (a) Total population presently covered under this PHC

(b) Total population which was covered under this PHC 5 years ago

(c) Total number of sub-centres presently functioning under this PHC

(d) Total number of sub-centres which were functioning under this PHC five years ago
L5 Number of following posts in position

<table>
<thead>
<tr>
<th>Posts</th>
<th>Number in position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor (Male)</td>
<td>29</td>
</tr>
<tr>
<td>Lady Doctor</td>
<td></td>
</tr>
<tr>
<td>Supervisory Staff</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Extension Worker</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>39</td>
</tr>
<tr>
<td>Female</td>
<td>40</td>
</tr>
</tbody>
</table>

L6 How many doctors are trained for undertaking the following:

- Vasectomy
- Tubectomy
- Laparoscopy
- Minilap
- IUD
- MTP

L7 (a) How many LHV / MPHF(F) and ANMs are trained for inserting IUD?
- LHV / MPH(F)___________
- ANMs___________

(b) How many LHV / MPH(F) are actually inserting IUD without any assistance from doctor?

(c) How many ANMs are actually inserting IUD without any assistance from a doctor or LHV?

41
42
43
44
45
46
47 48
49
50
L8 Does this PHC has any regular (fixed) day for sterilization / tubectomy / laparoscopy / minilap?

1 Yes 2 No (GO TO 18a)

a) When and at what interval are these?

1 Once in every week
2 Once in every fifteen days
3 Once in every month
4 Other (Specify)

L9 How many vasectomy / tubectomy / laparoscopy / IUD camps were held during the last year? (other than regular operation day)

1 Vasectomy
2 Tubectomy / minilap
3 Laparoscopy
4 IUD

L10 How many operations were conducted during the last two years?

<table>
<thead>
<tr>
<th>Method</th>
<th>1985-86</th>
<th>1986-87</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tubectomy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laparoscopy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minilap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vasectomy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
L11 Supply position of conventional contraceptives

<table>
<thead>
<tr>
<th>Contraceptive</th>
<th>Supply is</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regular and adequate</td>
</tr>
<tr>
<td>Condom</td>
<td></td>
</tr>
<tr>
<td>IUD/ Cu-T and loop</td>
<td></td>
</tr>
<tr>
<td>Pills</td>
<td></td>
</tr>
</tbody>
</table>

L12 Cold Chain

(a) Number of fridges in working condition

(b) Number of thermocold boxes in working condition

(ASK AND OBSERVE)

L13 Is an operation theatre available?

1 Yes 2 No (GO TO L14)

(a) For how many years has it been functioning yrs.

(b) Which of the following are available and in working order in the theatre?

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Working</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen cylinder</td>
<td>76</td>
</tr>
<tr>
<td>Water facility</td>
<td>77</td>
</tr>
<tr>
<td>Autoclave for sterilising surgical instruments</td>
<td>78</td>
</tr>
<tr>
<td>Shadowless Lamp</td>
<td>79</td>
</tr>
</tbody>
</table>
L 14 Does this PHC have indoor ward facilities for patients?

1 Yes  2 No (GO TO L15)

a) Presently how many beds are available? ________________

L 15 How many vehicles are available and are in working condition? ________________

L 16 Five years ago was this PHC responsible for _______ (our sample) village?

1 Yes (STOP INTERVIEW)  2 No

IF NO 

a) Which PHC was responsible for _______ (our sample) village 5 years ago? ________________

b) Approximately how far was it from this other PHC to _______ (our sample) village? _______ Kms (NOTE: May need to use map to estimate this distance)
Bibliography


