

CLINICAL EPIDEMIOLOGY AND EVIDENCE-BASED MEDICINE

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ABSTRACT

Epidemiology has often been regarded as a discipline useful only to those engaged in public health activities. Clinical epidemiology is the study of variation in the outcome of illness and the reasons for those variations. For many conditions the most important determinants of outcome are diagnostic and therapeutic interventions. The results obtained from clinical epidemiological research have direct applications for the providers of health care. The present article discusses the applications of clinical epidemiological research for making decisions related to the impact of diagnostic or therapeutic procedures on illness outcome.

Epidemiologic thinking differs conceptually from clinical thinking. Epidemiology can be defined as the study of disease and other health related phenomena in groups of persons. The word is derived from the Greek epic (upon) and demos (people). The epidemiologist thus thinks in terms of groups, not individuals, and asks whether a group of patients with a given demographic, clinical, and psycho-social characteristics will fare better, average or just OK, with a particular medical or surgical therapy. He will then advocate that the patients receive the treatment with the higher average rate of success.

A clinician caring for, an individual patient needs to consider published data based on groups of patients with knowledge of factors about the particular case at hand. He must make decisions for that patient, not for some hypothetical group of patients, however, similar the members of the group may appear to be to his

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Patient and his decisions are often all or none: whether to order a certain diagnostic test, whether to recommend surgery or medication, whether to continue or discontinue life support measures. Since, in order to be effective, the clinician must believe that each of his decisions is best for his patient. Although he may be aware of uncertainty, he cannot afford to act indecisively. Consequently, he views the range of choices as right ones and wrong ones.

The epidemiologist is not obliged to make decisions for individual patients, he can live with uncertainty. He focuses on improving the health of population and is less interested in the outcome of individuals within these populations; he prefers to think probabilistically.

It is important to emphasize that some fundamental clinical facts can be observed only in groups. No amount of path physiologic, mechanistic reasoning would reveal that the sex ratio at birth is not 50:50 but 51.5: 48.5, or that males have a higher overall mortality rate than females. Predicting the sex of an individual newborn or whether a given women will outlive a given man is subject to considerable error. But the sex ratio among the next 1000 newborns or the comparative mortality of a large representative group of men and women can be predicted within a fairly narrow range.

In the past, these two different approaches, individualized and mechanistic on the one hand, group oriented and probabilistic on the other, have had little in common. Unlike the laboratory based sciences, epidemiology tended to remain far from the bedside. Epidemiologists concerned themselves almost exclusively with investigating the etiology of infectious and chronic diseases, and clinicians consequently found epidemiology to be of little relevance to their roles as caretakers and decision makers. Medical, dental, or nursing school courses in epidemiology were viewed with an attitude ranging from indifference to contempt.

Recently, however, the essential compatibility and mutual benefit of the two approaches have become more evident, and this has given rise to the term clinical epidemiology. Although all epidemiology is clinical in a broad sense, since it concerns disease and other health related phenomena, classical epidemiology has usually concerned itself with disease etiology. Clinical epidemiologists also study etiology, but are equally interested in diagnosis, prognosis, therapy, prevention, evaluation of health care services and analysis of risks and benefits.

Happily, this marriage of the epidemiologic and individual clinical approaches is proving fruitful not only to patients, their caretakers, and

researchers, but also to the disciplines themselves. Inferences based on statistical associations can lead to new avenues of laboratory investigation.

Definition

Clinical epidemiology can be defined as study of variation in the outcome of illness and of reasons for that variation.

Clinical Epidemiology: Main Areas of Interest

The main areas of interest within clinical epidemiology are etiology, diagnosis, prognosis, treatment, and prevention, analysis of the risks and benefits of diagnostic and therapeutic maneuvers and evaluation of health care services.

Etiology

What are the causes of coronary artery disease (CAD)? Most of what we know about this condition derives from long-term, population-based epidemiologic studies. For example, in the well-known Framingham study, a two-third sample of the 30 to 60 year old population of that Massachusetts town was examined at the inception of the study and periodically thereafter to identify socio-demographic and clinical risk factors for CAD. As a result of this and other similar studies, it is now widely acknowledged that smoking, hypertension, high blood cholesterol levels, insufficient exercise, and a high-stress (so-called type A) personality significantly increase the risk of heart attack.

Diagnosis

How is CAD diagnosed? A variety of invasive and non-invasive diagnostic tests have been developed in an attempt to assess the anatomic state of the coronary arteries, the derangement in blood supply to the heart muscle, and the resulting tissue damage. These include blood tests, roentgen graphic studies, electrocardiograms (at rest and during exercise), and radio isotopic tracer uptakes. Before such tests achieve wide application, they should be subjected to appropriate epidemiologic study to ascertain their ability to discriminate accurately between individuals with and without CAD or its sequel. That is what are the specificity and the sensitivity of such investigations?

Prognosis

What is likelihood that patient with CAD will be alive in 5 years? That is; Epidemiology related to future morbidity and mortality. These prognostic factors are analogous to the risk factors discussed above in reference to etiology but include, in addition, various indicators of the extent and severity of the underlying disease in question. Some prognostic factors are casually related to the outcome (morbidity or mortality) of interest; others serve merely as markers of the underlying disease or other causal factors. Fortunately, prognosis is a dynamic, rather than static, process that can be influenced by treatment and prevention. In other words, therapeutic and preventive interventions can themselves be prognostic factors.

Treatment

Most questions about therapeutic efficacy (surgical vs. medical, drug vs. placebo, drug A vs. drug B, treatment vs. no treatment) are best answered by means of experimental epidemiologic studies, also called clinical trials. In the past, many treatments that were recommended for patients with CAD, based on 'Clinical Experience' and 'Cumulative Wisdom' rather than well designed clinical trials, were subsequently shown to be useless or even harmful. Intramyocardial implantation of the internal mammary artery, for example, became a popular surgical treatment in the 1950s and 1960s, following the enthusiastic, but uncontrolled, experiences of its developers. Later studies with longer-term follow-up showed far less impressive results, and the procedure was subsequently abandoned. By contrast, coronary artery bypass grafting using a portion of the saphenous vein from the leg has been the subject of several well designed clinical trials. These trials have provided much useful information about its merits and limitations for specific groups of patients.

Prevention

How can CAD be prevented? Some epidemiologists distinguish here between primary prevention (preventing the disease from developing in the first place) and secondary prevention (preventing progression or complication of disease already present). In fact, many experts believe that recent changes in smoking, eating, and exercise behavior and improved control of hypertension are responsible for the clearly perceptible decline in morbidity and mortality from CAD.

Evaluation of Health Services

Here we have the provision of a service (a certain mode of providing health care for coronary patients), rather than a specific treatment, but many of the epidemiologic methods (especially clinical trials) for evaluating such a service are similar to those used to study efficacy of treatment. Older epidemiologic evidence suggests that Coronary Care Units (CCUs) are not effective in reducing post infarction mortality, but new trials are required to assess the potential benefit of more recent monitoring and therapeutic techniques.

Analysis of Benefits and Risks

Suppose it could in fact be shown that CCUs result in a slightly lower rate of post-infarction mortality. Suppose, however, that the constant noise, light, and tension of such units kept most patients from sleeping and resulted in some developing stress ulcers. How great a reduction in cardiac mortality would be necessary to justify this increase in non-cardiac morbidity? Or, suppose it costs a, one million dollars in CCU expenses for each 10 years of life saved by the unit. Is it worth it? Since financial resources are limited, can a greater reduction in cardiovascular mortality be realized by spending those one million dollars on mobile emergency rescue vehicles? Or on an anti-smoking campaign? Weighing the potential benefits, risks and cost of diagnostic, therapeutic and health care approaches comprised a set of activities including decision analysis, cost benefit analysis, and cost effectiveness analysis. With the growing recognition that no course of action is without adverse consequences and that choices are inevitable, these activities are receiving increased attention from clinical epidemiologists (as well as from economists and ethicists).

Current and Future Relevance

Many of the current controversies and unproven hypotheses in medicine will require epidemiologic research. Does coffee consumption increase the risk of developing pancreatic cancer? Will daily aspirin administration lower the risk of myocardial infarction or sudden cardiac death? What are the risks and benefits of home labor and delivery? Do tonsillectomy and or adenoidectomy lessen recurrence of pharyngitis (throat infection) or otitis media (middle ear infection)? Does tight control of blood sugar improve long-term prognosis in patients with insulin dependent diabetes? What are the diagnostic benefits of new imaging techniques, such as positron emission tomography (PET) and magnetic resonance imaging (MRI)? These questions require the knowledge of clinical epidemiology

By physicians so that they are able to interpret and apply published research to the best advantage of their patients.

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जनपदिक— रोगनिदान (एपीडेमियोलॉजी) को प्रायः जन-स्वास्थ्य गतिविधियां से जुड़े व्यक्तियों के लिए ही उपयोगी विषय-क्षेत्र समझा जाता है। क्लिनिकल एपीडेमियोलॉजी के अन्तर्गत रोग के परिणामों में विविधता और उन विविधताओं के कारणों का अध्ययन किया जाता है। ऐसी अनेकों परिस्थितियां होती हैं, जिनमें नैदानिक तथा चिकित्सकीय हस्तक्षेपों के परिणाम ही सर्वाधिक महत्वपूर्ण निश्चायक होते हैं। क्लिनिकल एपीडेमियोलॉजी संबंधी अनुसंधान से प्राप्त निष्कर्ष ही स्वास्थ्य परिचर्या सेवा प्रदान करने वालों द्वारा सीधे-सीधे प्रयोग में लाये जाते हैं। प्रस्तुत लेख में रोग-परिणामों पर नैदानिक अथवा चिकित्सकीय के प्रभावों के संदर्भ में निर्णय लेने के लिए क्लिनिकल एपीडेमियोलॉजी अनुसंधान के प्रयोग के बारे में चर्चा की गई है।

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A STUDY ON CURRENT STATUS OF TRAINING INSTITUTIONS IN HARYANA

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ABSTRACT

This article attempts to review the present training policy, strategy, infrastructure and facilities available for training of panchayati raj members in Haryana. No training policy was formulated by the State Government but some guidelines had been given to the training institutions. One time crash training programmes were organized for panchayati raj members of all the three tiers. The study concludes that the training institutions had certain deficiencies in terms of infrastructure and facilities. Recommendations have been made by the authors for improving the functioning of panchayati raj members.

Under the Constitution (73rd Amendment) Act 1992, the Panchayati Raj Institutions have been endowed with powers and responsibilities with respect to the preparation of plans and implementation of schemes for economic development and social justice. Review of various studies on Panchayati Raj Institutions in India shows that the Panchayati Raj members lacked knowledge about their responsibilities in regard to mobilizing resources, managing common property and preparing a perspective plan for development and social justice. Also, they had no idea about micro level planning for village development. They could not appreciate the value of people's participation in Gram Sabha. They lacked clear understanding about their roles and responsibilities. Sarpanches lacked skills in conducting meetings of Gram Sabha. These findings project the need to have an effective training programme for panchayati raj members to enhance their capabilities to take up the new responsibilities effectively. Hence, the present study was carried out to review the present training policy, strategy, infrastructure and facilities available for training of panchayati raj members in Haryana so as to suggest improvements in the training programmes.

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MATERIALS AND METHOD

The present study was undertaken at Nilokheri, a small town on Grand Trunk Road at a distance of 145 kms from Delhi towards Ambala, to study the State training institutions, namely; the State Community Development Training Centre (SCDTC) and Haryana Institute of Rural Development (HIRD). These two institutions were entrusted with the responsibility of training the elected members by the Government of Haryana. Secondary data were collected and analyzed. Primary data were also collected by interviewing the faculty members of both training institutions to know about the training policy, strategy, infrastructure and facilities, competence of faculty members and their suggestions about the training needs of elected members. Observations were made at the training institutions for studying the infrastructure and facilities.

FINDINGS

Training Policy and Strategy for Training of Panchayati Raj Members

It was found that there was no separate training policy document but the faculty members of training institutions were provided with guidelines by Haryana Government. Just after the elections in 1995, for the training needs assessment, seven workshops were organized at HIRD, Nilokheri. The participants' were DDPOs, BDPOs, Executive Engineers of panchayati raj, doctors and SDOs of development departments, etc. The areas for training were identified and the training curriculum was prepared for all the three tiers. Then the assessment of training load was made by calculating the total number of elected members and dividing into batches of 50-60 per training programme.

It was decided by the faculty of training institutes that the zila parishad members would be trained at HIRD for five days and the panchayat samiti members would be trained at district headquarters for two days by the faculty of SCDTC, Nilokheri, with DDPO as the co-ordinator of the programme. The Gram Panchayat members would be trained at block level for one day by a team of DDPO, legal officer and BDPO after being trained at SCDTC, Nilokheri, with BDPO as the co-ordinator of the programme. The methodology of training was decided to be lecture discussions, field visits and role plays. The evaluation of the training was to be done only at the end of the course by means of questionnaires. The allocation of financial resources for TA/DA, infrastructure, honorarium, background materials and POL was made by the Haryana Government. Research studies were

Conducted only at HIRD, Nilokheri, sponsored by the Government of India, Government of Haryana, IIPA and NIRD, Hyderabad.

Training Infrastructure and Facilities

The State Community Development Training Centre (SCDTC), Nilokheri, was established in April 1954 by the Government of India after launching of community development programme in 1952 for training of its functionaries. In 1967, it was handed over to the State Government of Haryana. Main objectives of the training centre were to impart: (i) training to block and village level functionaries of various departments, to acquaint them with self-employment and wage employment programmes of State and Central Government for eradication of rural poverty, (ii) training to the representatives of the PRIs in the areas of panchayati raj and rural sanitation, and (iii) training to executive members of mahila mandals for the upliftment of rural women and children. Haryana Institute of Rural Development (HIRD), Nilokheri, was started in 1993 as an autonomous body for research and training of district and State level officers.

Observations were made and the head of SCDTC and faculty of HIRD were asked about their views on infrastructure and facilities as depicted in Table

SCDTC, Nilokheri, had its own single storeyed building with enough rooms and adequate furniture. It had three hostels for trainees, one being exclusively for women. Teaching aids, library books and equipment were adequate. Transport facility and electricity supply were adequate. Financial position for salaries was adequate.

The deficiencies noticed were lack of library hall, personal computer, cyclostyling machine, adequate number of staff quarters and water supply. The financial position for training was inadequate and for research it was nil. Two posts were lying vacant and the training load was excessive. To overcome these deficiencies steps were being taken according to the principal of the training centre. To avoid excessive training load he suggested four divisional training centres in Haryana.

TABLE 1
INFRASTRUCTURE AND FACILITIES AVAILABLE AT THE TRAINING
INSTITUTIONS AT NILOKHERI

Contents	SCDTC, Nilokheri	HIRD, Nilokheri
Date of Observation	29.12.1997	29.12.1997
1. Physical Infrastructure - Building	Single storeyed	Double storeyed
2. No. of room for - Staff room - Office - Lecture room - Library - Hostel	1 1 2+seminar hall No room 3 hostels (one for women - 50)	2 2 2 Conference Rooms 1 1 Hostel double storeyed (30)
3. Furniture (Chairs, tables, stools, benches) - Lecture room - Hostel - Library	Adequate Adequate No room	Adequate Adequate Adequate
4. Equipment - Typewriters - Cyclostyling machine - Water cooler - Refrigerator - Photocopier - Personal computer	Yes No Yes Yes - No	Yes Yes. Yes. Yes No No
5. Teaching Aids - Blackboard and chalk - Charts and graphics - Flash cards, models - Overhead projector - Audio visual aids (slides, TV.VCP)	Yes Yes Yes - -	Yes Yes Yes - -
6. Staff Quarters	Insufficient	Sufficient
7. Boundary wall around institute and staff quarters	Yes	Yes

Contents		SCDTC, Nilokheri		HIRD, Nilokheri	
8.	Water supply	Inadequate		Adequate	
9.	Electricity supply	Adequate		Adequate	
10.	Facilities for FPDA	Yes		No	
11.	Transport facilities of vehicle and POL	Adequate - 2 vehicles Jeep, Bus 52 seated		Adequate 2 vehicles, Ambassador, Swaraj Mazda Bus	
II.	Financial Position Regarding - Salaries - Training - Research related to TNA and evaluation	Adequate Insufficient (grant 1 lakh/year) No grant		Adequate Sufficient Adequate	
III.	Manpower Load -No. of staff in position/vacant positions -Training Load	2 posts vacant (50 staff, 8 trainers) Excessive		For training, no staff recruited only 2 faculty members on deputation from NIRD for 5 years and called guest faculty (18-20 staff) Normal	
No. of Courses Held		Official	Non-official	Official	Non-official
1994-95		18	166	9	2
1995- 96		27	64	8	8
1996-97		17	13	6	1
1997-98		8	-	-	-
No. of participants					
1994-95		1340	52000	273	62
1995- 96		887	49823	167	122
1996- 97		589	651	112	21
1997-98		320	-	-	-

Contents	SCDTC, Nilokheri	HIRD, Nilokheri
Dropout rate	10-20% as orders for training were through State Government and follow-up of trainees was very good	50% as State Government did not nominate the trainees in time
Suggestion of Principal SCDTC to reduce the training load	Need for 4 training centres in 4 divisions of Haryana	

HIRD, Nilokheri, had a two-storeyed building with enough fully furnished rooms and two conference halls. The hostel had about 30 rooms with all facilities. The teaching aids, equipment, staff quarters, water supply, electricity and transport facilities were adequate. Financial position regarding salaries, training and research was excellent (Table 1).

The only deficiency noticed was lack of regular faculty members and personal computer. Two Associate Professors from NIRD, Hyderabad, had joined the institute in 1995 on deputation for five years. Guest faculty was invited for training. The dropout rate of trainees was very high (50%) according to the faculty members. The government did not nominate the trainees in time. To reduce the high dropout rate, planning for the training programmes has to be done in advance with strict follow-ups.

Ministry of Rural Areas and Employment has been taking steps to strengthen the National Institute of Rural Development, Hyderabad, for training of trainers and 25 State Institutes of Rural Development for training the panchayati raj functionaries at the State and district levels, by providing infrastructure in terms of buildings, equipment and other facilities, including strengthening of faculty for improving resource base. Three-fourths of the funds provided annually are to be utilised to intensify training related activities with emphasis *on* training of panchayati raj functionaries.

Training Curriculum of Panchayati Raj Members

The documents on curriculum of panchayati raj members were analysed and it was noticed that:

One time crash training programmes were organised after elections for *gram panchayat members* and no training programme was organised during 1997-98. One day courses with 400 participants per course were organised. The course contents were arranged in 8 sessions of 45 minutes each. Firstly the number of participants was very high, then the time allotted to important aspects of financial and executive administration was very little for them to understand. Nothing on community participation, inter-sectoral co-ordination, methodology of local planning and resource mobilisation was discussed. One day crash courses for such a large number of participants failed to make any impact.

One time, two-day courses were organised for *panchayat samiti members* at district headquarters with about 125 participants per course. The contents were arranged in 16 sessions of 45 minutes each. It was found that the number of participants per course was very high to actively participate in discussions. The time given to powers on 16 government departments was very less and no stress was laid on behavioral aspects and inter-sectoral co-ordination. As such the duration of the course was short and there was no reinforcement by refresher courses.

Residential training programmes were organised for *zila parishad members* at HIRD, Nilokheri. They were initially planned for five days but later on reduced to two-three days as trainees were not willing to stay for five days. The number of participants per course was 35. The course contents were adequate with field visits every day. In practice, it was experienced by the faculty of HIRD that the trainees did not show much interest to learn but rather utilised the occasion for learning as a political forum to pressurise for more powers. Since 1996-97, all training programmes for *zila parishad members* were cancelled because of this agitational approach of the participants.

For the gram panchayat and panchayat samiti members, the observations were discussed with the Principal of SCDTC, Nilokheri. He also agreed that one time crash courses were not adequate for training. He said that due to excessive training load, his faculty was not able to cope up. He suggested that there should be four training centres in four divisions of Haryana to enable all the elected members to be trained adequately and regularly.

Training Material

To help the elected members to gain knowledge, a manual in Hindi entitled "Panchayati Raj Hamara Raj" had been prepared by the Department of Development and Panchayats in Haryana Government during 1997. The copies of the same were being sent to various districts by the SCDTC, Nilokheri. This manual consisted of 38 pages, including the provisions of the Haryana Panchayati Raj Act, 1994, the duties/functions/powers of panchayati raj members at different tiers, meetings of *gram sabha* and *gram panchayat*, *panchayat samiti* and *zila parishad*, sources of funds, the constitution of committees, maintenance of records, regulatory orders, inquiry into complaints, etc. If this manual reaches each and every elected member, it would be quite useful as a ready reference.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made to improve the performance of panchayati raj members so as to involve them effectively in local decentralised development planning, including health.

Policy Guidelines for the Training of Panchayati Raj Members

There is an urgent need to have clear cut and well defined policy guidelines for manpower development and training of panchayati raj members. The policy should envisage induction training for all the members elected for the first time. Orientation courses will be required for the members with previous experience of working with PRIs. Regular refresher courses will be needed for all the members to update their knowledge and skills. Policy decisions are also to be taken on venue, frequency and duration of training, financial resources, trainers, undertaking of case studies and research activities, training infrastructure and facilities and evaluation procedures.

Manpower Development Cell for Panchayati Raj Members

Manpower Development Cell is needed at the State level. It should be headed by a full time senior officer with regular staff under the Director, Department of Development and Panchayats. Its main responsibilities should be to (i) assess the training load and the requirements of the elected members of training, (ii) prepare training manuals and guidelines, (iii) keep records of data about the training of the panchayati raj members, (iv) monitor the training programmes, and (v) co-ordinate the training institutes and provide feedback for

Improvement. It will also review the training infrastructure and facilities from time to time so as to make the necessary provisions on the basis of need.

State Training Institutions

In Haryana, the State Community Development Training Centre (SCDTC) Nilokheri is responsible for providing training to village and block level panchayat members. It has 8 faculty members and is conducting around 70 regular courses for government officials with around 4000 participants per year. The number of elected members in Haryana for village level is 60,117 and for the block level it is 2528. In order to provide induction training, around 1250 courses will be required to train 50 participants per course. As the training load is excessive, to facilitate the training of elected members, it would be more practical to involve the district level training centres such as Krishi Gyan Kendra, District Training Teams and ANM training school. Institutes located in Gurgaon such as HIPA and SCERT (State Council of Educational Research and Training) can also be involved in providing training to the elected members. Besides, the SCDTC at Nilokheri needs to be strengthened by filling up of the vacant posts, also providing adequate funds for training and library hall for books.

Haryana Institute of Rural Development, HIRD, Nilokheri, has been entrusted with training of the zila parishad members whose number is 319. Around 10 courses will be required to train zila parishad members within one year of their election. As the institute has an excellent infrastructure and facilities, it can provide both induction training as well as refresher courses to the zila parishad members.

Training Strategies

- i. *Institutional Training:* The State level trainers after getting trained at the Central Institutes of NIRD, Hyderabad or IIPA, New Delhi, should be in turn train the trainers of District Training Institutions. Then the village and block level panchayat members should get training at the District Training Institutes. The duration of the induction training should be at least five days and for orientation and refresher courses, it should be two to three days. Refresher courses are needed once every year. The number of participants per course should be limited to 40. The methodology of training should be lectures, group discussions, role plays, case studies and demonstrations.

- ii. On the job training should be provided to the panchayat members during Meetings and seminars by the panchayati raj administrators such as ADC, DDPO and BDPO.
- iii. A PRI newsletter should be started in local language for providing Information on PRI activities covered by other PRIs as an experience sharing medium, and also to provide information and guidelines on administrative procedures and rules.

Training Contents

The training contents, identified during the study, for the training of panchayati raj members are as follows:

Gram panchayat members need to be trained in decentralised development planning, steps and mechanisms for implementation and monitoring of activities in sectors related to health and development, inter-sectoral co-ordination at local levels, resource mobilisation, communication skill development and organisation of meetings.

Panchayat samiti members need training in decentralised development planning, steps and mechanisms for inter-sectoral co-ordination of health and other development sectors, monitoring and supervision of implementation activities and to influence the behavioral aspects of personnel, particularly attitudinal change among them.

Zila parishad members need to be trained in decentralised development planning process and mechanisms, monitoring and supervision, inter-sectoral co-ordination of health and other development sectors and to influence the behavioral aspects of personnel, particularly attitudinal change among them.

प्रस्तुत अध्ययन में हरियाणा राज्य में पंचायती राज सदस्यों को प्रशिक्षित करने के लिए वहां अपनाई गई वर्तमान प्रशिक्षण नीति, रणनीति, प्रशिक्षण संस्थानों के संगठनात्मक ढांचे और इनमें उपलब्ध सेवा-सुविधाओं की समीक्षा करने का प्रयास किया गया है। राज्य सरकार द्वारा यद्यपि कोई प्रशिक्षण नीति निर्धारित नहीं की गई थी, किन्तु इन प्रशिक्षण संस्थानों को कुछ दिशा निर्देश अवश्य दिए गए थे। सभी तीनों श्रेणियों के पंचायती राज सदस्यों के लिए क्रैश प्रशिक्षण कार्यक्रमों का आयोजन किया गया था, जो केवल एक बार ही दिया जाता था। अध्ययन के निष्कर्षों से पता चलता है कि इन प्रशिक्षण संस्थानों के संगठनात्मक ढांचे और इन्हें उपलब्ध सुविधाओं में कुछ कमियां थी। पंचायती राज सदस्यों की कार्यप्रणाली में सुधार लाने की दिशा में लेखकों द्वारा कुछेक सिफारिशें की गई हैं।

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**ABILITY AND WILLINGNESS TO PAY FOR HEALTH CARE: AN EMPIRICAL STUDY
IN SOUTH DELHI**

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ABSTRACT

This paper assesses the ability and willingness to pay for health care by the low income households engaged in informal sector in an urban slum in South Delhi. The study shows that willingness to pay for health care is affected by both ATP and non-ATP factors. Further, the analysis of data shows that 46.66 per cent of the sample households have ability to pay for health care. The regression model predicts that about 3.82 per cent of monthly household income is spent on health care. This finding may be of great relevance to decide user charges or fixing the premium on community health insurance, especially with reference to public facilities.

Ability to pay (ATP) for health care or affordability of health care has become a critical policy issue in developing countries as the households are forced to face combined user fee burdens from various essential service sectors such as health, education and water. Many research and policy debates focussing on Willingness to Pay (WTP) for essential services have tended to assume that WTP is synonymous with ATP. However, a couple of studies conducted in developing countries have shown that willingness to pay for health care was not necessarily affected by household's ATP. Similarly, many field experiments based studies assessing utilisation pattern before and after the introduction of user charges confirmed that apart from ATP, other socio-demographic and health related factors also affect households WTP. A few studies based on household surveys and qualitative research explored the families' sources of health care financing. For instance, a study in Africa showed that very poor income households with an average annual income of \$ 68 carried a disproportionate share of the economic burden of malaria with total direct and indirect costs of malaria among these households consuming 32 per cent of annual income.

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Many experts argue that willingness to pay for health care is not synonymous with ability to pay because health expenditures may impose considerable costs on household consumption and investment patterns. The costs of health care can be considered affordable when health care utilization is not deterred due to financial reasons, particularly when the opportunity costs incurred do not cause levels of consumption and investment such as education to go below minimum needs¹. Even though a household has enough resources to pay for health care, it may take a decision to prioritise expenditures on goods and services externally defined as "non-essential", forcing it to reduce expenditure on health care. Thus, the factors which influence a person's decision to spend or not to spend on health care are complex and it is difficult to determine whether payment or non-payment is due to ability to pay or any other factors.

ABILITY TO PAY FOR HEALTH CARE

ATP assumes that people have enough resources to pay for the basic services and is affected by multiple factors. However, in the ATP literature, a household income, expenditure on food and health, ownership of property and savings are assumed to be the key determinants and their subsequent valuation will tender the level of household ability to pay.

Household Income

In the ability to pay for the health care literature, the household income is considered to be the most important factor which affects ATP. Non-cash income should also be included because income from these sources may free up cash income.

Expenditure on Food

Households are assumed to spend a certain level of their income on food and need for expenditure on food that surpasses this level will be considered unaffordable. It has been considered that the consumption of food is better denomination of ability to pay for health care than income because it is easy to get more information on consumption as the respondents are willing to share information on consumption than income.

While considering the ability to pay for the health care, the idea used here is how much income is available for consumption of other non-food items. For instance, if a family is already spending a huge share of its income on food items,

then only a meagre amount is left to meet demand for non-food items. On the other hand, a household which spends a lower proportion of its income on food would be able to meet other expenditures such as education and health care. The underlying assumption is that if the family foregoes consumption, e.g. luxury goods such as alcohol and tobacco, it is judged that the family is able to pay for health care, but if they forego consumption of essential goods such as food, safe water, it is considered that the family is not able to pay for health care. Many household consumption surveys in India have also shown that poor families spent more than 60 per cent of their income on food.

Expenditure on Health

Many studies in developing countries have cited health expenditure-income ratio as evidence of ability to pay. A five per cent of health expenditure-income ratio is a common benchmark of affordability because most health expenditure surveys in developing countries show that a typical household spends between two and five per cent of their income on health care¹. Therefore, it is assumed here that any household which spends more than five per cent of its income on health care may be considered unaffordable. When a household spends more than certain proportion of its budget on health, the household's command over other commodities will be reduced, especially the poor households may have to make damaging cutbacks on food consumption and other essentials. Survey data are used to estimate health expenditure-income ratios of different categories of households and number of households facing ability to pay for health care problems. For instance, the NCAER survey in India⁸ found that while the poor spent 7.7 per cent of their income on health care and the rich had to spend only 2.7 per cent. However, there are cases where some low income families would spend little on health care because they have access to subsidized health care services and on the other hand some families do spend more. Therefore, proportion of income spent on health may also reflect ability to pay for health care.

Ownership of Property

Ability to pay for health care depends on the ownership of property such as land and other productive assets.

Saving of the Household

Saving is a proxy variable as no one would like to reveal one's actual

Saving is a form of asset and it might imply an enhanced capacity of household to use health care services. Savings include money a family saved either in the formal financial institutions such as post offices and banks or informal institutions namely, family friends, relatives, local chit funds, etc.

WILLINGNESS TO PAY FOR HEALTH CARE

WTP refers to those with enough resources who are prepared to pay for their health care services. This may be measured by socio-economic and health related factors. Apart from ATP of households, other factors such as educational background of decision makers in the household, priority given to health care over other consumption expenditures, perception of symptom and disease by the household, perception about the facility and distance of the health facilities, etc., may also influence the WTP for health care. In this paper educational status of head of households is considered as a proxy measure for familiarity with the health system. The level of perception of the symptom and disease is related to educational background of households. The use of a particular source of care by the households generally depends on the perception of the facility. Therefore, major source of health care facility utilized was taken as the proxy variable for the perception of health facility.

Household's WTP is important because consumer responses to prices will influence service utilisation levels and patterns. How much amount the households are willing and able to pay for a good service can be assessed in two ways. One way is, by observing and modeling past health care utilisation, expenditure and responsiveness to prices and the other way is, by asking people directly how much they would be willing to pay for a specified health care services or product.

The main objective of this paper is to assess the ATP for health care by the poor, particularly those households engaged in informal activities and to estimate the minimum amount in terms of the proportion of income the household would be willing to pay for their health care.

METHODOLOGY

This study was conducted among the households in one of the biggest jhuggi jhompri clusters (Janta Jeevan Camp, Tigri, site I and II) in South Delhi during April-May 1997. According to data published by the Municipal Corporation of Delhi, this cluster comprises nearly 10,000 jhuggis. One block in this cluster was randomly selected for the study. From the selected block, 150 households which

do not have any member working in the formal sector were randomly interviewed. The interview schedule contained information on family profile, income and consumption expenditure, health care profile, expenditure on health care and savings, and ability and willingness to pay for health care. One month reference period was used for collecting information on household income, consumption expenditure, morbidity details and cost of treatment. The respondents selected from every household constituted at least the main earning member and/or spouse. Mothers acted as proxy respondents for children.

The analysis of this paper consists of two parts. In the first part, the ATP for health care of households was measured with the help of certain assumptions available in the ATP literature and in the second part; WTP for health care of households was estimated with the help of a simple regression model.

No single guideline for the measurement of ATP or the amount that people afford to pay for health care is available. In the absence of an objective guideline, many measures have been proposed by various studies. In this paper, household income, proportion of income spent on food and health care, ownership of property and saving are considered for ATP measurement. Interval scales were used for measuring these variables (Table 1). Four interval values were used because it would help avoid the arbitrary decision of giving scores 0 or 1 against each variable. The rationale for adopting this simple scale was to have a uniform measure for all variables so that ATP can be easily calculated. Equal weight was given to all variables due to the fact that no consensus was evolved so far indicating which variable would command more weight. The score for each variable of the household was allocated and ATP for each household was estimated by a summation of scores obtained in all the variables.

The possible scores for each variable affecting ATP are 1, 2, 3 and 4. There are five variables for ATP measurement and the values of ATP for each household would be between five and 20. The values for ATP for each household were calculated by a summation of the scores obtained in all ATP variables. It was assumed that households which scored more than 10 (50 per cent) were considered to be able families.

TABLE 1
INTERVAL SCALE AND MEASUREMENT OF ATP VARIABLE

Variable		Interval Scale and Scores	
a.	Household income (assuming Rs.2500 will meet basic requirements of families having five	Less than Hs.1250	1
		Rs.1251 - 2500	2
		Rs.2501 - 3750	3
b.	Expenditure on food (assuming a labour household spends 60 % of its income on food - based on available studies)	Rs.3751 and above	3
		More than 80 per cent	1
		Between 80% and 60%	2
		Between 60% and 40%	3
c.	Expenditure on health care (assuming that an average labour household spends 5 % of its monthly income on health care)	Below 40%	4
		More than 10%	1
		Between 1.0% and 5%	2
		Between 5% and 2%	3
d.	Ownership of property	Below 2%	4
		Owns no property	1
		Owns only jhuggi	2
		Plus consumer durable television, L.P. gas	3
e.	Saving	Plus other properties (land, sco	4
		No saving	1
		Saving below Rs.100/month	2
		Saving Rs.100-200/month	3
		Saving above Rs.200/- month	4

ASSUMPTIONS

- i. Households which earn more than Rs.2500 per month has ability to pay For health care. This assumption was made on the basis of that Rs.2500 per month will meet the basic requirements of a household (having five members) in a city like Delhi. This amount is quite higher than the minimum wages fixed by the Delhi Government in 1997¹⁰,

- ii. Households that spend lesser than 60 per cent of their income on food has ability to pay for health care than other households,
- iii. Households which spend lesser than 5 per cent of their monthly income on health care have more ability to pay for health care than others¹,
- iv. Households which own house/property/major consumer durable items have more ability to pay for health care than others, and
- v. Households which save more money will have more ability to pay for the health care.

In the second part of this paper, a regression model was developed to determine the minimum share of income which the households would be willing to pay for the health care. The dependent variable 'y' denotes the proportion of current income spent on health care. Independent variables include all other ATP variables considered in the study and other socio-demographic and health related factors. The amount currently spent on health care, *i.e.*, health expenditure of the previous month was also considered as an explanatory variable. It was expected that the estimated value obtained through the regression model would provide a base for deciding user charges in public health facilities or fixing premium on community health insurance.

FINDINGS AND DISCUSSION

Table 2 gives the results of the ATP measurement. Households are grouped into ability to pay and no ability to pay for health care based on the scores obtained in each variable. When household income alone was considered for ATP measurement, it was found that 59.33 per cent of households had ability to pay for the health care. When proportion of income spent on food was taken as a criterion, 51.33 per cent of the households had ability to pay. However, two-thirds of households had ability to pay when proportion of income spent on health care was adopted as a criterion. According to the ownership of property criterion, only 36.66 per cent were found to have ability to pay and while considering saving as a criterion for measurement of ATP, it was found that 38.66 per cent had ability to pay. A combined summation of scores obtained in all the ATP variables showed that 46.66 per cent of sample households had ability to pay for health care.

Result is consistent with few earlier studies. Similarly, for household which spent a larger share of its income on food means it will have a smaller share for other consumption expenditure including health care.

TABLE 2
RESULTS OF ATP MEASUREMENT

Variable	Household income	Proportion of income spent on food	Percentage of income spent on health	Ownership of property	Saving
Type of ATP					
No Ability to Pay	61(46.66)	73(48.66)	49(32.66)	95 (63.33)	92 (61.33)
Ability to Pay	65 (53.33)	77(51.33)	101(67.33)	55 (36.66)	58(38.66)
Total (N= 150)	150	150	150	150	150

In the regression analysis, the dependent variable y denotes proportion of income spent on health care by households. In the analysis, it was assumed that the current expenditure on health care is the minimum which the households would be willing to pay for health care. The independent variables include ATP variables considered in the analysis and other socio-demographic and health Related factors.

The independent variables included are age of head of household, number of children in the household, education of head of household, expenditure on food, family size, monthly expenditure on health care, monthly household income, marital status of head of household, ownership of property, household priority on health care, saving status of household, sex of head of household, number of illness episodes occurred during the reference period, health care facilities availed, and number of times doctors consulted. Definitions of variables representing each of the components of the model are presented in the Table 3. All the variables described in Table 3 were used to predict willingness to pay for health care. The results of the regression are shown in Table 4.

The results of regression equation shows that co-efficients of variables such as age of head of household, number of children in the family, educational level of head of household, family size, current expenditure on health care, marital status of head of household, number of illness episodes, family size, ownership of property, priority on health care of family members, amount of savings, sex of the head of household, kinds of health care utilised, and number of visits made have had positive association. Among these variables, education of head of household, current expenditure on health care, family size, priority on health care, major source of health care utilized and number of visits to health care facilities are statistically significant. However, the co-efficients of monthly household income and monthly food expenditure have negative signs which indicate that proportion of income spent on health care decreases with increase in household income. This

TABLE 3
THE INDEPENDENT VARIABLES

Identification	Description
AGE	Age of head of household
CHILDREN	Number of children in the age group of 0-5 years
EDU	Years of schooling of head of household
EPISODE	Number of illness episodes recorded during the reference period
FOODEX	Monthly household expenditure on food
F SIZE	Number of members in the household
HEAEXP	Monthly household health expenditure
MONINCO	Monthly income of household from all sources
MSTATUS	Marital status of head of household. It is measured as a dummy variable; married, 0 otherwise
OWNER	Indicates ownership of house. It is a dummy variable; 1 = own house, 0= otherwise
PRIORITY	Indicates priority given to health care of household members Dummy variable; 1= priority, 0= no priority
SAVING	Amount of monthly saving of the household
SEX	Sex of the head of household; 1 = male, 0= female.
SOURCE	Kind of health care utilisation 1 = private, 0= otherwise
VISITS	Number of visits made during the reference period

TABLE 4
RESULTS OF LINEAR REGRESSION ANALYSIS

Variables	Regression Co-efficient	t-statistic
AGE	0.023	0.7353
CHILDR	0.419	0.883
EDU	0.068	1.962
EPISODE	0.706	1.880
FOODEX	-0.002	-1.036
F SIZE	0.085	2.260
HEAEXP	0.005	12.413
MONINCO	-0.001	-1.634
MSTATUS	0.314	0.468
OWNER	0.167	0.984
PRIORITY	0.041	1.982
SAVING	0.185	0.235
SEX	0.450	0.839
SOURCE	1.001	1.945
VISITS	0.530	2.231
CONSTANT	3.815	1.818

The WTP for health care (in terms of proportion of income) of households was predicted by substituting the mean values of all variables included in the regression model. The estimated value thus obtained is 3.82 (i.e., 3.82 per cent of monthly household income). This seems to be the minimum share the households are expected to pay for health care.

CONCLUSION

This paper shows that willingness to pay for health care is affected by both ATP and non-ATP factors. Non-ATP factors include socio-demographic and health related factors. The paper also shows that 46.66 per cent of the sample households have ability to pay for health care. The regression model predicts that households would be willing to pay about 3.82 per cent of their monthly income on health care. The results of this study may be of relevance in deciding user charges or fixing the premium on community health insurance, especially with reference to public facilities.

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प्रस्तुत लेख में अनियमित क्षेत्र में कार्यरत दक्षिण-दिल्ली की मलिन बस्तियों के अल्प आय वाले परिवारों द्वारा स्वास्थ्य परिचर्या सेवाओं हेतु भुगतान करने संबंधी उनकी क्षमता एवं इच्छुकता का आंकलन किया गया है। अध्ययन से पता चलता है कि स्वास्थ्य परिचर्या सेवाओं के लिए भुगतान करने की इच्छुकता भुगतान कर पाने की क्षमता तथा भुगतान न कर पाने की क्षमता जैसे कारकों पर निर्भर होती है। इसके अतिरिक्त, आकड़ों के विप्लेषण से यह भी पता चलता है कि 46-66% सैम्पल परिवार स्वास्थ्य परिचर्या सेवाओं के लिए भुगतान करने की क्षमता रखते हैं। समाश्रयण (रीग्रेशन) मॉडल से यह संकेत मिलता है कि एक परिवार की मासिक आय का लगभग 3-82% भाग स्वास्थ्य परिचर्या सेवाओं पर खर्च किया जाता है। अध्ययन से प्राप्त निष्कर्ष, जन सुविधाओं के विशिष्ट संदर्भ में प्रयोक्ता प्रभार निर्धारित करने अथवा सामुदायिक स्वास्थ्य बीमा राशि की किश्त निर्धारित करने के लिए महत्वपूर्ण रूप प्रासंगिक सिद्ध हो सकते हैं।

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HEALTH PRACTICES PREVALENT AMONG TRIBAL WOMEN

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ABSTRACT

The tribal groups are in constant interaction with the natural surroundings and depend upon plants and herbs collected from the forest for cure of common ailments. The study reveals that the tribal community is not fully aware of the health care facilities available to them. The study has further shown that the community has strong believed in their system of traditional health care. Hence, the study suggests that the modern method of health care needs to be valued in the context of the existing practice of health care among tribal women in which they have set of skills. This may lead in improving the traditional system with appreciable ingredients of modern methods and materials.

It is a well-known fact that the tribals have been leading an independent life which is much different from the large population living around them. Ethnographic and anthropological studies have mentioned that the tribals have their own ways of managing their day-to-day life activities of which health is an important aspect. Hardly any report is available to know about the health problems of tribals, more specifically regarding their health seeking behaviour. Health is an important development sector and in order to find a firm places it must be made appropriate to the needs of the people irrespective of whether urban, rural or tribal. Small societies have their indigenous methods and practices for cure of illness and diseases. These tribal groups are in interaction with the natural surroundings and depend upon plants and herbs collected from the forest around for the cure of their common ailments.

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The State of Madhya Pradesh is having about 23 per cent of tribal population consisted of different tribal groups. Gond is the major tribe of India located in the central region and still remains a backward tribe. Tribal woman during her pregnancy takes no extra care. They consume the normal routine diet during the pregnancy period also. Most of the deliveries are conducted at home only with the help of an old lady, 'dai' of the village. During diseases they take the help of 'sirah' who is a magician as well as a religious person. Regarding their food practices, health, etc. some studies have been carried out in different parts of India but no systematic study has been conducted in Bastar district of Madhya Pradesh. Hence, the present study is an attempt to understand the health behaviour of the tribals of Bastar.

MATERIALS AND METHOD

A list of villages in selected blocks was prepared and three villages from each block were randomly selected. A list of tribal pregnant women was procured from Anganwadi of the selected villages. Thirty three tribal pregnant women were selected each from Lohandiguda and Tokapal block and thirty four were selected from Jagdalpur block. Sample comprised 100 respondents and information on health practices followed by them was collected using an interview schedule.

FINDINGS AND DISCUSSION

Health Check-up

Information on the status of health check-up as revealed through the survey is presented in Table 1. Tribal women hardly go for medical check-up during their pregnancy. Out of the total tribal pregnant women surveyed, only 28 per cent of them went for medical check-up. 15 per cent of them went for the first time while 2 per cent were going weekly, 4 per cent were going fortnightly and 7 per cent were going monthly. It was found that they were not aware of the medical facilities. As far as immunization was concerned, only 59 per cent from Block-III, 18 per cent from Block-II and 6 per cent from Block-I were immunized. Only 24 per cent of respondents were taking iron tablets during pregnancy. The pregnant women who stayed near the cities were the only goers for pregnancy medical check-up. These women were found to be aware of the need for a regular medical check-up. The major sources of receiving information by the tribal women were found to be Anganwadi workers, PHC and educated relatives. Majority of them still believe that their system of managing nutrition and health care during pregnancy was better than the outside medicines. Information on previous pregnancies strongly supports this view (Table 2).

TABLE 1

HEALTH AND MEDICAL CHECKUP OF TRIBAL WOMEN DURING PREGNANCY

Factors	Total number of respondents (n = 100)	Block-I (n-33)	Block-II (n=33)	Block-III (n=34)
<i>Medical check-up</i>				
Yes	28	2 (6.06)	6(18.18)	20(58.82)
No	72	31 (93.93)	27(81.81)	14(14.17)
First time	15	2(6.06)	2(6.06)	11 (32.25)
Weekly	02	0(0.0)	1(3.3)	1(2.94)
Fortnightly	04	0(0.0)	2(6.06)	3(8.82)
Monthly	07	0(0.0)		5(14.70)
<i>Immunization</i>				
Yes	28	2(6.06)	6(18.18)	20(58.82)
No	72	31(93.93)	27(81.81)	14(41.17)
<i>Iron Tablets</i>				
Yes	24	2(6.06)	7(21.21)	15 (44.11)
No	76	31(93.93)	26(78.78)	19 (55.88)
<i>Source of Information</i>				
	72	30 (90.90)	25(75.75)	17(50.00)
Nil	02	0 (0.0)	0(0.0)	2(5.88)
Radio	14	2(6.06)	5(15.15)	7(20.58)
PHC	05	0(0.0)	1 (3.03)	4(11.76)
Educated Relative	07	1(3.03)	2(6.06)	4(11.76)
Anganwadi Workers				

Percentage and frequency are the same as the number of respondent is 100. Figures in parentheses indicate percentages.

Status on Pregnancy

Problems related to pregnancies amongst tribal women were examined in 100 cases spread over the 3 blocks. Results are presented in Table 2. The average number of pregnancies per mother in the three blocks varied between 2.3 and 3.7 still births abortion and premature delivery were the problems related to pregnancy. Majority of the respondents who never consulted doctor during diseases used to take help of 'sirah' or used medicinal herbs collected from forests. Majority of the respondents from Block-I and II took the help of 'sirah'.

While an equal number of respondents from Block-III used medicinal herbs or took the help of sirah'. According to tribals of district Bastar, illness during pregnancy occurs due to various reasons. A pregnant woman becomes sick when she is under the spell of an 'evil spirit' or when the 'Devbhoat* i.e. God or Goddess is angry. The trouble is cured by counteracting the spirits through 'white magic' performed by 'sirah* who is specialist (Table 3). He is magician as well as religious person. Sirah is an experienced person with religious background, well established and recognised by the community as a helper with powers. A study observed similar findings in a tribal community in Andhra Pradesh which depends on leaders similar to sirah as a patron diety¹.

TABLE 2
OUTCOME OF PREVIOUS PREGNANCIES OF TRIBAL PREGNANT WOMEN

History of Pregnancies	Total Respondents* (n=100)	Block-I (n=33)	Block-II (n=33)	Block-III (n=34)
No. of multigravide	81	24	32	25
No. of past pregnancies	224	88	72	64
Average number of pregnancies per mother	2.8	3.7	2.3	2.6
Problem during past pregnancies	27	10	13	04
i. Still birth	16	10	6	0
ii. Abortion	1	0	0	1
iii. Premature	10	0	7	3

* Figures indicate actual number of subjects.

Medicinal Herbs

As a result of human interaction with natural surroundings, the man has advanced to this present age with the understanding of qualities of flora and fauna and has made use of it. The tribals through the same process have learnt and identified herbs and plants for various purposes to cure the ailments and diseases. A list of herbs and their use as was revealed during the survey is presented in

Table 4. The tribal pregnant women use *harra* for fever, *behra* for pains of leg and *tora* oil for muscle pain, groundnut oil for body pain and *patkoria kanda* (tuber) for stomach pain. *Mehalu* fruit was used for cuts and wounds, *bichai dhar* for snake bite, etc. Similar practice is also followed by the tribals of other regions with high level of satisfaction^{2, 3,4,s}.

TABLE 3
INFORMATION RELATED TO TREATMENT OF DISEASES BY TRIBAL PREGNANT WOMEN OF DISTRICT BASTAR

Factors	Total Respondents* (n=100)	Block-I (n=33)	Block -II (n=33)	Block-III (n=34)
<i>Consult doctor during diseases</i>				
Always	20	0(0.0)	0(0.0)	20(58.82)
Never	80	33(100)	33(100)	14(41.17)
<i>Home remedy</i>				
Sirah	50	23(69.69)	20(60.60)	7(20.58)
Medicinal herbs	30	10(30.30)	13(39.39)	7(20.58)

*Percentage and frequency are the same as the number of respondent is 100.
Figures in parentheses indicate percentages.

TABLE 4
SOME PLANTS AND HERBS USED FOR MEDICINAL URPOSES BY THE TRIBALS
OF DISTRICT BASTAR

Plants/herbs	Botanical name	Disease/illness	Application
Harra	Terminalia chebula	Fever	Harra is consumed with water.
Behra	Terminalia belerica	Pains in legs and arms	Behra is consumed with water.
Tora oil/groundnut oil		Body pain	The hot oil is applied specially over the affected parts of the legs and arms.
Patkoria kanda		Stomach pain	This kanda is powdered and mixed with water and then consumed.
Melham fruit		Cut/wounds	The paste form is applied on the cuts and wounds.
Bichai Dhar or Dang kanda	Dioscorea bulbifera	Snake and scorpion bite	Used in a paste form and applied on the wound.
Adhakapari	Tribulus terrestris	Headache	This is used as a paste and applied over the aching portion of the head/forehead. A cloth is tied over it.
Sighad leaf		Fracture	This is used as a paste and applied over the fractured portion; a cloth is tied over it.
Bark of mango tree		Diarrhoea	Bark of mango tree mixed with water and taken with sugar is believed to be effective in diarrhoea,

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प्रकृतिक वातावरण में पूरी तरह रचे-बसे होने के कारण जनजातीय समूह साधारण बीमारियों के उपचार के लिए पेड़-पत्तियों और जड़ी-बूटियों के प्रयोग पर निर्भर करते हैं। अध्ययन से प्राप्त निष्कर्षों से पता चलता है कि आदिवासी समुदाय के लोगों को उन्हें उपलब्ध कराई गई स्वास्थ्य परिचर्या सेवाओं के बारे में पूरी जानकारी नहीं होती है। अध्ययन से यह भी पता चलता है कि इन समुदायों के लोग स्वास्थ्य परिचर्या संबंधी रूढ़िगत प्रणाली में दृढ़ विश्वास रखते हैं। इसलिए अध्ययन में यह सुझाव दिया गया है कि चूंकि आदिवासी महिलायें स्वास्थ्य परिचर्या के अपने तरीकों के बारे में अभ्यस्त होती हैं और उन पर अधिक विश्वास करती हैं, इसलिए स्वास्थ्य परिचर्या के आधुनिक तरीकों का उनमें प्रचलित अभ्यासों के संदर्भ में आंकलन किया जाना चाहिए।

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SOCIALIZATION OF THE GIRL-CHILD IN RURAL INDIA

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ABSTRACT

This paper discusses the parental perception of sickness, socialization of girl child related to self-reliance, food habits, dependency and socio-cultural values which play an important role in the development of self-esteem or self-image of a girl child. The findings indicate that the parents do not discriminate a girl child in terms of quality and quantity of food and other factors associated with it as they are getting aware of the fact that girl child's need for nutritious food is as important as those of boys. It has also been observed that in rural community the parents and elders socialise and internalise the girl child in such a way that she has to adhere to certain socially approved behaviour.

The goal of achieving universal health for which India is committed, would certainly not be feasible without giving priority to the vulnerable or the high risk group. The female child has to live through behavioral differences and other discriminations. They are extremely vulnerable to risk of suffering from ill-health. Today the girl child's health is the key to the health of the families and future generations. An integrated and holistic approach to the development of girl child in all spheres thus definitely involves creation of a new environment in which she is to be valued and nurtured. Similarly, gender discrimination, traditions, customs and parental behaviour in the process of socialization and internalization have adverse effects on health, self-esteem and overall development of the girl child.

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Family is the first and major source of origin of perception and attitudes among children. Parents as role models transmit values and children who identify and adopt these values involuntarily very early in life. The girl child's perception of herself and her role is conditioned by her early socialization, a process which eventually moulds her into the stereotyped prisoner of her gender. The girl's role model is her mother who works through her sickness and pain and learns to suffer from ill-health silently. The girl child gradually acquires the qualities of weakness, submissiveness and self-sacrifice which allow her to accept domination of male-oriented values.

REVIEW OF LITERATURE

A survey in Bihar highlighted a wide gap between boys and girls in nutrition, health and educational status¹. Girls received less supplementary foods as compared to boys. Poverty aggravated the problems faced by the girl child in rural areas. In a study conducted it was found that parental acceptance promoted self-esteem in children, whereas, the rejected children had a low esteem². Several studies have been conducted on types of parenting and its effect on children's personality traits.

Three types of parenting and their effect on children have been derived. In the first category of the parents who are controlling, demanding, warm, rational and discipline-oriented. Their children were found to be more independent, socially responsible, self-controlled, reliant and explorative. The second category is represented by parents whose behaviour is strict, critical, less warm and more emotionally not attached. Their children become withdrawn, discontented and distrustful. The third category includes parents who are non-controlling, non-demanding, exercising less or no power, reasoning warmth and acceptance. Their children tend to be lacking in self-reliance, control and explorative tendencies³.

In a longitudinal study it was observed that the girls are not born as tense rather it is the discriminative and harsh attitude of parents in particular and society in general make them worrying, tense and depressed, and spoil their mental health which lead to mal-adjustment in future life⁴. Adolescent's ego development was found to be associated with certain cognitive and affective parental behaviours⁵.

It has also been opined that child's personality is also determined by the varying levels of experienced enrichment and deprivation. A study has observed that disadvantaged students were more rigid, conforming, anxious, less extrovert,

Alienated and had a lower self-image than their less deprived counterparts. Another study has observed that rapid socio-economic changes that are occurring in the country induce certain adoptive changes in the family which in turn lead to modifications in socialization and child rearing practices. Kagitcibasi (1988) also remarked that how human socialization is effected by cultural diversity and social changes and the implications of this for healthy human development are issues of crucial importance to cross-cultural psychology.

Too much attention is given to legal, theoretical and formal position rather than to actual relations between men and women and their dynamics over a period of time⁹. Less number of girls compared to boys were enrolled in the school and continued education¹⁰. Parents emphatically said that more education for girls would make it difficult to arrange marriage for them. When girls raised their voice and behaved adamantly, they were punished. They were strictly supervised and most girls accepted the fact that they were expected to marry, be a housewife and mother. Their role expectations were clear and in line with traditional values from early childhood they began to learn these roles by identifying themselves with their mothers.

MATERIALS AND METHOD

The study was carried out in rural areas of Gwalior district of Madhya Pradesh. The sampling involved a coverage of two primary health centre areas, namely: Barai and Dabra. One sub-centre was randomly selected from each of the primary health centres. In order to get the eligible parents (parents should have at least one male and one female child), a primary survey was conducted with the help of local multipurpose workers (MPW) and 250 families from peripheral villages were selected randomly for the study. The respondents from these families consisted of the girl children (6-19 years) and their parents.

Three types of structured and semi-structured schedules were used comprising (i) socio-economic and demographic profile, (ii) socialization of girls, girl's self-esteem, and (iii) physical growth and health assessment, particularly body weight, secondary sex characters development and relevant background information. Responses regarding exposure of the girl children to the verbalization related to beliefs prevailing in the family/society were sought from the sampled female children through interview schedules.

Within the schedules, statements related to various aspects of socialisation and internalization process were included based on day-to-day exposure of verbalization of the parents. It is assured that this verbalization would go a long way in shaping/framing the personality and future expectation of the girl child. The

Statements devised have not been tested for reliability and validity as the study was purely exploratory. Meantime, only those statements had been incorporated in sequencing manner which presumably would have greater impact on the socialization, internalization and development of personality, e.g. myths, sickness, food habits, self-reliance and other socio-cultural aspects. The basic purpose of this paper is to understand and explore the process a girl child is going through in the present day context.

FINDINGS AND DISCUSSION

The families are autonomous and sovereign where parents adopt their own values in bringing up the children within the existing socio-cultural and religious set-up and the girls are subjected to disciplining by parents and elders in the family.

Majority (95%) of families were Hindu. The scheduled castes and tribes, and other castes together comprise about 55 per cent of the sample while backward castes constitute 22.0 per cent. By and large nuclear family structure dominates (67.2%) in rural settings. However, 32.8 per cent of families are living under joint and extended family system. It was found that 31.2 per cent of fathers and 73.6 per cent of mothers were totally illiterate while 34 per cent of fathers and 21 per cent of mothers were educated between primary and middle level. Only 34.8 per cent of fathers and 5.6 per cent of mothers had education upto high school and above. Most of the families (48%) were farmers, followed by landless labourers (18.8%). The non-traditional occupation included business, industrial labour, government and private services constituted 33.2 per cent. A majority of families (37.2%) were earning more than Rs. 15,000 per annum. The mean income of the family comes about to Rs. 12,420 per annum. It was also found that 33.2 per cent of the households did not possess any agricultural land. A majority of (22.8%) household possessed 1-5 bighas of land. It clearly showed that most of them were marginal farmers and one-third of households were mainly dependent on manual labour for their livelihood. Thus, the study population was from low socio-economic and educational strata of the rural society (Table 1).

Myths about Socialization and Internalization of Girl Child in the Family

A child is exposed to certain common statements made by elders in the family in day-to-day life which leave an indelible mark in the mind and to a great extent the child lives with that during adulthood. In this study an attempt has been made to find out statements to which a girl child is exposed during childhood with regard to gender discrimination.

TABLE 1**PROFILE OF THE STUDY POPULATION (N=250)**

Religion	Hindu Muslim Christian	225 (95%) 24 (9.6%) 1 (0.4%)
Caste	Scheduled Castes Scheduled Tribes Backward Castes Upper Castes Other Castes	48 (19.4%) 22 (8.8%) 55 (22.0%) 68 (27.2%) 59 (26.6%)
Type of Family	Nuclear Family Joint Family Extended Family	168(67.2%) 49 (19.6%) 33 (13.2%)
Educational Level of Parents	Ill derate Primary Middle Matric and Secondary Graduate and above	184 (73.6%) 34 (13.6%) 18 (7.2%) 13 (5.2%) 1(0.4%)
Occupation	Landless labourer Agricultural Farmer Industrial Labour Business Government Servant Private Service and Other	47(18.8%) 120(48.0%) 13(5.2%) 28(11.2%) 28(11.2%) 14(5.6%)
Annual Family Income (in Rs.)	1000-5000 5001-10000 10001-15000 15001 and above	20 (8.0%) 57 (22.8%) 80 (32.0%) 93 (37.2%)
Agricultural Land (in Bighas)	No Land Up to 5 6-10 11-15 16 and above	83 (33.2%) 57 (22.8%) 39 (15.6%) 28 (11.2%) 43 (17.2%)

(Figures in parentheses indicate percentages)

TABLE 2
MYTHS ABOUT SOCIALIZATION AND INTERNALIZATION OF
THE GIRL CHILD IN THE FAMILY (N=250)

S.No.	Statements	Did your parents or elders ever say such a	
		Yes	No
1.	Birth of a son brings more happiness than the birth of a daughter in the family.	189 (76.6)	61 (24.4)
2.	It is necessary to have atleast son to carry on the family lineage.	194 (77.6)	56 (21.4)
3.	A mother who gets only male children are considered blessed.	109 (43.6)	141 (56.4)
4.	Married and pregnant women should pray and fast to get a male child first.	129 (51.6)	121 (48.4)
5.	Mother who bears only female children are considered damned/dispossessed.	73 (29.2)	177 (70.8)
6.	Barren women are condemned in the community.	63 (25.2)	187 (74.9)
7.	Widowhood is considered a bad happening and is unwelcome.	87 (34.8)	183 (65.2)

(Figures in parentheses indicate percentages)

Table 2 shows that 76.6 per cent of the girl children were exposed to verbalizations of their parents or elders like 'birth of a son brings more happiness than the birth of a daughter in the family'. 77.6 per cent of the girl children were exposed to 'it is necessary to have at least one son to carry on the lineage of the family'. Around 44-52 per cent of the girl children were exposed to statements like mothers begetting only male children were considered blessed and that married and pregnant women should pray and keep fast to beget male children. Lesser but quite a few girl children (between 25-35 per cent) were exposed to more negative statements related to them, e.g. mothers bearing only female children were considered damned, barrenness is worth condemnation and widowhood means banishment from socio-religious participation. If a girl child is repeatedly exposed to this verbalization then it could lower the girl child's self-esteem and increase her sense of insecurity as she realises that she has practically no control over

most of these aspects.

TABLE 3
SOCIALIZATION OF THE GIRL CHILD RELATED TO SICKNESS (N=250)

S.No.	Statements	Did your parents or elders ever say such a	
		Yes	No
1.	Both girls and women usually sutler from one or the other minor ailments which may not be bothered about much.	48 (19.2)	202 (80.8)
2.	Only when girls become bedridden due to sickness then only it becomes a matter of concern.	84 (33.6)	166 (66.4)
3.	Girl should be able to endure ailments quietly and should not make any hue and cry about it.	83 (33.2)	167 (66.8)
4.	In case of sickness of girl's get well by them if she takes rest and eats less.	42 (16.8)	208 (83.2)
5.	Home remedies are enough to take care of the girl's illness.	41 (16.4)	209 (83.6)
6.	Girls are basically strong and despite severe illness they don't die easily and she would invariably make her parents pay for dowries.	68 (27.2)	182 (72.8)

(Figures in parentheses indicate the percentages)

Table 3 gives the distribution of responses of the female children against certain aspects related to sickness and treatment in terms of severity of diseases which might affect them, or the medical care attention they might need as verbalized by the parents. Majority of girls were not exposed to all the statements given in Table 3. The girl child was not found to be discriminated by parents as far as her health needs were concerned.

Table 4 highlights the fact that girls in the study were not exposed to statements like "boys need good and rich food because their work involved more physical labour whereas girls need simple and little food since their work is confined to the home", "girls should not take more food as they would become fat and thus ineligible for marriage", "girls should not take spicy and rich food as it would enhance physical maturity", "girls should not eat spicy food outside as it

would spoil her and make her naughty", "girls should be trained to take her meals after everybody has eaten as a matter of sacrifice". 49.2 per cent did hear in their family that "girls should fast regularly as it would help her adjust in her husband's home during deprivation if any", 51 per cent heard the statement that "girls are not expected to complain about food, it is only the boys who could do that", and 54.8 per cent heard that girls should eat vegetarian food only as non-vegetarian food is not good for them". On the other hand nearly more percentage of girls had reported that they were not made aware of these aspects by their parents. Thus one can conclude that parents in rural community are getting aware the girl child's need for nutritious food.

TABLE 4
SOCIALIZATION OF THE GIRL CHILD RELATED TO FOOD (N=250)

S. No.	Statements	Did your parents or elders ever say such a thing	
		Yes	No
1.	Boys need good and rich food because their work involves more physical labour whereas girls need simple and little food since their work is confined to the home.	74 (29.6)	176 (70.4)
2.	Girls should not take more food as they would become fat and thus ineligible for marriage.	43 (17.2)	207 (82.8)
3.	Girls should not take spicy and rich food as it would enhance physical maturity.	41 (16.4)	209 (83..6)
4.	Girls should not eat spicy food outside as it would spoil her and make her naughty.	54 (21.6)	196 (78.4)
5.	Girls should fast regularly as it would help her adjust in her husband's home during deprivation if any.	123 (49.2)	127 (50.8)
6.	Girls should be trained to take her meals after everybody has eaten as a matter of sacrifice.	140 (27.2)	110 (72.8)
7.	Girls are not expected to complain about food. It is only the boys who could do that.	128 (51.2)	122 (49.0)
8.	Girls should eat vegetarian food only as non-vegetarian food is not good for them.	137 (54.8)	113 (45.2)

(Figures in parentheses indicate percentages)

TABLE 5
SOCIALIZATION OF THE GIRL CHILD RELATED TO SELF-RELIANCE (N=250)

S.No.	Statements	Did your parents or elders ever say such a thing	
		Yes	No
1.	How can the parents treat girls and boys as equal, when girls cannot continue the family lineage.	117 (46.8)	133 (53.2)
2.	How can the parents treat girls and boys as equal, when the girls are born with the burden of dowry on parents.	123 (49.2)	127 (50.8)
3.	Girls are usually weak and afraid and as such cannot perform risky and daring jobs.	128 (51.2)	122 (48.8)
4.	Girls usually cannot protect themselves and need to be accompanied by males either young or old.	157 (62.8)	93 (37.2)
5.	Girls are always under protection either of her parents or husband and as such whichever family she is married to, she should spend her life there without any complaints.	154 (61.6)	96 (38.4)
6.	Husband should mean everything to his wife, thus she should obey all his orders and serve him wholeheartedly.	185 (74.0)	65 (26.0)
7.	Girls don't have any rights of their own and should confine themselves within the rights allowed to her by their husband/elders.	147 (58.8)	103 (41.2)
8.	Girls should not take any decision on their own. They should consult father, brother, husband and other elders and decide only to their satisfaction.	178 (71.2)	72 (28.8)
9.	Girls are considered as <i>Paraya Dhan</i> and her living with the parents is a matter of few years her real home is with her husband.	215 (86.0)	35 (14.0)

(Figures in parentheses indicate percentages)

According to 86 per cent of girls, they were exposed to the statement "girls are considered as *Paraya Dhan* and her living with the parents is a matter of few years, her real home is with her husband. More than 74 per cent of the girls were

exposed to the statement like husband should mean everything to his wife, thus she should obey all his orders and serve him wholeheartedly and girls should not take any decision on their own. They would consult father, brother, husband and other elders and decide only to their satisfaction. However, 53.2 per cent of the girls felt to have quality of treatment like boys. In addition, more than 60 per cent of the girls were exposed to statement like girls usually cannot protect themselves and need to be accompanied by males either young or old and girls are always under protection either of her parents or husband and as such whichever family she is married to, she should spend her life without any complaints (Table 5).

The child's mental health is closely related to the learning process. Fear, insecurity and feelings of inadequacy are conducive to failure while self-confidence facilitates learning process and success. The socio-cultural milieu of the environment as well as family indirectly helps the girls to develop their self-image. Frequent repetition of such words in day-to-day life gets associated with their beliefs for long duration of their life. In this situation, it was felt that the view of the girls should be recorded for better understanding of their self-image by responding to some relevant statements often verbalized at home.

Almost 75 to 93 per cent of sampled girls reported that they have heard the following statements quite often from their parents or elders: *Always use polite words in conversation, should not demand anything for her, take the food last, avoid aggressive physical postures, arguments, and looking at unknown persons eye-to-eye. More than 70 per cent of girls had endorsed that they should not talk loudly, laugh aloud, should not complain, someone should accompany her while going out and should bear physical pains or bear discomfort in silence.* In brief, the table reflects that the girls had been socialized in such a way that they should strictly obey the prevailing socio-cultural values in the family as well as in the society and adhere to certain behaviour (Table 6).

CONCLUSION

The above discussion highlights that the myths about socialization and internalization of girl child in the family are prevailing up to high level, thus, the personality profile of girls in rural community moulded according to the exposures to such uttering by their parents. Contrary to probable expectations the girl child in the study was not found discriminated as far as her health needs and medical attention were concerned, but a streak of negative attitude of parents towards girls could still be discernable.

In relation to food, prevalent belief was that girls were being discriminated in terms of quality and quantity and other factors associated with it which was not

TABLE 6
SOCIALIZATION OF THE GIRL CHILD RELATED TO SOCIO-CULTURAL VALUES
IN THE FAMILY (N=250)

S. No.	Statements	Did your parents or elders ever say such a thing	
		Yes	No
1.	Girls should always use soft-word in her conversation and never use abusive language.	237 (94.8)	13 (5.2)
2.	Girls should talk less before the elders and she should not talk unnecessarily.	231 (92.4)	19 (7.6)
3.	Girls should always be humble and peaceful, she should not start fights nor take any part in them.	232 (92.8)	18 (7.2)
4.	Girls should always obey her parents and elders in her family.	228 (91.2)	22 (8.8)
5.	Girls should not demand anything on her own. She may take whatever is given to her by mother, father, brother, husband and in-laws, otherwise she should be quite.	177 (70.8)	73 (29.2)
6.	Girls should ensure that everybody has eaten before she eats, despite the fact she may have to remain hungry; this sacrifice should also make her feel happy.	184 (73.6)	66 (26.4)
7.	The physical posture of girls should not be defiant and aggressive.	180 (72.0)	70 (28.0)
8.	Girls should not take eye-to-eye with other unknown persons.	188 (72.8)	62 (24.8)
9.	Girls should not resort to arguments with others.	200 (80.0)	50 (20.0)
10.	Girls should not talk loudly.	208 (82.2)	42 (11.8)
11.	Girls should not laugh shamelessly	210 (84.0)	40 (16.0)
12.	Girls should not have the habit of complaining.	188 (75.2)	62 (24.8)
13.	Girls should not wear improper clothes.	185 (74.0)	65 (26.0)
14.	Girls should not go to anybodies house	227 (90.8)	23 (9.2)
15.	Unaccompanied. Girls should bear physical pain discomfort quality.	150 (60.0)	100

(Figures in parentheses indicate percentages).

Found in the study, thus, one can conclude that the parents in rural community are getting aware of the fact that the girl child's need for nutritious food. Socialization of the girls in the area of self-reliance is inadequate particularly in decision-making. Girl child is considered as *Parya Dhan*. Husband feels that women should obey all his orders and serve him wholeheartedly. Similarly, it was also a very common feeling that girls usually cannot protect themselves, they have to be either under protection of her parents or husband. The girls are born with the burden of dowry on parents.

Socialization related to socio-cultural values reflect that the girl child had been socialized in such a way that they should strictly obey the socio-cultural values in the family and adhere to certain behaviour, specially that they should talk less before the elders, always use polite words in her conversation, be humble and peaceful, therefore, independent expression of opinion, behaviour, etc. were considered deviations rather than expressions of innovations or creativity.

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प्रस्तुत लेख में लड़कियों की रुग्णता, आत्मनिर्भरता, मूल्यों, जो उनके आत्म-सम्मान अथवा उनकी व्यक्तिगत छवि के विकास के लिए महत्वपूर्ण हैं, आदि पक्षों के संदर्भ में माता-पिता की अवधारणाओं पर चर्चा की गई है। प्राप्त निष्कर्षों से यह संकेत मिलता है कि जैसे-जैसे माता-पिता इस बात के प्रति जागरूक होते जा रहे हैं कि पौष्टिक भोजन जितना एक लड़के के लिए आवश्यक है उतना ही लड़की के लिए महत्वपूर्ण है, तदनुसार लड़की के भोजन की मात्रा तथा क्वालिटी के संदर्भ में और उससे जुड़े जीवन के अन्य पहलुओं के बारे में अब कोई भेद नहीं किया जाता है। यह भी देखने में आया है कि ग्रामीण समुदायों में माता-पिता तथा बुजुर्ग लड़कियों का सामाजिक पालन-पोषण इस ढंग से करते हैं कि उन्हें कुछ सामाजिक मान्यताओं का पालन भी करना होता है।

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