TRAPPED INTO LIVING
WOMEN'S WORK ENVIRONMENT AND THEIR PERCEPTIONS OF HEALTH

Edited by
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Centre for Enquiry Into Health and Allied Themes

First Published in February, 2005

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ISBN 81-89042-31-9

Printed at
Satam Udyog
Parel, Mumbai-400 012.

PREFACE

An important consequence of combining the tasks of production and reproduction is that it has a serious impact on well being. For the poor there is really no escape from high work intensity. And yet, the aspects of how intensification of work time as well as the work itself impact on well being have received scant attention in literature. Further, globally, the changing socio-economic equations render the poor [and women in particular] even more vulnerable. To understand these changes and their implications for women's health, Engender, Singapore, coordinated a Southeast Asia multicentric study on women, work and health, in the context of globalization.

In India, CEHAT was entrusted with the responsibility of coordinating the study. CEHAT commissioned three studies, each covering a different arena of women's work: one, women as industrial workers in the informal sector; two, women workers in the growing export-oriented cultivation of grapes; and three, urban slum women forced into home-based work largely because of decline in traditional manufacturing activities. The latter have to, simultaneously, also cope with degrading environmental conditions.

While these case studies may not show direct and/or neat linkages to globalization, listening to their voices and capturing their experiences clearly indicates how their lives and living environments have been adversely affected by larger changes in the economy.

We hope this publication will make a useful contribution to the growing literature attempting to document impacts of changing environment, and thereby generate further debate and research to consolidate our understanding on issues emerging out of these studies.

We are greateful to the Centre For Environment, Gender and Development [Engender] Pte. Ltd., Singapore, for their support in making this volume possible. A special thanks to Padmini Swaminathan for agreeing to edit the volume.

Ravi Duggal
Coordinator, CEHAT February 2005

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ACKNOWLEDGEMENTS

This study was made possible by the generous grant that we received from the Centre for Environment, Gender and Development [Engender] Pte, Ltd, Singapore. We are grateful to them for facilitating the fieldwork on which this volume is based, and, subsequently, for the opportunity to present our work at the meeting organized by them at Hong Kong in June 2000.

Throughout the duration of the study we had the active support and guidance of our consultants: Dr. Abhay Shukla, Ms. Soniya Gill, Ms. Sujatha Gothoskar, and Ms. Padma Prakash. We remain indebted to them.

At several stages we shared our findings before a larger audience. We would like to record in particular our thanks to Aditi Iyer, Amar Jesani, Bhavani Shastri, Dhruv Mankad, K N Bavale, K Seeta Prabhu, Lesli Rodricks, Preet Rustagi, Shabana Khan, Sunita Bajpai, Vasant Gupte, Veronica Geoge, and Vidya Chitke for their patient hearing and for their inputs into our analysis. At the final dissemination workshop held on 19th May 2000, we were fortunate to get the observations of Maithreyi Krishnaraj, Veena Shatrughna, R Nagaraj. Mohan Rao and Padma Prakash on our findings and analysis. We are extremely grateful to these scholars for enriching this volume through their discussions and comments.

Vibhuti Patel deserves a special mention for her painstaking comments on the draft of our manuscript.

S. Chattopadhay helped in editing the language of the volume and we are grateful to him.

Anirban Bose, Tejal Barai, Vijay Sawant, and Vikas Gamre, provided logistical support right through the inception of this project to its present form. We are indeed extremely grateful to them. We would also like to thank Margaret Rodrigues for handling the publication technicalities and logistics.

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PART I

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Padmini Swaminathan

THE CONTEXT

Approached from any discipline—be it demography, economics, sociology, or any other field of study—women's participation in paid employment, and particularly, participation outside the household domain, has uniformly been given a positive connotation. In demography, for example, the seemingly high correlation between increase in female Work Participation Rate (WPR) and reduction in fertility rate has catapulted this statistical finding into a policy decision, wherein growth in population in populous Less Developed Countries is sought to be controlled through, among other things, larger participation of women in paid employment. In economics, where the study of poverty is a major preoccupation, wage employment is central among the prescriptions for poverty reduction. Further, paid employment for women is also generally associated with greater economic independence, resulting in better household nutritional status as well as better scope for education of girl children. Sociological studies of women's participation in wage employment stress the enhanced status and autonomy that such work participation provide for women, which in turn confers on them greater decision-making power.

At another level, there is increasing documentation of the 'Triple Overlap' of gender stratification, economy, and family (Blumberg, 1991). Insights from these studies provide an understanding of how housework is an aspect of family life most resistant to change. Occupational demands and expectations continue to be based on the assumption that the worker is an individual who is relatively free of domestic and family responsibilities. Further, an underlying dimension of modernization is the increasing centrality of individual goal-attainment (Bernhardt, 1993). This has important, and, more often, *negative* implications for women. For women to become *modern*, or compete with men on equal terms would imply that they are unburdened of household duties and childcare. Otherwise they must make adjustments at a personal level, for example, by working part-time or by limiting the sizes of their families, if they wish to combine the two roles. The division of tasks within the family, or its reorganization, so that both genders share the responsibilities, is not yet a subject of negotiation for most households, whatever their social and economic level.

For the first time the Central Statistical Organization of the Government of India provided official visibility to women's domestic burden by collecting data on various household activities through the Time Use Survey. The Survey was conducted in 18,591 households spread over six selected states, namely, Haryana, Madhya Pradesh, Orissa, Tamil Nadu, and Meghalaya. The main objectives of the Survey, to quote the Report (Government of India, 2000), were "to collect data for properly quantifying the economic contribution of the women in the national economy and to study the gender discrimination in the household activities" (ibid: xi). The Report classifies activities using the 1993 System of National Accounts (SNA). It makes use of three categories: SNA, extended SNA, and non-SNA.

The SNA activities consist of *primary* production activities like crop farming, animal husbandry, fishing, forestry, processing and storage, mining and quarrying; *secondary* activities like construction and manufacturing; and *tertiary* activities like trade, business, and services. Extended SNA activities include household maintenance, care for children, the sick, and the elderly. Non-SNA activities include learning, social and cultural activities, mass media, personal care and self-maintenance. Table 1.1 captures the weekly average time spent by men and women on these three broad categories of activities.

On an average, per week, males spend about 42 hours in SNA activities as compared to only about 19 hours by females. However, the situation completely changes when we consider extended SNA activities. Here, the male spends only about 3.6 hours per week as compared to almost 34.6 hours by the female. Thus, females spend almost 10 times more time on extended SNA activities than males. In non-SNA activities, males spend about 8 hours more than females per week. Table 1.2 disaggregates the data "on some important activities which generally fall in the domain of women's life" (Government of India, 2000: 71) to give an idea of the disproportionate burden of household activities on women.

Non SNA Activities by Sex and Place of Residence

States	Activities	Rural		Urban		Total	
		Male	*Female*	*Male*	*Female*	*Male*	*Female*
Haryana	SNA	37.98	23.49	36.54	11.21	37.72	21.26
	Extended SNA	1.74	30.67	3.11	32.74	1.99	31.06
	Non-SNA	128.22	113.81	128.31	124.08	128.23	115.67
	Total	167.94	167.97	167.96	168.03	167.94	167.99
	Total Persons	1919	1603	687	588	2606	2191
Madhya Pradesh	SNA	43.55	22.62	36.35	8.50	42.07	19.85
	Extended SNA	4.42	35.47	4.43	36.99	4.43	35.79
	Non-SNA	119.98	109.85	127.19	122.53	121.47	112.38
	Total	167.95	167.94	167.97	168.02	167.97	168.02
	Total Persons	6832	6186	2275	1963	9107	8149
Gujarat	SNA	44.83	23.90	41.81	7.02	43.63	17.60
	Extended SNA	3.25	37.55	3.09	41.57	3.19	39.08
	Non-SNA	119.93	106.52	123.09	119.47	121.12	111.38
	Total	168.01	167.97	167.99	168.06	167.94	168.04
	Total Persons	3244	2988	2913	2652	6157	5640
Orissa	SNA	39.54	19.03	42.19	8.37	40.12	17.07
	Extended SNA	4.34	35.28	5.00	37.61	4.47	35.70
	Non-SNA	124.10	113.67	120.81	122.06	123.45	115.20
	Total	167.98	167.98	168.00	168.04	168.04	167.97
	Total Persons	4131	4157	957	877	5088	5034

Continued ...

Table 1.1 : Statewise Weekly Average Time (in hours) Spent On SNA, Extended SNA and Non SNA Activities by Sex and Place of Residence

States	Activities	Rural		Urban		Total	
		Male	*Female*	*Male*	*Female*	*Male*	*Female*
TamilNadu	SNA	42.02	23.46	43.28	11.02	42.54	18.97
	Extended SNA	3.51	29.52	2.70	32.08	3.19	30.46
	Non-SNA	122.43	114.99	121.94	124.89	122.27	118.61
	Total	167.96	167.97	167.92	167.99	168.00	168.04
	Total Persons	5507	5541	3204	3186	8711	8727
Meghalaya	SNA	48.28	29.12	35.42	14.42	45.94	26.34
	Extended SNA	7.02	34.55	7.96	34.39	7.16	34.52
	Non-SNA	112.70	104.31	124.60	119.24	114.78	107.15
	Total	168.00	167.98	167.98	168.05	167.88	168.01
	Total Persons	652	655	269	283	921	938
Combined States	SNA	42.31	22.53	41.06	9.16	41.96	18.72
	Extended SNA	3.74	33.95	3.44	36.44	3.65	34.63
	Non-SNA	121.98	111.50	123.47	122.44	122.42	114.58
	Total	168.03	167.98	167.97	168.04	168.03	167.93
	Total Persons	22285	21130	10305	9549	32590	30679

Note: 1. *The figure of total time for each may not be exactly equal to 168 due to effect of rounding.*
2. *Activities were classified using the 1993 system of National Accounts (SNA). For details of activities under each category refer text.*

Source: India, Government of, 2000. The Report of the Time Use Survey, CSO, Ministry of Statistics and Programme Implementation, New Delhi, April p.56.

Table 1.2 : Weekly Average Time Spent (in hours) on Some Domestic Activities by Men and Women

Activities	Haryana		Madhya Pradesh		Gujarat		Orissa		Tamil Nadu		Meghalaya		Combined States	
	M	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*
Cooking	0.36	11.37	0.62	14.24	0.38	13.85	0.86	19.28	0.38	14.74	1.26	13.74	0.52	14.93
Cleaning household	0.12	4.37	0.28	4.44	0.16	5.06	0.15	3.72	0.26	4.80	0.35	3.26	0.21	4.55
Cleaning utensils	0.10	4.68	0.13	3.71	0.10	4.28	0.10	2.45	0.06	2.62	0.32	3.90	0.10	3.39
Washing and Mending clothes	0.09	4.02	0.28	2.12	0.11	4.03	0.13	1.05	0.21	2.81	0.37	3.10	0.18	2.71
Shopping	0.39	0.34	0.64	0.31	0.45	1.56	1.03	0.23	0.48	0.50	0.40	0.44	0.59	0.64
Pet Care	0.01	0.02	0.08	0.10	—-	0.02	0.01	0.04	0.01	0.03	0.02	0.05	0.03	0.04
Care of children	0.18	3.91	0.26	3.23	0.33	3.25	0.53	3.92	0.29	2.36	0.47	4.44	0.32	3.16
Teaching own children	0.08	0.18	0.14	0.10	0.17	0.33	0.27	0.18	0.11	0.18	0.35	0.29	0.16	0.19

Continued ...

Table 1.2 : Weekly Average Time Spent (in hours) on Some Domestic Activities by Men and Women

Activities	Haryana		Madhya Pradesh		Gujarat		Orissa		Tamil Nadu		Meghalaya		Combined States	
	M	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*
Accompanying children to places	0.03	0.06	0.23	0.21	0.02	0.04	0.02	0.02	0.05	0.09	0.05	0.23	0.08	0.09
Care of sick and elderly	0.06	0.11	0.02	0.12	0.04	0.16	0.10	0.54	0.01	0.08	0.03	0.19	0.04	0.19
Supervising children	0.12	0.89	0.25	0.96	0.51	1.13	0.24	0.54	0.16	0.45	0.98	1.79	0.28	0.78
Care of guests	0.04	0.04	0.01	0.01	0.04	0.11	0.04	—-	0.02	0.02	0.15	0.24	0.03	0.04

Note: 1. The entry '-' in a cell indicates that no corresponding observation was found in the sample
2. M: Male F: Female

Source: Government of India, 2000. The Report of the Time Use Survey, CSO, Ministry of Statistics and Programme Implementation, New Delhi, April, p.70

Taking SNA and extended SNA activities together, the Report makes the following important observation, extremely significant to our attempts to link women, work, and health:

> "If we take SNA and extended SNA activities together... women were found to be working for longer hours than men. If we work out the average of women's work to the total work of male and female, it works out to 55 per cent, which compares quite well with the figure of 53 per cent quoted in the UNDP Human Development Report for 1995. Therefore, if extended SNA activities are included in economic activities, the contribution of women will be *higher* when compared to men" (emphasis added) (Government of India, 2000: 81).

An important consequence of combining the tasks of production and reproduction is that it has a serious impact on well-being. For the poor, and the poor working women in particular, there is really no escape from high-work intensity. Yet, the aspects of how intensification of work-time as well as the work itself impact on the well-being and development of children, have received scant attention in literature. The three case studies commissioned by CEHAT[1], Mumbai, are among the few attempts being made to build up a body of knowledge linking women's perceptions of their well-being to their living and work environment, and to changes in these environments over time. In an effort to capture as wide a range as possible of:

a) The multi-dimensional nature of women's work,
b) The multi-layered contexts in which women work,
c) the overlapping nature of women's activities, and
d) how (a), (b), and (c) have an impact on their health,

it was decided to focus on three distinct sectors of the economy. These included studies of:

a) The coping and survival strategies of women in a slum in Mumbai;
b) women workers in a small but growing sector in agriculture, namely, the export-oriented cultivation of grapes; and

[1] *CEHAT stands for Centre for Enquiry into Health and Allied Themes*

c) a region in transition from a predominantly agriculture-based one to diverse forms of non-agriculture activities, the consequent impact of this change on the occupational profile of the region, and on women's labour force participation in particular.

The rest of this Introduction is organized as follows: In (Section I) we provide a brief review of select literature that attempts to synthesize the themes of women, work, and well-being, as well as provide a conceptual framework to contextualize the varied nature of women's work. (Section II) discusses two aspects: one, the continuing phenomenon of marginalization of women's work, and two, the almost complete neglect to tackle the issue of the health-impairing nature of women's domestic and factory work. The findings of two recent reports are used as backdrop to illustrate the above points. (Section III) introduces the three case studies, highlighting in the process the macro-contexts in which they need to be placed.

1 Work, Work-Intensity and Well-Being: A Review of Select Literature

Nothing could be more apt than to begin the discourse on work and well-being with a summary of Robert Sass' documentation of the hitherto unwritten story of women's role in the origin of occupational health and safety legislation in the United States and Canada (Sass, 1999: 109-45). According to Sass, workplace safety and health legislation is embedded in the history of the varied women's movements during the 20th century, beginning with the social work movements. Quite a few middle-class women, ("who were otherwise barred from professions and a university education except at a small number of women's colleges") (ibid: 112) sought an active public life and plunged into the organization of settlement houses in the slum areas of America's large urban centres. These women, working in settlement houses, investigated the relationship between living and working conditions. They saw first-hand the effects of housework and child labour, and the bitter consequences for women working long hours in the retail trades and sweatshops in the major urban centres, as well as in small cities throughout the U.S. Sass takes pain to emphasise the fact (a point extremely relevant for our case studies) that the

studies brought out by these women relied primarily on *narratives*, describing how workers and their families, the poor, the unemployed, the injured, and those made ill at work, actually *experienced* the brutal effects of existing policies and practices (emphasis added) (Sass, 1999: 113)

Sass goes on to document, how, over the years, different layers of the intelligentsia systematically discredited the work of these pioneering women. Further, the development of the Factories' Acts in the 1830s and in subsequent years, completely undermined workers' experiences, and also succeeded in disconnecting the worker from the perpetrator of workplace injuries and ill-health. Thus, for example, Sass points out, after an accident or illness, the employee deals directly with a claims officer of the Compensation Board; the employer has no legal obligation thereafter.

> "In an economic society, what dominates our thinking about occupational health and safety is workers' compensation. Today, occupational health and safety is driven by workers' compensation costs rather than by prevention.
> "Our language reinforces this understanding. For instance, 'accident' has come to mean something like an earthquake, tornado, or flood, where no person is to blame...
> "...The word "accident" relieves employers from suits and compensation from fatalities, illness, and injuries, consistent with the triumph of a market ideology deflecting workers and their organization from prevention...
> "...The official discourse is by inspectors, medical officers, industrial hygienists, industrial engineers, industrial and behavioural toxicologists, and psychologists. And here 'power' is invested in the 'official' language, which may or may not be relevant to the worker or workers who are suffering. Workers' discourse is silenced, and they are subjected to a cost-benefit analysis and trade-off " (Sass, 1999: 130-132).

In a telling update to his historical account, Sass points out that there were approximately 39,300 work fatalities in the

U.S. in 1993; more than 8 million work-related injuries occurred in the same period, of which 2,40,000 of them resulted in permanent disability; annually, 40,000 to 70,000 deaths could be attributed to occupational disease, with an additional 3,50,000 nonfatal occupational illness cases (ibid: 116). And, yet, "less than 2 per cent of the journals used or recommended by a faculty instructing in Human Resource Management mention occupational health and safety in a substantive manner" (ibid: 116).

The current renewed interest in issues of work and well-being has come largely from feminist preoccupation with redefining 'work', to capture at one level the varied nature of women's work, including domestic, wage and non-wage work, and at another level, to understand the impact of macroeconomic factors on women's work burdens. This, in turn, has led to questions of *effort intensity* of women's work, and therefore, to issues of women's well-being. Given the very nature of this exercise, it has resulted in a fair amount of research and documentation of women's experience of their employment, and the adverse impact that the multiple nature of their work is having/has had on their health and well-being. The works of three authors need to be mentioned in this context those of Maria Sagrario Floro (1995a, 1995b), and the joint work of Cecile Jackson and Richard Palmer-Jones (1998, 1999).

Placing her discussion on women's well-being and the allocation of time in the context of economic restructuring, Floro (1995a) argues that the effects of macroeconomic policy reform must take into account both the level of output produced, and the resulting changes in the level and intensity of work for individuals (ibid: 1913). Illustrating her point with an example, Floro (1995a) points out that the removal of food price subsidy during structural adjustment is usually analyzed in terms of changes in monetary income. What is not generally acknowledged is the more important changes that take place in the household, namely,

a) changes in the quantity and quality of non marketed goods and services necessary for the survival and maintenance of the household;
b) changes in the strategies that household members, particularly women, tend to employ to earn income, and

at the same time continue to produce non-marketed goods and services.

> "The effects of price subsidy removal on their well-being may be underestimated, particularly if household consumption levels do not decline significantly as a result of an *increase in the length and intensification of work time*. The consequences of such coping strategies on the well-being of these household members are not taken into account either in traditional measurements of living standard or in traditional analysis of policy reform... There are long-term, serious economic and welfare consequences of these responses that make such a topic important for both economists and policy makers" (emphasis added) (Floro, 1995a: 1914).

In a similar vein, Floro suggests, if one wants to examine the nature of poverty, one should ask not just what the things are that poor individuals and households deprived of, but also equally important, what they are compelled to do in order to survive (Floro, 1995b: 2). The analytical framework suggested by Floro, includes an exploration of the effects of time-use on well-being, the latter being defined in terms that incorporate both the *length of the working day* and the *incidence of work intensity*. Using the notion of joint production, Floro carries forward the analysis in order to examine the particular use of time by women in poor households in the form of overlapping activities to mitigate the effects of low incomes (ibid: 18).

Jackson and Palmer-Jones suggest methods to overcome the shortcomings in the ways we have thought about gender and work with an over reliance on time as a proxy for burden, effort, and equity (1999: 562). The authors propose an analytical focus on the significance of the experience of work to illuminate both *direct* and *indirect* connections between work and well-being.

> "By direct connections we mean how the burdensomeness of a task depends on the type of body one has (female/ male, large/small, healthy/unhealthy, experienced/ inexperienced), which we conceptualize as *body capital.* Body capital is the cumulative outcome of the bodily endowment at birth, the health history, and social relations of work and so on, of the person to date, and which affects how burdensome a particular task *feels* to a gendered subject... By *indirect* connections we mean the ways in which these perceptions and experiences of burden enter into social relations of work, in both wage labour markets and intra-household negotiations over work, of time allocation more broadly" (Jackson and Palmer-Jones, 1999: 562).

The implications for policy and research of the above way of looking at the body, well-being, ill-being, and work are tremendous. The most significant among these relate to those aimed at:

a) Alleviating poverty through programmes such as food-for-work;
b) Dismantling and/or making infructuous existing protective legislation for labour, thereby, not just adding further to the considerably large numbers of unprotected workers, but, worse, encouraging greater bodily exploitation of workers because of the characteristic features of such unprotected employment, namely, piece-rate payment, long hours of work, nil benefits, etc.

The authors in fact suggest that poverty reduction may be facilitated by "*reducing* the burden of work and *raising* the capacity for work" and, again that, "rest should be considered a form of productive consumption" (Jackson and Palmer-Jones, 1998: 25) (emphasis added). The implication of this for research and development policy might be that we need to reconsider the crude use of time inputs as a measure of work burden, since an individual engaged in work producing fatigue needs time to recover, which should be factored into measures of work contribution" (Jackson and Palmer-Jones, 1998: 26).

The current preoccupation with increasing efficiency and productivity, narrowly defined and measured in terms of output per unit of capital/per unit of labour, etc., cannot accommodate concerns such as the above, namely, reducing work intensity and raising capacity for work. On the contrary, what one routinely encounters through field-level studies is the continued and pervasive exploitation of the labouring poor (men and women) through limitless extension of the working day, through

the practice of forced overwork for which the worker receives no pay, through linking wages to impossible targets such that workers always receive less on the plea that targets have not been met, etc. In their constant struggle to reach these targets, workers force themselves to stay put at their workplaces, to avoid going to toilets, and even skip meals. Thus, the disadvantages and disabilities under which the poor (and poor women in particular) labour are several, multi-dimensional, and spread over multiple spaces. We now turn to a discussion that attempts to conceptualize this varied nature of women's labour.

1.1 Women's Labour or Keeping Intact the Essence of Capitalism and Patriarchy

Peter Custers' (1997) discussion of women's labour in Asian economies using feminist critique and extension of Marx's labour theory of value is useful to comprehend conceptually the empirical findings of our case studies. In the calculation of labour time, Marx looked at only the time spent in producing commodities for capitalist entrepreneurs, which way of looking at value creation ignored domestic chores (largely performed by women) as well as other non-waged work, again largely performed by women, and more so in third world countries. According to Custers, a conceptual breakthrough was achieved when Della Costa pointed out that household labour does not just create use values but exchange values as well in the form of commodity labour power. "Women at home produce when they give birth to children and raise them (future labour power), and they produce when they restore the strength of the labouring capacity of living workers (present labour power)" (Custers, 1997: 364).

Applying the above concept of labour time to his investigations, Custers' notes that the home workers in West Bengal (stitching garments at piece rates) perform 15 hours of labour per day, out of which more than half is non-waged. Again, in his examination of the labour of women part-time workers in Japan, Custers found that their average working week turned out to be 90 hours or more (ibid: 364).

An interrelated theme that Custers discusses is that of the sexual division of labour. He provides a useful distinction between 'social' and 'sectoral' division of labour between the

sexes, which enables us to comprehend the manner in which capitalism and patriarchy intermesh to keep intact the subordination of women despite their increasing participation in wage labour. By 'social' division of labour, Custers refers to the three Cs (cooking, cleaning and childcare) that women throughout society are disproportionately burdened with, and which has remained almost 'fixed' and universal. The Time Use Survey (Government of India, 2000) referred to earlier, bears testimony to the domestic burden that women in India have to shoulder with almost negligible help from their male counterparts. The 'sectoral' division of labour between men and women refers to the division of tasks within a given sector—agriculture, industry, etc. The sectoral division has, over time, changed with changing forms of production and demands of the market, and the capitalist system; yet, the subordination of women continues and can be identified by the persistence of wage discrimination against women, men's monopoly over machines, definition of skill, etc.

The relevance of Custers' analysis of women's labour to our study lies in the fact that it provides an extremely useful framework to contextualize our findings and carry it forward to analyze how the varied and time-consuming (but invisible, unrecognized, unmarketed, and unpaid) activities of women sustain the capitalist system; in the process the system not just exploits women but also renders them vulnerable to ill-health, and thus compromises on their well-being.

1.2 Women's Experience of Their Living and Work Environment: A Continuing Saga of Disease and Deprivation

Almost fifteen years ago the National Commission on Self Employed Women (Government of India, 1988a) constituted several task forces to record various aspects of the lives of women in the unorganized sector. One such task force (Government of India, 1988b) concentrated on the occupational health issues of women in this sector. Even a cursory glance through this compendium – which has for the first time attempted to link together women's experience of their work and perceptions of their health – immediately makes one painfully aware that for women in this sector nothing much has changed for the better.

On the contrary, increasingly larger and larger number of men and women (the latter in particular) are entering the labour force but toil endlessly without being recorded and recognized. This non-recognition as workers, at once makes invisible:

a) the worker herself/himself,
b) the nature of work, and
c) the risks at work.

It also enables the employer to deny payment of whatever statutory benefits the workers are entitled to if recognized as workers. This massive collusion on the part of officials and employers to deny worker status to an increasing number of their employees has resulted in a situation where, despite visible and pervasive deteriorating conditions of work and living environment of the poor, there is hardly any official recognition of the pressing nature and the need to come to grips with the problem on a war footing. On the contrary, the nature of investments being made in the economy is distinctly aimed at catering to the global needs of the upwardly mobile middle and elite sections of the population. To give an example, the state's preoccupation with *infrastructure* development is geared more toward improving the environment for telecommunication and information technology; investments aimed at provision of basic facilities such as fuel, sanitation, drinking water and housing for the poor, continue to remain abysmally low and uncoordinated (Swaminathan, 1999). A similar disaggregation of health infrastructure expenditures bring out the disproportionately poor reach of affordable and quality services as far as the poor and vulnerable sections of the population are concerned (Duggal, *et al* 1995).

Just to give a flavour of the nature of the problems with which we have to contend with in countries like ours, we discuss the findings of two recent studies: one, on the 'Problems and Issues of Unorganized Labour in Tamil Nadu' (Government of Tamil Nadu, 1999), and, two, on Rural Energy and Health Impacts, prepared for the Ministry of Environment and Forests (Parikh, 2000). Both the studies are based on field data from Tamil Nadu. The choice of the studies is for the following reason: one study covers the problems at the work site (public domain), while the other is used as a proxy for the domestic sphere (private domain). The location of the studies, that is, Tamil Nadu, emphasizes the point that even otherwise 'developed'

states like Tamil Nadu, have yet to begin the process of addressing the issue of work conditions and well-being of their populations.

1.2.1 Findings of the Report of the Committee on Unorganized Labour: An Official Record of the Conditions of Work at the Non-Domestic Site

The findings of the Committee constituted to study the conditions of work of unorganized labour in Tamil Nadu sum up what is by now well known— that the conditions of work do not vary much between protected or unprotected industries/— though it rarely gets officially endorsed. The Committee identified 35 occupations, some of which are covered by some labour welfare enactments, while others are not. Its overall findings are discussed under three broad headings:

a) Mode of recruitment of workers,
b) Conditions of work, and
c) Health and safety aspects of work.

1.2.2 Mode of Recruitment

A striking feature of most of this employment is that workers are employed largely through unregistered contractors or sub-contractors. To quote the Committee:

> "The destinies of the workers are linked up with the machinations of a large number of contractors, on whose whims and fancies, likes and dislikes, depend the availability of work for this type of labour. These middlemen have the least regard for the health and welfare of the workers, and in fact exploit them by taking advantage of their economic dependence and ignorance" [Government of Tamil Nadu, 1998:22].

The larger implication of the contract system of employment is that large numbers of workers remain outside the purview of the Factories' Act, since employers recognize and deal only with contractors and not directly with the labour that the contractors

bring in. For example, the Committee found that in the saltpans of Vedaranyam, Tamil Nadu, barely 50 to 60 workers were on the payroll of the establishment out of the 600 found working there. The Committee's enquiries revealed that the contract labour system of employment, not uncommon elsewhere in the state, was responsible for such a state of affairs (ibid: 56). Similarly, in vessel manufacturing units, the Committee noted that the most important characteristic of this employment was that workers were employed only indirectly on a piece-rate basis or job-rate basis through a contractor who mediated between the actual employer and the workers. This particular employment has been included in the Minimum Wages Act of the Labour and Employment Department in 1978; besides, the minimum rates of wages have been fixed and revised periodically. Nevertheless, the Committee found that:

> "Unfortunately, however, the benefits conferred by the minimum wages in law in so far as these workers are concerned, have not yet been translated into reality, strictly on account of the contract labour system carried on by the *maistries* (contractors) in such an ingenuous way that the number of workmen engaged in every such industrial establishment is always maintained below 10, with the result, neither the Contract Labour [Regulation and Abolition] Act, nor the provisions of the Factories' Act is made applicable to these unregulated factories" [Government of Tamil Nadu, 1998: 64].

1.2.3 Conditions of Work

The Committee found that working conditions in almost all the industries were deplorable. Further, it noted that employers used great ingenuity to keep their units outside the purview of the Factories' Act. This allowed the employers to fix wages arbitrarily, often below the statutory provisions of the Minimum Wages Act for the concerned industry. A significant finding of the Committee *was the active gender discrimination* practised by the industries covered by them. For example, commenting on the practices in the 'appalam' manufacturing industry, the

Committee observed:

> "Equal wage for equal work is something utopian and hitherto unheard of by the workers in this occupation. A female worker doing identical work in this occupation is denied 50 per cent of the wages given to the male worker. A male worker earns around Rs 40 per day while a female worker is paid only Rs 20 per day" (Government of Tamil Nadu, 1998: 19).

Similarly, in the coir industry, while a male worker earns on an average Rs 40 per day, a female worker is paid anything between Rs 25 and Rs 27. (Ibid: 29).

Further, the Committee noted that the employees in the 'appalam' industry were mostly girls who had been forced to drop out from school and enter this industry to augment their family income.

A point stressed by the Committee in the context of the match and fireworks industry is that large number of women and children were engaged as home-workers in processes that were delinked from other processes that required factory premises. In the latter processes, only male workers were employed. Unfortunately, the Committee did not proceed beyond recording this observation. To us, this fact has tremendous implications from a gender angle. Even if eventually the Committee were to succeed in regulating the factories, this by itself would not be sufficient to ensure regularization of those processes of the industry now carried on as home-based work by women and children.

1.2.4 Health and Safety Aspects of Work

In a refreshing departure, the Committee commented extensively on safety and health aspects, even if at a general level. Its observations were based on what it encountered during field visits, plus the perceptions of the workers whom it interviewed. It observed that the strain of working long hours in unhealthy and in-sanitary conditions, and the low standard of living due to the meagre earnings, contributed a great extent to the workers' poor state of health.

In most industries, the workers are not provided with any protective equipment. In those units where such equipment is provided, the Committee found them to be totally unsuitable. In bleaching and dyeing units, the Committee found workers standing very close to the metal pot fixed over a furnace without wearing goggles. Workers were also exposed to risks from handling caustic soda, acids, and other dangerous effluents emanating from the different processes. In the cashew nut industry (which is listed in the 'dangerous operation' category of the Tamil Nadu Factories Rules, 1950) the Committee found that the scrubbing and shelling of cashew nuts resulted in skin cancer. Contact with shell oil caused the peeling of the outer skin though it did not result in permanent disablement. The Committee found many workers afflicted by dermatitis. In industries where the concentration of dust particles in workplaces was heavy and continuous, it found the workers prone to respiratory disorders. In a nutshell, the Committee recorded that:

> "Since the government has not created any enforcement machinery to deal with these employments, even the maintenance of records and registers are not ensured. In this vicious-circled situation, the Committee would like to impress upon the government that the creation of adequate infrastructure, with enough manpower and means of mobility, is as important as that of scheduling of employment, and a fixation of minimum wages. Unless there is enforcement, mere adding of employments to the schedule and fixation of minimum wages would not do any good to the workers" (Ibid 84).

Our purpose in discussing the Committee's report is to highlight the *official* recognition, given, albeit belatedly, to not just the abysmal contractual and physical conditions of informally employed workers, but also the risks to their health associated with such employment. The Committee believed that the creation of 'appropriate administrative and infrastructure machinery' to implement existing legislation would go a long way towards addressing the problems it highlighted. On this point, we do not agree with the Committee since, as we have documented above, employers have been able (through the contract labour system) to circumvent existing

legislation and employ labour without formally recognizing them as such.

In short, then, despite increasing work participation rates, workers are disadvantaged at various levels. The nature and pattern of economic development is such that the bulk of employment is generated largely in the informal sector with its attendant evils of little or no protection. Wages are often below the statutorily fixed minimum levels, and work conditions unsafe and unhealthy. Most workers are too vulnerable to be able to mobilize and protest against these disadvantages. The situation is worse for women who have to endure multiple-disabilities at practically every level. It is our contention that the above problems cannot be addressed solely through legislative and administrative framework, since the latter is not geared to address and tackle such structurally in-built inequities.

1.2.5 The Gender–Biased and Health-Impairing Politics of Fuel in India: Health Hazards at the Domestic Site

Indian energy planning is still driven by the traditional supply-oriented mentality emphasizing the development of power, coal, and hydrocarbons, without adequate regard to specific end-uses that determine the demand, as well as the social and environment costs of providing these services (Swaminathan 1999: 165-187). Despite the increase in the quantum of energy supplied, a vast section of the population has not benefitted, particularly as far as energy for cooking is concerned.

And herein lies the gender issue. The experience of poverty being gendered, and the constitution of the household being patriarchal, implies that the brunt of such low levels of investment in basic infrastructure falls disproportionately on the poor in general, and on women in particular (Swaminathan, 1999: 168).

There is growing evidence of adverse effects on health because of high biomass smoke levels. Much of the domestic cooking and space heating in rural areas take place in poorly ventilated houses, through the use of traditional *chulhas*

(stoves), which have low thermal efficiency and high emission factors, all of which combine to produce very high concentration of air pollutants. Four major categories of ill-health have been identified as health risks associated with pollutants from using unprocessed biofuels. These include, respiratory infections in young children, adverse pregnancy outcomes for women exposed during pregnancy, chronic lung diseases and associated heart diseases in adults, and cancer (Ramakrishnan, 1995: TERI, 1994).

The Indira Gandhi Institute of Development Research, Mumbai, in collaboration with the Sri Ramachandra Medical College and Research Institute, Chennai, initiated a survey in 1999 in the rural areas of Tamil Nadu to study the health impacts of rural energy. The survey covered 5,028 households from 30 villages of 4 districts. The indicators selected covered:

a) socio-economic characteristics,
b) fuel consumption pattern,
c) cooking practices,
d) exposure to indoor air pollutants,
e) health profile, and
f) environmental concerns.

> "Physicians examined all those reporting any symptom, and present during the survey. In addition, physicians examined all members present in the indoor air quality monitoring households, irrespective of symptomatic status" (Parikh, 2000: 1)

The findings of the study on health impacts include the following:

a) The prevalence of obstructive disorders amongst women—cooks using bio-fuels was around 22 per cent. Chronic obstructive airway disease accounted for around 30 per cent of these cases. The prevalence of restrictive disorders was around 10 per cent too but less than 2 per cent were classified as severe restriction. The prevalence of allergic conjunctivitis was around 10 per cent. The prevalence of respiratory illness increased with increasing years of cooking exposure (Parikh, 2000: 3).
b) The health data showed that smoking habit was not prevalent in women. The data further revealed that non-smoker males also suffered from respiratory diseases. This may be due to the exposure at home, the dusty job of farming, and the dusty environment in *kachha* houses, as well as outside environment (ibid: 3).
c) The linkages of health with bio-fuels were also established on the basis of self-reported symptoms of respiratory diseases. The symptoms of cough, phlegm, breathlessness, wheezing, etc., were significantly higher in case of households using bio-fuels than in households using LPG. Even eye-irritation was found to be significantly high in bio-fuel user households (ibid).
d) On the basis of self reported and proxy responses, respiratory symptoms were significantly higher among all households living in *kachha* homes as compared to those in *pucca* homes (ibid).
e) The testing of lung capacity further revealed that the involvement in cooking, and the number of meals cooked in a day using wood had significant health impacts (ibid: 4).
f) Approximately 50 per cent of the population had no other option but to use bio-fuels due to non-availability of kerosene (ibid: 5).

Taken together, the reports discussed above, point to the need to capture *simultaneously* the conditions and hazards that women in particular face while attending to their domestic and non-domestic work. The three case studies to follow have attempted to document precisely these multiple and overlapping nature of women's tasks; in the process they record women's *experience* of fulfilling these tasks (day-in and day-out) in terms of their own perceptions of how these tasks impact on their health.

1.3 The Case Studies: An Introduction to Their Contexts

The three case studies manifest in different ways the illusion of what passes for 'development' in this country. We give a brief gist of each of the studies before discussing the larger contexts in which they need to be situated and reflected upon.

The study by Jeyaranjan and Swaminathan entitled the 'Costs of Work' begins by outlining the socio-economic transformation taking place in a (Chengalpattu) district, close to Chennai. The nature of transformation includes the changeover from a predominantly agrarian-based economy to an industrial one, the consequent impact of this transformation on the occupational profile of the labour force, and, the social implication of this change, namely, the *visibility* it has given to the Dalits of the region. The study then focusses specifically on what this transformation means for women. We have sought to capture for women the wide-ranging impact of straddling several spaces simultaneously over a day. Women's *experience* of 'work' at each of these sites (mainly home and work place), and their perception of health, forms the core of this analysis against the backdrop of their induction into 'modern' employment, which is equated with 'non-farm' or 'industrial' employment; the latter again being equated with 'development'.

The study by Sharadhini Rath attempts to understand the impact on labour that accrues when developing country firms/farms become part of 'global commodity chains'. These chains link together firms/farms in developing countries with suppliers and customers in developed countries. Focussing on the cultivation of grapes for the export market, Rath examines the consequences of getting into this 'chain' in terms of the following:

a) how has involvement in the 'chain' transformed the production and processing of grapes for the international market,
b) how has labour responded to the changed conditions of production, and
c) how do labour perceive their health to have been affected by the demands of production for an international market.

Deosthali and Madhiwalla's study maps out the impact of industrial decline on the lives and health of women living in two communities of a slum in Mumbai. Women here are forced to cope simultaneously with several uncertainties with deleterious consequences for their health. Such uncertainty includes the need to look for work; at the same time their actual choice of work is limited because of household responsibilities and the nature of the living environment. Further, while the migration of the males force the women left behind to assume

the role of the head of the household and take decisions, the mandate to take decisions is not absolute since the absent husband needs to be constantly referred to for approval. Similarly, while the community does offer women some space and assistance, it, at the same time, restrains women's mobility and functioning in several ways. In short, the burden of living and coping with urban poverty takes a severe toll on the health of these women.

Together, these studies represent a microcosm. Despite their differential contexts and geographical location, collectively they *interrogate* the nature and pattern of development that has taken place/is taking place in the country. A discussion of this 'interrogation' is in order here.

1.3.1 Nature of Employment: What Macro-Data Reveal

One level of interrogation that we need to do is to examine the nature of employment increasingly being generated in the economy, and the implications this has for the workforce in particular, and for the poor in general. Here we draw liberally upon the works of Nagaraj (2000) and Unni (2001) who have examined the overall *trends* in employment, as well as the *quality* of employment obtaining in the economy.

Nagaraj's (2000) analysis shows that since 1973-74 there has been an economy-wide decline in the employment elasticity of output, with the fall being more pronounced in the secondary and tertiary sectors. In short, the labour absorption capacity of the economy has reduced. Again, while there has been some diversification of the rural workforce into non-farm activities, especially in the 1980s, Nagaraj finds no evidence of a sustained reduction in unemployment levels, howsoever measured. On the contrary, he finds a distinct deterioration in the *quality* of employment. To quote Nagaraj,

Between 1977-78 and 1993-94, the share of

- the organized sector in total workforce declined from 8.7 per cent to 8.1 per cent,
- wage employment in the unorganized sector went up from 6.6 per cent to 7 per cent,

- self-employed in total workforce declined from 56.5 per cent to 51.7 per cent, and
- casual wage employment went up from 28.2 per cent to 33.2 per cent (Nagaraj, 2000: 13).

Considering the above findings, Nagaraj suspects the validity of the widely held inverse association between growth and poverty reduction in India.

Analyzing the aspect of *inequality* in India over the last two decades, Nagaraj finds among other things that:

- The ratio of rural to urban (nominal) per capita income, which improved during the 1970s, deteriorated during the 14 years after 1980-81.
- Since 1970, there has been a steady increase in inequality across the major states as measured by the coefficient of variation in State Domestic Product per capita.
- In the decade since the mid-1980s in the private corporate sector, the share of (nominal) gross value added accruing to labour has steadily declined by about 15 per cent while that of capital (profit before tax, after depreciation and interest) has gone up correspondingly.

Nagaraj therefore concludes that "growth has favoured urban India, the organized sector, the richer states and property owners against rural India, the unorganized sector, the poorer states and wage earners" (Nagaraj, 2000: 18).

We will further discuss the aspect of urbanization and poverty a little later.

Complementing Nagaraj's analysis above is Jeemol Unni's (2001) study on 'Gender and Informality in Labour Market in South Asia', which examines the concept and provides evidence of the growing *informalization* of the labour force in South Asian countries. Unni identifies two broad components of the informal economy, namely, *non-wage* employment and *wage* employment. She found the component of *non-wage* employment in non agriculture work to be the most prominent in Bangladesh, Pakistan, and India. Non-wage employment in India comprises a large proportion of home-based workers and street vendors, particularly in the cities.

The second component of the informal economy (namely, wage employment), Unni notes, is more difficult to distinguish

clearly. For one, she found an increasing proportion of *casual* employees in India and Bangladesh. A significant process identified by Unni (also borne out by the study by Jeyaranjan and Swaminathan) is the growth of informal employment within the formal economy. These employees do not receive the benefits due to formally employed workers. A variant of this process of informalization is the outsourcing of work by the organized sector to home workers, a phenomenon captured in the study by Deosthali and Madhiwalla.

Unni's discussion of the *quality* of employment available to workers, particularly women, is in terms of the *differential wages* that the women receive.

> "Gender differential in wages in Bangladesh, Pakistan, and Nepal all pointed to the lower quality of wage employment obtained by women in these countries. For India, detailed data on wages to employees in formal and informal components of the economy, as well as to home workers, provided evidence of the poor quality of employment available to women in the informal economy...
> "The various components of the informal economy are growing and an increasing participation of women in them is observed...
> "However, the chances are that the informal employment is what helps many households reduce the intensity of poverty."

Both Nagaraj and Unni have discussed the aspect of the change in *quality* of existing employment and that being generated in the economy. While Nagaraj uses the term to indicate the (deteriorating) *status* of employment (namely, stagnation or decline in organized sector employment, increase in casual wage employment, etc.), Unni has defined quality of employment in terms of the differential wages that women receive. Our three case studies carry forward (in their own way) this discussion of the *quality* of employment to include also the aspect of the *health impact* of the nature of work that women in particular have to contend with, both at their living and work sites.

1.3.2 Nature of Production: The 'Commodity Chain' Model

A second kind of 'interrogation of development' that is extremely under-searched, as far as India is concerned, is the exploration of the phenomenon of what Gereffi and Korzeniewcz (1990) call the emergence of a global manufacturing system. Here, production capacity is dispersed to an unprecedented number of developing, as well as industrialized countries. Utilizing the concept of a 'commodity chain', the authors state:

> "One must follow two steps in building such a chain. First, to delineate the anatomy of the chain, one typically starts with the final production operation for a consumable good and moves sequentially backward until one reaches the raw material inputs. The second step in constructing a commodity chain involves identifying four properties for each operation or node in the chain (except for labour): (1) the commodity flows to and from the node and those operations that occur immediately prior to and after it, (2) the relations of production, i.e., forms of the labour force, (3) the dominant organization of production, including technology and the scale of the production unit, and (4) the geographic loci of the operation in question." (Gereffi and Korzeniewcz 1990: 50).

In our opinion, Sharadhini Rath's study of grape cultivation for the export market is amenable for further exploration using the commodity chain concept. The study itself has concentrated on the 'relations of production' and the form of organization of the production unit, that is, points (2) and (3) of the second step outlined above by Gereffi and Korzeniewcz. The implications of using the commodity chain model lies in the fact that, it enables us to detect where economic surplus is concentrated in a global economy. "A corollary of this fact, however, is that the main source of economic surplus generally is not at the production stage but rather at the last stage of the chain, where service activities predominate." (Gereffi and Korzeniewcz, 1999: 50)

Table 1.3: Statewise Identified/Estimated Slum Population (Select States)

Sl. No.	States/Uts.	1981			1991		
		Urban Population	Identified slum population	Percentage	Urban Population	Estimated slum population	Percentage
1	Andhra Pradesh	124.876	28.579	22.9	178.871	43.133*	24.1
2	Assam	17.824	1.230	6.9	24.878	4.483+	18.0
3	Bihar	87.190	32.699	37.5	113.530	26.906	23.7
4	Goa	3.518	0.242	6.9	4.798	0.833	17.4
5	Gujarat	106.017	15.316	14.4	142.461	25.814*	18.1
6	Haryana	28.274	2.742	9.7	40.547	6.843*	16.9
7	Himachal Pradesh	3.260	0.761	23.3	4.492	1.258+	28.0
8	Karnataka	107.296	5.745	5.4	139.078	12.934	9.3
9	Kerala	47.713	4.101	8.6	76.803	12.218	15.9
10	Madhya Pradesh	115.865	10.749	10.2	153.388	21.029	13.7
11	Maharashtra	219.936	43.149	19.6	305.416	78.724	25.8
12	Orissa	31.103	2.820	9.1	42.350	8.432	19.9
13	Punjab	46.478	11.668	25.1	59.932	14.144	23.6
14	Rajasthan	72.105	10.252	14.2	100.671	24.00	23.8
15	Tamil Nadu	159.519	26.760	16.8	190.776	35.713	18.7
16	Uttar Pradesh	198.091	25.800	13.0	276.059	58.391*	21.1
17	West Bengal	144.467	30.280	21.0	187.076	51.949	27.8

Notes: + Figures of identified/estimated slum population have been furnished (for the state as a whole) by the respective state governments

* Slum population estimates are based on the information (for Class I and Class II cities/towns) received from the State Government for the Year 1991

Source: India, Government of, 1997. *Compendium of Environment Statistics*, Central Statistical Organization, Ministry of Planning and Programme Implementation, New Delhi, September, p162.

Our purpose in introducing the 'commodity chain' model discussion into our analysis is to highlight the fact that, countries like India (which is at the low end of most commodity chains), in their zeal to continue in the chain and enhance their export earnings, often adopt the 'low road' strategy as far as their labour is concerned. This consists in squeezing out the maximum from an already low wage-earning workforce working under abysmal, unhealthy, and hazardous conditions. Rath's study is unique, in that, there are not many clusters where the labour is so organized as to also 'benefit' from being part of the global chain.

1.3.3 Poverty, Inequality, and the Log-Jam Effect[2]

The third kind of 'interrogation of development' stems from Nagaraj's (2000) broad conclusion that growth has favoured urban as against rural India. This observation needs a more nuanced analysis, since, the phenomenon of the increase in slum population in urban areas (and particularly in the urban areas of the more developed states) needs to be reckoned with. Table 1.3 gives a rough idea of the percentage of slum population *among* the urban population for the major states in India for 1981 and 1991. Almost all these states show an increase in the total estimated and percentage of slum population in 1991 when compared to 1981. Table 1.4 gives the *distribution* of the slum population according to size/class of cities for 1991. The more economically developed the state, the greater is the percentage share of the slum population in Class I cities of these states.

[2] *We have borrowed this term from de Haan and Lipton (1998)*

Table 1.4 : Identified/Estimated Percentage Distribution of Slum Population According to Size/Class Categories of Cities/Towns in 1991 (Select States)

Sl. No.	States/U.T.s	Percentage Distribution			Total Slum population (in lakhs)
		Class I	Class II	Others	
1	Andhra Pradesh	63.3	15.5	21.2	43.133
2	Arunachalpradesh	—-	—-	100.0	0.221
3	Assam	62.5	16.1	21.4	4.483
4	Bihar	68.4	18.6	13.0	26.906
5	Goa	—-	7.3	92.7	0.833
6	Gujarat	72.4	12.2	15.4	25.814
7	Haryana	52.5	22.4	25.1	6.843
8	Himachal Pradesh	27.2	—-	72.8	1.258
9	Jammu & Kashmir	—-	—-	—-	—-
10	Karnataka	72.3	8.8	18.9	12.934
11	Kerala	50.4	2.7	46.9	12.218
12	Madhya Pradesh	48.5	16.1	35.4	21.029
13	Maharashtra	82.5	4.5	13.0	78.724
14	Orissa	43.0	15.4	41.6	8.432
15	Punjab	65.3	18.7	16.0	14.144
16	Rajasthan	51.2	5.5	43.3	24.000
17	Sikkim	—-	—-	100.0	0.095
18	Tamil Nadu	67.8	13.2	19.0	35.713
19	Uttar Pradesh	53.9	14.8	31.3	58.391
20	West Bengal	87.2	4.1	8.7	51.949
	Total States	67.1	10.8	22.1	430.538

Source: Government of India, 1997. *Compendium of Environment Statistics*, Central Statistical Organization, Ministry of Planning and Programme Implementation, New Delhi, September, p.163.

If we make the broad assumption that the increase in slum population indicates what Ravallion (2001) has termed the 'urbanization of poverty', then what we are witnessing is a pattern of development where the urban share of the poor is increasing. This is not to say that poverty in India has not seen significant reductions in the last several decades. What is being emphasized is the following: Urbanization in itself is not helping much to reduce poverty. On the contrary, it is being hypothesized that the severity of poverty may be higher in urban areas. Deosthali and Madhiwalla's study which deals specifically

with the theme of women coping and surviving in a slum context, needs to be seen against the above backdrop.

In their overview on the theme of poverty in Asia, de Haan and Lipton (1998) argue that Asian growth has become less pro-poor since the mid 1980s, and income distribution has become more unequal. Their observation that, despite urbanization of some of the poor, many suffer interlocking disadvantage in location, education, health, work, etc., (de Haan and Lipton, 1998: 162) is extremely relevant and borne out in different ways by the studies of Deosthali and Madhiwalla, and Jeyaranjan and Swaminathan. Past policies have no doubt brought about reductions in poverty, however, and this is the worrying aspect of the problem, past growth has left behind a hard core of poor people who face multiple disadvantages in access to resources, schools, and the 'marketplace' (ibid: 171). In all of this, de Haan and Lipton record, women are more *vulnerable* than men are and have less chance of escaping poverty than men. de Haan and Lipton are not very hopeful that further growth *per se* will be able to address the problem of the 'hard core poor', since the latter are 'jammed by several logs' which reinforce each other. The solution to this logjam, according to the authors, lies in structural remedies, a conclusion that Jeyaranjan and Swaminathan's case study also explicitly arrives at, but one that is implicit in the other two studies.

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PART II

The 'Costs' of Work: Social Transformation and Perceptions of Health in a Region in Transition: A Study of Chengalpattu, Tamil Nadu*

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INTRODUCTION

Immanuel Wallerstein's (1994) discussion of the goals of development is an apt starting point to understand what has passed for development in India during the past five decades. Addressing the question of what the demand for development is about, Wallerstein alludes to twin goals: on the one hand, development is supposed to mean greater internal equality, that is, fundamental social (or socialist) transformation. On the other, it is supposed to mean economic growth, which involves 'catching up' with the leader.

> "But social transformation and catching up are seriously different objectives. They are not necessarily correlative with each other... In any case, it should be clear by now that we have to analyse these objectives separately and cannot continue blithely to assume their pairing, which developmentalists, both liberal and Marxists, as well as many of their conservative opponents, have for the most part done for the past 150 years" (*ibid*: 13).

One important way to understand social transformation would be to analyse development from a women's perspective. Around 1975, in the context of the International Women's Conference in Mexico, it was admitted that women in general, and third world women in particular, 'had been left out' of the development process. Among the first to identify this deficit was Ester Boserup (1970) whose pioneering study of women in the process of economic development focussed attention on the absence of women in the new factories and waged workplaces of modern industry. Thereafter began a series of, very often globally funded, national programmes to 'integrate women into the developmental process' through more education, more access to modern technology, and through absorption into the (hopefully) formal sectors of employment. Despite the fact that, decades after the 1975 International Year of the Women, the programme of integrating women into the developmental process had not in the least changed the basic capitalist and patriarchal structure in which women were caught up, much of development policy still continues to be informed from the same 'integration into the development process' syndrome. A whole

series of studies (Koczberski, 1998; Mies, 1994) on the effect of development on women has meanwhile shown that almost everywhere development means more work for women for their sheer survival, more state control over their immediate life, particularly in the sphere of reproduction and health, and generally more violence and destruction of their dignity and integrity.

The present study is one more contribution to the growing literature on the 'violence' of gender-biased development. Its main attempt is to capture the extremely harsh conditions in which the majority of women work, and the consequent harm to their health that their work entails. The location of the study is the district of Chengalpattu in Tamil Nadu, South India. The district itself is undergoing rapid transformation from a predominantly agrarian-based to an industrial one. Not only is the occupational profile of the population undergoing a change, but the earlier most important resource of the region, namely, land, is increasingly being put to non-agricultural use. In a sense, therefore, the region is witnessing an irreversible change, in as much as the scope for 'fallback' position for the population (earlier dependent on land/agriculture) has considerably reduced, and may even get wiped out altogether.

The erstwhile landless agricultural labour populace (almost all of whom belong to the Dalit* caste) constitute the single most important constituent of the population. The younger generation among this segment has changed its occupation from agriculture related activities to factory-based work. In very many ways, this segment of the population perceives this change as upwardly mobile and beneficial. Relative security of employment (not in terms of contract of service, but more in terms of continuity of employment in the area), regularity of pay, which in turn has enabled access to more and better food, as well as more and better clothing, etc., are among the several reasons cited as the beneficial consequences of factory employment, and therefore, by implication, 'development' of the region.

The study, in a sense, interrogates this 'development', and the equation of this development with modernisation. The percentage of the working population in non-farm employment, the growing number of industrial units, the increasing share in

**Dalits as a caste rank at the bottom of the caste hierarchy.*

value-added by the secondary and tertiary sectors of production, etc., are very often taken to indicate the level of development of the region. By these conventional indicators of development the region has indeed experienced 'development', with the poorer class and caste having benefited monetarily from it. Indeed, there is a strong perception among them of having become more 'modern' because of their working in factories. There is no denying the 'prestige value' attached to factory work, nor the fact that employment away from the bonded nature of agricultural work confers a certain sense of liberation for the hitherto landless Dalit caste in particular. What we would like to highlight, however, is the immediate and long-term implications of the nature of transformation taking place in the state, and in the region.

The increase in and growth of non-farm employment is an important component of the transformation that has taken place in many parts of the state. Simultaneously, what data reveal is the increasing employment of adolescents (particularly girls) in many of the non-farm enterprises, either existing or new (Swaminathan, 2000). Several implications immediately follow from this:

(a) More and more adolescents are 'forced out' of school for various reasons. A few of them join the new enterprises coming up, very often, on the periphery of large towns. Such employment cannot but be low paying, with hardly any skill requirement, given the age at which the adolescents are employed.

(b) The industrial units that are coming up, and/or expanding, are not necessarily all informal, in the sense they are not all illegal. In fact, the units covered in our survey are almost all registered, legal entities. However, the employment they offer to most of their labour is daily, contractual or temporary. Apart from the pay, whatever other benefits the employment may offer is dependent solely on the employer's whims and fancies; the employees are not covered by any statutory legislation. Most of them have no legal recognition as 'worker' (Nihila, 1999; Gopal, 1999).

(c) For all workers — men, women, and adolescents — the conditions of work are extremely harsh and unhealthy. Given the lax attitude of the officials and trade unions, combined with the plentiful availability of 'upwardly-mobile oriented' youth, the employers are under no pressure to invest in labour, and/or in providing safe work places.

(d) There is increasing documentation of the 'health costs' of the above nature of development (Nihila, 1999; Gopal, 1999). However, this does not get highlighted to the same extent as the fact that such employment is at the same time 'liberating', as well as brings in momentary relief to the households concerned. Quite a few studies have reported that most employees are 'burnt' out by the time they reach 40 years; women try to cope with the phenomenon by opting for less paying and 'not so quality conscious' jobs or units.

(e) Another phenomenon which is very little researched, but which stands out quite starkly at the state level, is the relatively high infant mortality rates characterising Tamil Nadu (Swaminathan, 1997). Recent literature on the subject relates infant mortality rates to the nature of maternal employment. In fact, Kishore and Parasuraman's (1998) study finds that "infant mortality does not vary by whether a mother is employed or not *per se*, but mother's employment does have negative consequences for infant survival if the mother works away from home for cash, lives in an urban area, or lives in the south of India"(*ibid*: 34).

SECTION SCHEME

The study begins (in Section A) with a review of the structural changes that have taken place in the state during the '80s as revealed by the 1991 Census. It has dwelt at length on analysing the data relating to the *employment* and *education* of children and adolescents (particularly females), precisely to highlight the point that the short-term gains (in terms of increasing non-farm employment opportunities for girl children and adolescents) have long-term adverse consequences. This is followed by an analysis of the changes at the district level; within

the district, an attempt has been made to map out the economic transformation that the region (encompassing the study villages) has experienced. An important component of the transformation is the change in the land-use pattern that the district as a whole, and the region in particular, is undergoing. The changes now taking place in the land-use pattern being almost irreversible, they have significant implications for the employment and livelihood of the resident population.

Section B analyses the field data and includes information on how the field work was conducted, the socio-economic profile of the workers, the work process that make up their different jobs, and the perception of health and working conditions associated with each job.

Section C specifically focuses on women and health. The need to include the hours spent on housework, and childcare, and the consequent impact this has on workers' health, particularly women, becomes extremely crucial in the context of very low state and household investment in basic infrastructure.

Section D summarises the main findings of the study.

Extracts from a qualitative study of women's experience of utero-vaginal prolapse have been included in the Appendix. The significance of the study and the relevance of its inclusion lies in the fact that it, (a) pertains to the study area, (b) covers poor, rural, agricultural wage- labouring women, and (c) corroborates women's perception of uterine prolapse with that confirmed through medical examination.

A STRUCTURAL CHANGES IN TAMIL NADU ECONOMY

Tamil Nadu has been experiencing structural changes in its economy during the past two decades. As elsewhere in the country, the profile of sectoral contributions to the economy has been changing; the share of agricultural sector in the State Domestic Product has been on the decline, while the relative share of service sector has been growing. Such a structural change manifests itself in changes in other indicators of the state economy like employment and education. The discussion begins with the changes in the employment profile of the state.

2.1 Changes in the Structure of Employment in Tamil Nadu During 1980s[1]

The most noticeable change in the structural characteristic of employment in Tamil Nadu is that, between 1981 and 1991, the Work Participation Rate (WPR) has increased for women, both in the rural and urban areas. For men, on the other hand, the WPR shows a marginal increase in urban areas, and a marginal decrease in the rural areas Table 2.1. The 'Agricultural Labour' category still absorbs a significant portion of male and female workers, and for both sexes there has been an increase in WPR in this category between 1981 and 1991 Table 2.2. What is important to note here is the age-wise change between 1981 and 1991. For males there has been an increase in WPR in this category in all the three age groups, namely, child (5-14), adolescent (15-19), and adult (20-24). In the case of females, while there has been an overall increase in WPR in the agricultural labour category, there has been, simultaneously, a fall in WPR in the child and adolescent categories.

It is the manufacturing category (designated in the Census as the 'Other than Household' category), which has returned substantial increase in WPR, particularly for females in all the age groups, namely, child, adolescent and adult.

[1] *This section draws heavily from Swaminathan, 2002*

Table 2.1 : Work Participation Rate (1981 & 1991) Tamil Nadu

	Age Group	Male		Female	
		1991	*1981*	*1991*	*1981*
Total	All Ages	56.39	56.50	29.89	26.52
	5-14	4.57	6.06	5.11	5.44
	15-19	44.11	56.24	32.81	33.42
	20-24	75.01	79.54	40.03	35.76
Rural	All Ages	58.28	59.24	38.50	33.55
	5-14	5.26	7.30	6.63	7.04
	15-19	51.09	66.63	44.05	44.57
	20-24	82.21	87.49	55.46	47.74
Urban	All Ages	52.78	51.25	13.10	11.97
	5-14	3.15	3.44	2.02	2.09
	15-19	31.56	36.72	12.75	12.81
	20-24	63.33	65.90	16.76	15.03

Source: Census of India, Series 20, Tamil Nadu, 1981 and 1991

The age-wise distribution of WPR for Tamil Nadu between 1981 and 1991 shows a relatively more noticeable fall in male child and adolescent WPRs (that is, for the age groups 5-14 and 15-19 years) than in the case of female children and adolescents. Districts, which show a distinct increase in female WPR, are also the ones where female child and adolescent WPRs have increased between 1981 and 1991. For 1991, in 13 of the 21 districts which show WPRs higher than the state average, the WPR of female child and adolescent is also higher than the state average (Swaminathan, 2000). More importantly, when one disaggregate data by caste, one finds that the proportion of female child and adolescent workers among the Schedule Castes (SC) to be greater than among the non-SCs Table 2.3.

A glance at the age-wise and industrial category-wise distribution of female WPR reveals that in the case of female participation in non-farm employment, the bulk of those employed are in the 5-14 age-group, followed by the 15-19 age-group. Thereafter (from the age group 20-24 years onwards), there is a distinct fall in the percentage of females employed in this industrial category. On the other hand, female WPR in farm employment shows no such distinct decline as one goes from child to adolescent to adult workers Table 2.2.

Table 2.2 : Categorywise Work Participation Rate (1981 and 1991), Tamil Nadu

Age Group		Cultivator				Agricultural Labour				Household Industry				Otherthan Household Ind.				Other Servi ces			
		Male		Female		Male		Female		Male		Female		Male		Female		Male		Female	
		1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981
											Rural										
All Ages		37.28	43.55	24.97	25.94	36.09	31.32	61.52	61.40	2.55	3.53	3.92	4.41	6.43	5.99	2.90	2.46	6.67	5.06	3.00	2.20
5-14		23.62	27.78	18.11	18.09	50.97	49.69	61.17	62.06	3.09	4.29	7.14	6.76	7.00	6.78	9.10	5.04	2.65	1.10	1.03	0.20
15-19		29.15	36.01	20.30	20.89	47.54	43.00	62.52	64.65	2.93	4.04	6.65	6.41	8.48	6.83	6.95	4.41	2.95	1.51	1.65	0.96
20-24		32.77	40.40	22.03	24.16	39.39	34.18	62.24	62.65	2.08	3.97	4.02	5.30	8.59	7.77	3.71	2.07	5.07	2.60	3.72	1.76
											Urban										
All Ages		3.06	3.78	4.84	3.29	5.97	5.60	18.88	19.54	3.42	5.42	11.74	17.77	25.19	27.58	19.10	17.77	19.77	15.91	28.54	22.94
5-14		2.50	1.87	2.67	1.68	7.93	10.22	13.83	18.24	6.95	10.34	19.22	26.59	46.16	45.31	47.10	37.23	10.07	4.17	10.04	8.64
15-19		2.76	2.93	3.46	2.17	8.78	8.67	18.15	21.58	4.67	7.97	17.70	25.00	35.48	37.14	35.04	29.62	11.36	5.20	11.68	7.30
20-24		3.06	3.04	4.33	2.18	6.20	5.59	18.48	17.78	3.60	5.72	12.80	19.55	51.12	33.45	23.17	21.30	14.50	8.69	25.34	18.47

Source: Census of India, Series 20, Tamil Nadu, 1981 and 1991

The significance of the above pattern of employment across different ages, categories, and caste, will become clearer when we juxtapose it against data on education.

Table 2.3 : WPR of SC And Non-SC Child And Adolescent: Tamil Nadu, 1991

		S C WPR		Non-SC WPR	
		Male	Female	Male	Female
	All Ages	55.78	40.93	56.83	27.26
Total	5-14	5.25	6.81	4.39	4.68
	15-19	49.73	47.21	42.82	29.61
	All Ages	57.54	46.66	58.50	36.08
Rural	5-14	5.88	8.06	5.06	6.20
	15-19	55.13	56.45	49.93	40.64
	All Ages	49.32	19.77	53.25	12.18
Urban	5-14	2.94	2.41	3.18	1.96
	15-19	31.84	18.08	31.52	12.01

Source: Census of India, Series 20, Tamil Nadu, 1981 and 1991

2.2 Worker Population and its Level of Education

The achievement of Tamil Nadu in the field of literacy is impressive, particularly when data are analysed intergenerationally. However, not only is the ground to be covered enormous, but the nature of the emerging problem is also turning out to be complex. This we will explicate with data on the 'school attendance status' of children and adolescents, and with data on the levels of education of the 'worker' population with that of the general population. A larger proportion of children and adolescents among the SCs do not attend school, signifying a social polarization Table 2.4. This in turn will have cumulative implications as far as future prospects for this segment of the population is concerned.

A gender gap in education is also starkly discernible, particularly when we compare the school attendance status of adolescents [15-19]; larger numbers of female adolescents both SCs and non-SCs) are out of the school system when compared to male adolescents. Further, the proportion of girl child workers among those not attending school is greater than the proportion of boy child workers. This finding corroborates the data on WPR that reveals more female child workers to male child workers in the age group 5-14.

Table 2.4 : School Attendance Status of Children and Adolescents, Scheduled Caste and Non-Scheduled Caste Population, Tamil Nadu, 1991

(As percentage respectively of total child and adolescent population)

	Scheduled Caste				Non-Scheduled Caste			
	Male		*Female*		*Male*		*Female*	
	5-14	*15-19*	*5-14*	*15-19*	*5-14*	*15-19*	*5-14*	*15-19*
	Attending School							
Total	68.92	34.45	58.62	18.48	74.49	41.06	68.02	27.33
Rural	68.20	32.81	56.14	15.19	72.58	36.34	63.79	19.82
Urban	71.59	39.91	67.35	28.86	77.97	48.57	75.60	39.32
	Not attending School							
Total	31.08	65.55	41.38	81.52	25.51	58.94	31.98	72.67
Rural	31.80	67.19	43.06	84.81	27.42	63.66	36.21	80.48
Urban	28.41	60.09	32.65	71.14	22.03	51.43	24.40	60.68
	Not working and not attending school							
Total	25.86	15.97	34.60	34.41	21.25	16.66	27.41	43.34
Rural	25.96	12.24	35.84	28.48	22.54	14.44	30.16	39.96
Urban	25.48	28.35	30.26	53.11	18.91	20.17	22.48	48.74

Source: Census of India, Series 20, Tamil Nadu, 1981 and 1991

Table 2.5 : Educational Level of *General* Population and *Worker* Population: SC an Non-SC

	Total Population (SC)				Total Workers (I-IX) (SC)				Total Population (Non-SC)				Total Workers (I-IX) (Non-SC)			
	Male		Female		Male		Female		Male		Female		Male		Female	
Total	5414599		5297667		3020384	55.78	2168101	40.93	22884376		22262304		12937087	56.53	6068771	27.26
		of which				of which				of whch				of which		
Illiterate	2749005	50.77	3734703	70.50	1611088	53.34	1787371	82.44	7499797	32.77	11539206	51.83	3668971	28.36	3961764	65.28
Literate without educational level	791645	14.62	590594	11.15	295799	9.79	110637	5.10	33788274	14.76	2810743	12.63	1374265	10.62	478207	7.88
Primary	919170	16.98	541199	10.22	541271	17.92	156055	7.20	4762670	20.81	3669107	16.48	3019922	23.34	791502	13.04
Up to Matriculation	798804	14.75	371674	7.02	494033	16.36	97311	4.49	5317398	23.24	3279925	14.73	3640752	28.14	592546	9.76
Below Graduate	94342	1.74	39576	0.75	42775	1.42	9474	0.44	973152	4.25	534450	2.40	540575	4.18	92581	1.53
Graduate and above	61633	1.14	19921	0.38	35118	1.16	7253	0.33	952535	4.16	428873	1.93	692902	5.36	152171	2.51
Rural																
Total	4259370				2450677	57.54	1944943	46.66	14308347		14044967		8370604	58.50	5067859	36.08
		of which				of which				of which				of which		
Illiterate	2306122	54.14	3102683	74.43	1410420	57.55	1635293	84.08	5538665	38.71	8521723	60.67	3028831	36.18	3584285	70.73
Literate without educational level	628982	14.77	448197	10.75	246191	10.05	95748	4.92	2303022	16.10	1783437	12.70	1029042	12.29	392930	7.75
Primary	694447	16.30	372727	8.94	417611	17.04	131271	6.75	3089699	21.59	2081645	14.82	2037401	24.34	632161	12.47
Up to Matriculation	532304	12.50	215777	5.18	328879	13.42	73155	3.76	2693496	18.82	1381575	9.84	1862826	22.25	379923	7.50
Below Graduate	60999	1.43	20457	0.49	27563	1.12	6050	0.31	399588	2.79	178300	1.27	217741	2.60	41601	0.82

Continued ...

Table 2.5 : Educational Level of *General* Population and *Worker* Population: SC an Non-SC

	Total Population (SC)				Total Workers (I-IX) (SC)				Total Population (Non-SC)				Total Workers (I-IX) (Non-SC)			
	Male		Female		Male		Female		Male		Female		Male		Female	
Graduate and above	36516	0.86	8829	0.21	19713	0.80	3426	0.18	283877	1.98	98287	0.70	195063	2.33	36959	0.73
Urban																
Total	1155229		1128997		569707	49.32	223158	19.77	8576029		8217337		4566483	53.25	1000912	12.18
		of which				of which				of which				of which		
Illiterate	442883	38.34	632020	55.98	200668	35.22	152078	68.15	1961132	22.87	3017483	36.72	640140	14.02	377479	37.71
Literate without educational level	162663	14.08	142397	12.61	49608	8.71	14809	6.67	1075802	12.54	1027306	12.50	345223	7.56	85277	8.52
Primary	224723	19.45	168472	14.92	123660	21.71	24784	11.11	1672971	19.51	1587462	19.32	9825212	21.52	159341	15.92
Up to Matriculation	266500	23.07	155897	13.81	165154	28.99	24156	10.82	2623902	30.60	1898350	23.10	1777926	38.93	212623	21.24
Below Graduate	33343	2.89	19119	1.69	15212	2067	3424	1.53	573564	6.69	356150	4.33	322834	7.07	50980	5.09
Graduate and above	25117	2.17	11092	0.98	15405	2070	3827	1.71	668658	7.80	330586	4.02	497839	10.90	115212	11.51

Source: Census of India, Series 20, Tamil Nadu, 1981 and 1991

The negative impact of social and gender gap in school attendance can be gauged to some extent from the data on levels of education of the *worker* population Table 2.5. Briefly, these data capture the considerably higher levels of formal illiteracy and lower levels of educational achievement among the female workers. Nearly 84 per cent of SC female workers and 71 per cent of non-SC female workers in the rural areas have no formal education.

The fact that a large number of female children are out of school before, and/or during the adolescent stage, together with a significant gender gap in higher and technical levels of education, has severe implications for (a) the kind of jobs that women can get into, (b) women workers' prospects of upward mobility, and (c) women workers' bargaining capacity given their lower educational achievement. Worse, given the near stagnation in organized sector employment, coupled with diminishing employment opportunities even for those formally educated, the employment opportunities for a large number of semi-literate, less qualified women cannot but shrink. The only option for these women would be to join the ranks of casual and temporary workers. This is revealed to some extent by the National Sample Survey (Unni, 2001).

So far, this discussion has focused on the structural changes in the economy of the state as a whole. The shift from agricultural employment to other types of employment is increasingly discernible. An important feature of this shift for women is indicated by higher levels of work participation by female *children* and *adolescents*. The broad trends for the state are reflected to some extent in the district that has been chosen for the study, namely, Chengalpattu district. The next section (2.3) documents, albeit briefly, the structural changes that the district is experiencing.

2.3 Chengalpattu District: A Profile

Chengalpattu district adjoins Chennai city agglomeration, and the feverish growth of the metropolitan has drawn the peripheries of the district into its growth orbit. Consequently, the district in some parts is experiencing rapid transformation from an agrarian to an industrial based system. The sections

that follow, attempt to map certain features of the district, as well as the changes therein, with the help of available secondary data.

2.3.1 Changes in the Occupational Profile of Workers in Chengalpattu

One indicator of transition from an agrarian-based system to an industrial system is a shift in the occupational profile of the population, a comparison of which has been made for Chengalpattu for 1981 and 1991. Chengalpattu is one of the few districts in the state that has experienced significant changes in its occupational profile. The proportion of main workers engaged in agriculture (either as cultivators or as agricultural labourers) to the total workers declined, or at best remained the same between these two time points Table 2.6. While cultivators constituted around 22 per cent of the main workers in 1981, they accounted for only 16 per cent of this category during 1991. There was a marginal increase in the share of agricultural labourers, from 32 to 33 per cent, during the same period. On the other hand, there was a significant increase in the share of those who were classified as 'other workers', from 39 per cent of the main workers in 1981 to 44 per cent in 1991. However, there were differences in this overall pattern across *residence* and *sex*.

In rural Chengalpattu district, there was a sharp decline in the share of cultivators from 31 per cent to 24 per cent, while the share of agricultural labourers increased from 44 to 49 per cent Table 2.7. There was a marginal increase in the share of 'other workers' from 20 to 22 per cent. Among *rural males*, the share of cultivators declined, and the share of agricultural labourers increased, whereas *the proportion of female main workers working as cultivators and agricultural labourers declined*. Importantly, there was an increase in the share of 'other workers' among both males and females in rural Chengalpattu district. In the *urban* areas of the district, 'other workers' was the most important category accounting for about 82 per cent of the urban male workers and 58 per cent of the female main workers during 1981. By 1991, 84 per cent of the male and 68 per cent of the female main workers were 'other workers', signifying the growth of employment in non-

agricultural and non-household sectors Table 2.8. It is pertinent to note here that most of the industrialisation that is taking place in the state is in and around the Chennai metropolitan area. Thus, the growth of the city, and the consequent expansion in the service sector employment, along with the expansion in industrial employment, has changed the occupational profile of the population of Chengalpattu district.

Table 2.6 : Percentage Distribution of Main Workers (*Rural + Urban*) by Occupation: Chengalpattu District, 1981 and 1991

		1981			1991		
	Occupation	*Male*	*Female*	*Total*	*Male*	*Female*	*Total*
1	Cultivators	24.7	15.1	22.5	17.5	13.3	16.4
2	Agri. Labourers	23.9	61.4	32.6	25.5	57.9	33.7
3	HH Industry	5.4	4.9	50.3	5.1	5.4	5.2
4	Other Workers	45.7	18.3	39.4	52.1	23.3	44.6
5	Total	100	100	100	100	100	100

Source: Census of India, 1991

Table 2.7 : Percentage Distribution of *Urban* Main Workers by Occupation: Chengalpattu District, 1981 and 1991

		1981			1991		
	Occupation	*Male*	*Female*	*Total*	*Male*	*Female*	*Total*
1	Cultivators	4.2	4.1	4.1	3.5	4.1	3.6
2	Agri.Labourers	6.4	25.1	9	5.8	17.1	7.6
3	HH industries	6.7	12.3	7.5	6.1	10.5	6.7
4	Other workers	85.2	58.5	79.2	84.5	68.2	82.1
5	Total	100	100	100	100	100	100

Source: Census of India, 1991

Table 2.8 : Percentage Distribution of *Rural* Main Workers by Occupation, Chengalpattu District, 1981 and 1991

		1981			1991		
	Occupation	*Male*	*Female*	*Total*	*Male*	*Female*	*Total*
1	Cultivators	36.6	17.8	31.4	28.1	15.9	24.1
2	Agri.labour	34.1	70.2	44.1	39.6	69.5	49.3
3	HH Industry	4.7	3.2	4.3	4.4	4.1	4.3
4	Other workers	24.5	8.6	20.1	27.7	10.6	22.1
5	Total	100	100	100	100	100	100

Source: Census of India, 1991

2.3.2 Changes in Land Use Pattern and Activity in Chengalpattu District

The change in the occupational profile of the population, and the expansion of Chennai urban agglomeration is redefining the land-use pattern in the district. High wages have rendered agriculture uneconomical, particularly with hired labour. Fertile lands left fallow is a common sight in this region. Moreover, the expanding urban limit of the city is leading to the conversion of agricultural land into housing or industrial plots. Available secondary data does confirm the changes in the land-use pattern in the district Table 2.9. During the year 1997-98, more than 31 per cent of the geographical area of the district was put to non-agricultural uses, and about 14 per cent of the land was left fallow. In fact, Chengalpattu district accounts for the highest contribution to the overall land put to non-agricultural uses in Tamil Nadu.

The land-use pattern over time Table 2.9 reveals that a significant change has taken place, particularly in the duration for which land is left fallow. Leaving the land fallow for long periods was earlier minimal, whereas it has increased significantly during recent times as indicated by the extent of land classified as 'other fallow'. Land that is left fallow only during a particular crop year is classified as 'current fallow'. Land that remains uncultivated for longer duration (more than a year but less than five years) is classified as 'other fallow'. While about 3 per cent of the cultivable area in the district was left fallow for more than a year during the mid-1980s, it was about 13 per cent during 1997-98. This indicates that such lands are in the process of being put to other uses.

Apart from the changes in the land-use pattern in the district, the net irrigated area (NIA) is also declining in the district. While the NIA during 1971-73 was around 2,32,600 hectares, it has declined to around 2,09,000 hectares during 1993-95, and further to 1,49,832 hectares in 1997-98 (Tamil Nadu, Government of: 2000:S-21). This also indicates the decline in the importance of agriculture in the district.

Thus, the agrarian base of the district has been experiencing significant changes as indicated by the changes in the land-use pattern as well as by the decline in net irrigated area. We now turn to a discussion of the industrial profile of the district.

Table 2.9 : Land-Use Pattern in Chengalpattu District

(in percentage)

Sl. No.	Classification	1985-86	1997-98
1	Forest	5.4	5.4
2	Barren/Uncultivable Land	4.1	2.5
3	Non-agricultural Uses	24.5	31.4
4	Cultivable Waste	1.76	2.4
5	Pastures	3.6	4.3
6	Groves/Tree Crops	3.9	2.4
7	Current Fallow	15.35	1.3
8	Other Fallow	2.9	12.6
9	Net Area Sown	38.19	37.7
10	Total	100	100

Source: Season and Crop Report, Various Years. Government of Tamil Nadu, 2000. Tamil Nadu – An Economic Appraisal, 1997-98, Dept. of Evaluation and Applied Research, Chennai.

Industrial activity in Tamil Nadu is geographically concentrated in certain pockets. Chennai city, Chengalpattu, Coimbatore, and Salem districts account for nearly half of the number of industrial units in the state. There is a general increase in industrial activity as indicated by the data on the number of units, as well as the number of workers employed during the early 1980s and the early 1990s, both in the state as well as in the district.

Table 2.10 indicates that in 1994-95, Chengalpattu district accounted for 13 per cent of the number of factories in the state, and 17 per cent of the fixed capital invested in these units; the district also accounted for about 16 per cent of the workers engaged in these units.

To summarise our discussion on the changes in the district, we find a shift in land-use pattern. Land is used more and more for non-agricultural purposes. Consequently, the area under crops is also registering a decline. These two, together with other factors, have changed the irrigation scenario. It is important to note here that these factors are not mutually exclusive but are related in multiple ways. It is not that agriculture has declined without any corresponding change in other sectors. Industry is growing in the district with more and more units getting established around the Chennai metropolitan city. This is indicated by the concentration of industries in the

district. At the employment level, the dominance of agriculture is on the decline. Other avenues of employment are gaining prominence as indicated by the occupational profile of the population.

It is pertinent to note here that such a transformation is not accompanied or aided by any improvement in access to health, education, water supply, sanitation, etc. This lag in the development of infrastructure acquires an added importance in a context where the working population is wrenched away from its rural environs with all its attendant advantages and disadvantages. This, in turn, could seriously impinge on the quality of life of such a population that has been drawn into a new system of production, distribution, and social organisation in general. *Section 2.3.3* provides a brief discussion of the level of access to such infrastructure in the district.

Table 2.10 : Some Indicators of the Industrial Sector, Tamil Nadu, & Chengalpattu District

Sl. No.	Variables	Tamil Nadu		Chengalpattu District	
		1982-83	1994-95	1982-83	1994-95
1	No. of Factories	11778	19211	1124 (9.5)	2535 (13.20)
2	Fixed Capital (in Rs lakhs)	280009	2725362	47926 (17.1)	468877 (17.20)
3	No. of Workers	688716	933430	86635 (12.6)	150021 (16.10)
4	No. of Employees	861902	1374588	117197 (12.6)	198375 (14.4)

Source: Tamil Nadu- An Economic Appraisal, Various Issues

2.3.3 Access to Infrastructure in Chengalpattu District

Educational infrastructure: About 84 per cent of the inhabited villages in the district have access to some educational facility. All such villages have a primary school Table 2.11, around 29 per cent of them have middle schools, and one tenth of them have secondary schools. Significantly, about 2 per cent of them have higher secondary schools. The percentage of villages having colleges and industrial training institutions is less than 1 per cent. Thus, it is easier for the population to access schools up to the primary level, but from the very next level the bottleneck starts where the facilities are just one third of what is available at the primary level. The difficulty of

accessing secondary and higher secondary schools to complete schooling is enormous, as very few villages have them. We also find that access to educational infrastructure in Chengalpattu district is relatively lower than that of the state as a whole.

Apart from access to education, access to other infrastructure crucially determines the quality of life. Sanitation and protected drinking water is important in maintaining good health of the population. Given the gendered nature of the division of labour in the domestic space, deficiencies in the access to such infrastructure burden women more than men. Ready availability of water and toilet facilities could considerably reduce the existing burden on women. The type of houses, and the fuel used for cooking, are some of the other aspects that directly impinge on the quality of life of women. Particularly, in a context where women take up industrial employment, access to these facilities gains more importance. A brief discussion of the extent of availability of these facilities in the district follows.

In rural Chengalpattu, nearly 63 per cent of the houses are kutcha houses and another 6 per cent of them are semi-pucca houses Table 2.12. Thus, almost 70 per cent of the houses are liable to develop some problem or the other during the rainy days, thereby adding to women's work burden. A look at the other facilities available at the village reveals that only 50 per cent of the rural houses in the district have electricity. About 61 per cent of the houses have safe drinking water. Only 9 per cent of the population have toilet facilities at home. However, only 5 per cent of the houses in the district have both drinking water *and* toilet facilities. At the other end, about 20 per cent of the households have none of these facilities Table 2.13. Given such low levels of facilities, one can imagine the enormous pressure on women and young girls. The nature of fuel used for cooking worsens their problem. About 87 per cent of the rural population still depends on firewood for cooking Table 2.14. Studies have noted that gathering firewood, fetching water, cooking, and other domestic tasks account for a substantial share of women's and children's energy output – around 700 and 300 calories per day respectively (Swaminathan, 1999). Worse, there is growing evidence of adverse health effects because of high biomass smoke levels. In an interesting article, Desai and Jain (1994) argue that in many developing countries women's domestic burden may pose a greater impediment (than

childcare responsibilities) to their participation in economic activities that yield a wage income.

Table 2.11 : Educational Infrastructure in Chengalpattu District, 1991

Sl No.	Nature of Educational Infrastructure	Percentage of Inhabited Villages	
		Chengalpattu	*Tamil Nadu*
1	Any Educational Facility	83.85	90.48
2	Primary School	83.85	90.48
3	Middle School	28.64	36.38
4	Secondary School	10.3	15.36
5	Higher Secondary School	1.83	3.68
6	Degree College	0.24	0.46
7	Adult Literacy Centre	0.12	2.16
8	Industrial Training School	0.06	0.18
9	Other Training School	0	0.23
10	Any other	0	0.51

Source: Office of the Registrar General, India, 1997

Table 2.12 : Distribution of Households by Type of Houses, Chengalpattu District

Sl. No.	Type of house	% of Type of houses		
		Rural	*Urban*	*All*
1	Pucca	31.23	65.63	46.09
2	Semi-pucca	5.71	11.89	8.38
3	Kutcha	63.06	22.48	45.53
4	Total	100	100	100

Source: Occasional Paper No. 5 of 1994, Office of the Registrar General & Census Commissioner, India

Table 2.13 : Distribution of Population by their Access to Facilities at their Home, Chengalpattu District, 1991

Sl. No.	Nature of Facility	% of Population having the Facility		
		Rural	*Urban*	*Total*
1	Electricity	49.41	77.49	61.54
2	Safe Drinking Water	61.53	42.71	53.4
3	Toilet	8.48	60.98	31.17
4	Electricity & drinking water	30.56	31.05	30.77
5	Toilet & drinking water	4.95	22.34	12.47
6	Electricity & toilet	7.68	59.9	30.24
7	All the three facilities	4.49	21.8	12
8	None of the three facilities	19.28	10.23	15.37

Source: Computed from India, Government of. 1994. Occasional Paper No.5, Office of the Registrar General and Census Commissioner, New Delhi.

Table 2.14 : Percentage Distribution of Population by Type of Fuel Used, Chengalpattu District 1991.

Sl. No.	Type of fuel used for cooking	% Of Population Using		
		Rural	*Urban*	*Total*
1	Cowdung cake	4.25	1.43	3.03
2	Electricity	0.08	0.15	0.11
3	Coal/Coke/Lignite	0.00	0.03	0.01
4	Charcoal	0.01	0.06	0.03
5	Cooking gas	3.60	26.23	13.38
6	Wood	87.12	42.31	67.76
7	Biogas	0.35	0.73	0.51
8	Kerosene	3.34	28.89	14.38
9	Others	1.24	0.17	0.78

Source: Computed from India, Government of. 1994. Occasional Paper No.5, Office of the Registrar General and Census Commissioner, New Delhi.

What we have presented above is a somewhat dated picture, with a time lag of nearly a decade. Lack of recent data is the major reason for this. New industrial units have come up in the hitherto undeveloped suburbs of Chennai during the past decade. The soaring land prices in the developed areas of the suburb of Chennai could have also ensured the shifting of industries to these new locations.

2.4 Thirupporur Region: A Profile of the Study Area

We have noted earlier in our introduction that the expansion of the Chennai urban agglomeration has had noticeable impact on its border areas that fall entirely in the Chengalpattu district. Thirupporur is about 35 kilometres to the south of Chennai. The proximity and contiguity to the metropolitan city and its dynamics has drawn this hinterland into its orbit with multiple consequences. The hinterland provides labour and land to the expanding city. Many workers commute daily to the city. The industrial expansion has reoriented the land-use pattern in the region. Agricultural activity is on the decline, with land acquiring a new value. It is used more for non-agricultural purposes like construction of industrial units, farmhouses, self-financing educational enterprises, etc. Many small and medium-sized industries are moving into this area from the city. Such units, possibly, can ill afford the high land prices in the metro. These industrial units are providing employment to the erstwhile agricultural labourers of the surrounding villages. Importantly, the prevailing work conditions for these labourers can be classified as 'unorganised' with all its attendant evils. The perceived 'decency' of the industrial jobs has weaned away much of the agricultural labour force, resulting in significant increases in agricultural wages. This, in turn, has rendered agriculture with hired labour uneconomical, and therefore large tracts of land remain uncultivated. Whatever cultivation takes place is mainly by owner cultivators with some hired labourers.

An industrial estate exclusively for the small- and medium-scale pharmaceutical units was started in Alathur village during the early 1990s. About 50 production units were built in the estate by a state-owned industrial promotional organisation, a few of which started production after a couple of years. These units together employ about 3,000 women workers from the surrounding villages. Simultaneously, many other types of industrial units have also come up in the region. The boom in garment and leather exports resulted in many export-oriented units being started in the state. Since the district had many such units earlier, their number grew manifold, fuelled by the export boom.

Our study area comprises nine villages around the Alathur pharmaceutical estate. These villages were identified after a preliminary survey among the workers in the estate. We checked

the habitat of the workers and found that most of them originated from these villages and commuted daily to the estate for their work. Later, when we surveyed these villages, we found that many others from these villages were working in other industrial units, other than those in the estate but located in the region. These nine villages are located in what we refer to as the Thirupporur region. The spectrum of industries in which they work is quite wide. While many of them are employed in the pharmaceutical estate, particularly the women workers, other industries like garment exporting units, chemical and food processing units, salt packing units, metal working units, etc, also employ a significant number of workers, both male and female. Agriculture survives, albeit, at a low level. Exceptions notwithstanding, the labour force that continues to work in agriculture belongs to the older generation when compared with those participating in non-agricultural work. The selected villages are experiencing the changes that we have noted for the district as a whole. The decline in agricultural activity is much sharper in these villages, with more and more land being left fallow, along with a shift in the occupational profile of the population.

2.4.1 Land-Use Pattern in the Selected Villages

Earlier, we have noted the changes in the land-use pattern that had taken place at the district level. We now turn to a discussion of the changes in the selected villages. There are two discernible features to the change. Land put to non-agricultural use has increased over time. More importantly, land that is left fallow for longer duration has increased. Such land could be considered as those that would eventually be put to non-agricultural use. For the selected villages, we have land-use data only for the recent period, and hence capturing the changes therein is not possible Table 2.15. But it is clear that the broad patterns that hold good for the district as a whole holds good for the selected villages. A very striking aspect of the land-use pattern in these villages is that the percentage of net area sown to the total geographical area is much less than the percentage of net area sown to the geographical area for the district as a whole. While it is around 40 per cent at the district level, it is around 30 per cent for some villages, and it is much less for some others. Specifically, land put to non-agricultural

Table 2.15 : Land-use Pattern in the Selected Villages, 1997-98

(In percentage)

Sl. No.	Land use	Vil 1	Vil 2	Vil 3	Vil 4	Vil 5	Vil 6	Vil 7	Vil 8	Vil 9
1	Forest	-	39.6	0.3	17.8	34	26.3	-	-	39.2
2	Barren and Uncultivable Waste	-	1	4.1	7.2	0.7	-	-	-	-
3	Non-agricultural Use	32.8	14.6	39.6	15.8	24.5	21.4	33.9	39.4	19.2
4	Cultivable Waste	-	-	1.8	-	1.2	0.2	1.1	-	-
5	Permanent Pastures	9.6	1	-	5.1	4.8	9.9	5.2	2.2	5
6	Groves	1.2	1.5	0.5	1.4	-	-	1.9	9.4	0.4
7	Current Fallow	29.4	12.1	27.8	20.4	7.4	13.7	21.4	18	13.5
8	Other Fallow	-	-	-	0.2	-	-	5.5	2.2	1
9	Net Area Sown	27.1	30.2	25.9	32.2	27.4	28.4	31	28.7	21.9
10	Total	100	100	100	100	100	100	100	100	100

Note: The village numbers represent the following villages: 1. Kalavakkam; 2. Kannagapet; 3. Thirupporur; 4. Thandalam; 5. Venkaleri; 6. Alathur; 7. Paiyanur; 8. Chenkadu; 9. Chempakkam.

Source: Compiled from the respective Village Revenue Records for the year 1997-98.

use is unusually very high in these villages. Together with land left fallow, land put to non-agricultural use ranges from two thirds of the total geographical area of the village at the maximum to one third of the village area at the minimum. These features of the land-use pattern indicate that the changes are more acute in the selected villages than at the district level. *In other words, the declining importance of agriculture is more severe in the selected village than at the district as a whole*. The village-level data is much recent (collected during 1997-98) as compared to the district-level data (collected during 1994-95), and this may partially explain the intensity of change in the select villages. In arriving at this conclusion, we have excluded land that is not suitable for cultivation due to natural constraints like barren and uncultivable land. We have also excluded land that is classified as forest and pastures.

Thus, in the villages selected for study, land is increasingly put to non—agricultural uses or left fallow to be eventually used for non-agricultural purposes. Further, whatever land is cultivated in the selected villages, is done so not very intensively. One possible reason could be the preponderant dependence on the seasonal irrigation source of tanks. Most of the land is cultivated with a single paddy crop during the monsoon. Moreover, many of the holdings are very small in size. These aspects of agrarian production do affect the employment profile of the dependent working population.

2.4.2 Sources of Irrigation in the Selected Villages

The increasing dominance of well irrigation in Chengalpattu district, at the cost of tank and canal irrigation, is not found in many of the selected districts. Except in a couple of villages, well irrigation has not taken over tank irrigation. Tank irrigation is the sole source in three villages, and in four other villages, it irrigates more than 50 per cent of the land. Only one village is entirely irrigated with well water, and the extent of irrigated land in the village is very low Table 2.16.

Seasonal availability of water in tanks that are fed by monsoon rains permits only a single crop, particularly under the conditions where the storage capacity of the tanks has dwindled considerably. Prolonged neglect and widespread encroachment are important causes for the decline in storage

capacity. If wells had been used as an irrigation source, the decline would not have been so acute in these villages as cultivation of more than one crop would be possible, and this, in turn, would have provided more employment. Our enquiries in the field indicate that the cost of labour had gone up considerably, and had rendered agriculture with hired labour unprofitable. Hence, there was little interest on the part of the landowners to invest in well irrigation. Simultaneously, the increased market value for land due to its newfound non-agricultural uses had encouraged the landowners to leave the land fallow till a profitable sale materialised. Thus, the dependence on tank irrigation and seasonal agriculture seemed to be the outcome of broader changes that were sweeping through these villages, rather than that the villages were constrained by natural factors to depend entirely on tank irrigation.

Given the slack agricultural production in the selected villages, with dependence on tank irrigation, the crop mix was not diverse and remained highly seasonal unlike in other areas where the well had turned into a major source of irrigation, with a diverse crop mix and greater intensity of crop production.

Table 2.16 : Percentage Distribution of Net Irrigated Area By Source of Irrigation, 1997 - 98

Sl. No.	Name of the village	Source of Irrigation			
		Tanks	Wells	Others	Total
1	Kalavakkam	98.7	1.34	-	100
2	Kannagapett	100	-	-	100
3	Thirupporur	55.8	24.4	19.6	100
5	Venkaleri	63.4	22.8	13.3	100
6	Alathur	78.7	13.3	7.8	100
7	Paiyanur	100	-	-	100
8	Chengadu	100	-	-	100
9	Chempakkam	74.3	25.7	-	100

Source: Village Revenue Records, Various Villages, 1997-98

2.4.3 Crop Pattern in the Selected Villages

Paddy remains the most important crop. It is cultivated only during *samba*. The *Samba* season coincides with the South-West Monsoon. This crop pattern requires labour only during

this season, which spans at the most for four months. *Mechanisation without intensification of agriculture in these villages has drastically reduced the scope for employment.* Crops that can be grown during other seasons are hardly raised. Our field enquiry indicates that whatever cultivation takes place is mainly for home consumption. Only small plots of land are cultivated by small-owner cultivators or by small tenants. Tenants have taken up cultivation mainly to substitute their income from agricultural labour, or the income of some other member in the family who is employed in the industry. Some of these tenants take up cultivation of vegetables and fruits like watermelon in small plots of land to be sold in the city market Table 2.17 . This means that, for whatever reason, *employment in agriculture in these villages is not promising in terms of regularity*.

Table 2.17 : Percentage Distribution of GCA Across Crops, 1997- 98

Sl. No.	Name of the village	Percentage Area under the Crops				
		Paddy	*Water-melon*	*Groun dnut*	*Other crops*	*Total*
1	Kalavakkam	56.2	9.6	0.45	33.6	100
2	Kannagapet	66	23	-	11	100
3	Thirupporur	58.4	33.2	-	8.3	100
4	Thandalam	89.7	-	-	10.3	100
5	Venkaleri	84.7	-	4.1	11.1	100
6	Alathur	93.2	0.42	-	3.8	100
7	Paiyanur	88.4	0.84	-	10.8	100
8	Chenkadu	88.7	-	-	1.16	100
9	Chembakkam	63.84	21.5	-	14.6	100

Source: Village Revenue Records, Various Villages, 1997-98

2.4.4 Change in Occupational Profile in the Selected Villages

Similar to the changes in the occupational profile of the main workers in the district between 1981 and 1991, available data indicate that the composition of the working population had changed in the selected villages as well. In Chengalpattu district, the share of 'other workers' had increased during the

past decade (1980 to 1990)[2]. The Census data (1991) for the selected villages indicate that there were significant number of 'other workers' only in two villages, that is, Thirupporur and Thandalam. Since we had not undertaken any census of the selected villages, a comparable set of information was not available with us. However, we had an estimate of the number of workers employed in industries from each of the villages. We compared the number of industrial workers (a component of the category 'other workers' by definition) during the year 1999 in these villages with the number of 'other workers' in the villages during the year 1991 Table 2.18. We found a phenomenal increase in the industrial employment in these villages, which was almost non-existent during 1991. Employment of women in industrial production in particular was quite new to these villages, as almost all of the main workers (from both sexes) were either cultivators or agricultural labourers during 1991. In some villages, the number of other workers seemed to have decreased between these two time points. Since we had taken only the industrial employment and had excluded employment in trade, commerce, construction, transport, etc., for 1999, the numbers were lower. A comprehensive census survey in these villages would definitely show a higher proportion of main workers engaged in 'other works' as compared to the beginning of this decade.

Our inquiries in the field suggest that most of the women who have taken up industrial employment are from dalit or backward communities, with hardly any participation from upper caste male or female. In other words, those who have been working as agricultural labourers are moving into industrial employment, while those from the upper caste continue to keep away from the emerging employment opportunities. In fact, the upper caste population in the village looks down upon wage employment that requires moving out of the house. Many respondents have reported that, due to this stigma, employment in the new industrial units reduces the scope of finding a groom for the female workers, particularly among the 'upwardly mobile' backward castes. This problem is

[2] *They include the workers engaged in the following broad industrial categories: (i) Livestock, forestry, fishing, hunting and plantations, orchards and allied activities; (ii) Mining and quarrying; (iii) Manufacturing, processing, servicing and repairs other than household industry; (iv) Construction; (v) Trade and commerce; (vi) Transport, storage and communications; and (vii) Other services.*

of less prevalent among the dalits. Thus, the new industrial employment does not come without a social cost, at least for a segment of female workers in these villages.

Table 2.18 : Number of 'Other Workers' in Selected Villages, 1991 and 1999

Sl. No.	Name of the village	Number of Workers *1991*			Number of Workers *1999*		
		Male	*Female*	*Total*	*Male*	*Female*	*Total*
1	Kalavakkam	7	0	7	58	39	97
2	Kannagapet	5	0	5	27	49	76
3	Thirupporur	399	62	461	90	220	310
4	Thandalam	76	3	79	66	134	200
5	Venkaleri	1	0	1	12	18	30
6	Alathur	4	0	4	40	46	86
7	Paiyanur	37	-	37	72	160	232
8	Chenkadu	3	0	3	7	10	17
9	Chembakkam	96	1	97	26	52	78

Source: For the year 1991, figures available in the Census are used. Estimates of the workers in the villages during 1999 are based on the data available with the primary health workers of the respective villages.

To reiterate a point, we find these villages to be in transition from a dominant, agrarian-based production system to an industrial production system. As a result, there is a decline in agricultural activity as indicated by the changes in the land-use pattern. More and more agricultural land is either used for non-agricultural purposes, or left fallow. Irrigation sources are not properly maintained and new sources of irrigation are not exploited. The crop pattern is stagnant, with paddy being cultivated in small plots of land by small landholders. However, we witness a declining role for hired labour in the production process. More and more of the labour force (particularly female labour force) in these villages is drawn into the expanding employment being provided by units springing up in the area bordering Chennai metropolitan region.

B THE STUDY PROPER: SETTING THE CONTEXT

2.5 Methodology Adopted for Data Collection

The primary objective of the study is to capture as concretely as possible 'work'-related health outcomes for workers, particularly women. We began with a questionnaire hoping to simultaneously net information on several different dimensions: personal, household, factory, trade union/industry associations, doctors, health workers, etc. While this approach provided some idea of the socio-economic background of the individual/area, it did not lead to any substantive information on 'work'-related health. However, from the seemingly vague references to general ill health that this questionnaire (administered to about 20 people) elicited, we realized that we needed to expand the definition of 'work' to include pre- and post-factory schedule. In addition, we were also advised to make the discussion free flowing, rather than structured.

At the second stage then, we drew up broad parameters as guidelines even while allowing a free-flowing discussion. We interviewed about 10 people using this approach, and found that it did lead to a (qualitatively) rich haul of information. The workers were asked to describe an average day in their lives, beginning with the time they got up to the time they went to bed. Information from these descriptions were schematised into the following heads: personal details, household profile, pre- and post-factory work schedule, factory atmosphere and schedule of work in the factory, remuneration and other benefits, health perceptions, any other observation.

This schema very starkly brought out the gaps in information in every one of the components into which we had divided the total information that we had got from the 'free-flowing discussion methodology'. Hence, while we decided to retain the scheme, we worked on elaborating each of the components to net as much information on health, health-impacting and health-related aspects.

For example, the component relating to 'factory atmosphere and schedule of work in the factory' initially gave us information on the number of workers in the factory sex-wise, number of processes of production, sex-wise break-up of workers in each process, targets to be met by workers either

individually or in batches, nature of work done by the respondent, discriminatory practices (sexual and otherwise) perceived by the worker, etc. In the next round of interviews we asked our investigators to stress on and collect the following additional information:

a) Elaboration of the nature of work to net whether the workers worked on an assembly line or in batches. If working in batches, how did the batch or team divide the work among themselves, or was the work divided for them. How and who formed the team, and how frequently was the team changed.
b) Could team members take time off to go to the toilet, etc? Did the work involve continuous standing/sitting/bending—in short, the posture of work? Whether respondent specialised in any particular job or was shunted around and if so, how frequently. Was the team as a whole penalised for not meeting targets? What kind of stress did such team work lead to?

Similarly on the personal and household front we asked our investigators to cover

- different age groups of men and women workers;
- workers who have discontinued employment for some reason;
- identify workers who have been maimed/injured, and record their experiences;
- household consumption pattern and whether earnings have brought changes in the consumption/expenditure pattern. If yes, in what manner, and if not, why not.

On the details relating to health, we found some interesting patterns (from the free-flowing discussion data), despite the very general manner in which it was reported and recorded. For example, irrespective of the nature of job or industry, most workers, especially women, complained of stomach pain and/or uneasiness in the stomach.

We then asked our investigators to collect the following: (a) record as much as possible and in detail, the nature, frequency, and intensity of the stomach pain; (b) find out what the (respondent) worker consumed as food before, after and during an average day; (c) whether the increased and varied (if any)

food items available to households was also available to the respondent worker.

Our women investigator was specifically instructed to record descriptions of how women (across martial status) cope with their jobs during menstruation. From the preliminary information that she had collected on this issue in the first round we asked her to probe further into the issue to pinpoint the exact nature and intensity of menstrual problems, regularity of cycles, changes in cycles perceived by the workers consequent to their taking up a job, etc.

Apart from surveying the industrial workers, we also surveyed the agricultural labourers in the same villages. The sample size of the agricultural labour was smaller (about 45 per cent of the size of the sample for the industrial workers), as we realised that the responses from them was turning out to be repetitive. This survey among agricultural labourers was for lateral comparison of their health problems with industrial labourers. In all we had covered 180 industrial workers and 80 agricultural workers.

2.5.1 Socio-Economic Profile of the Sample Workers

All the surveyed workers are from backward communities or are dalits Table 2.19. Most of their parents were/are agricultural labourers. Either their households do not own any land or hold only small plots of land (owned or leased). Women industrial workers are generally from the younger age groups and those who continue to work in agriculture are from the older age groups Table 2.20. The education of the bulk of our respondents varies between primary level and secondary level Table 2.21. Their housing conditions are poor, with hardly any toilet facilities. Drinking water is fetched from the common tap or well that is located away from the house. However, ever since their employment in the industry, there is an improvement in the quantum, variety, and regularity of food consumed by the family. The *family* can now afford to consume fish and meat, at least once in a fortnight.

Table 2.19 : Distribution of Sample Workers by Caste and Gender

Sl. No.	Gender	Caste	
		Backward Caste	*Scheduled Caste*
1	Male	8	44
2	Female	33	94
	Total	41	138

Source: Survey Data

Table 2.20 : Distribution of Sample Industrial Workers by Gender and Age

Sl. No.	Age	Gender	
		Male	*Female*
1	N.A	-	2
2	0-14	-	1
3	15-19	8	47
4	20-24	19	35
5	25-29	14	18
6	30-34	5	16
7	35-50	4	7
8	Above 50	2	1
9	Total	41	138

Source: Survey Data

Table 2.21 : Distribution of Sample Workers by Their Educational Levels

Sl. No.	Educational Level	Male	Female
1	Illiterate	3	16
2	Primary	5	29
3	Middle	13	40
4	Secondary	20	35
5	Higher secondary	8	7
6	College	3	-
	Total	52	127

Source: Survey Data

Table 2.22 : Distribution of Sample Workers across Various Industries

Sl. No.	Industry	Number of Workers
1	Not employed at the time of survey	11
2	Pharmaceutical	107
3	Steel	14
4	Garment	11
5	Leather	6
6	Salt	16
7	Others	14
	Total	179

Source: Survey Data

Table 2.23 : Distribution of Sample Workers by their Level of Monthly Income

Sl. No.	Income Range (Rs)	Male	Female
1	Below 500	-	14
2	501-750	2	63
3	751-1000	5	24
4	1001-1250	5	14
5	1251-2000	22	11
6	Above 2000	8	1
	Total	42	127

Source: Survey Data

The free flowing discussion on the question of how 'beneficial', or, what kind of 'benefits' factory employment has conferred, brought forth very interesting responses covering several related themes. This, in turn, made it difficult even for the respondents to arrive at unidimensional or straightforward answers to the question. We reproduce a few of the observations to give a flavour of the interrelated themes involved in the answers.

> "Before going to work, I used to feel miserable for being a burden to my parents. I also suffered because of poverty. Now the situation is better because I have an income. We are able to afford fish once or twice a month, and eggs once a week. Earlier, I found it difficult to take care of my children, now I can spend on them and am also educating them."

[A 35-year old respondent who took up work after becoming a widow and being shunned by her in-laws.]

"Though there is improvement in the quality of food after going for work, the quantity has come down considerably. Mutton is consumed once a week, fish twice a week, and eggs occasionally. We are able to buy more vegetables now."

[17-year old unmarried respondent]

"In the house grandfather and grandmother are there along with my father and brothers. All household work, including cooking, washing, vessel and house cleaning, has to be done by me alone, since all the other able-bodied family members are male. My father is a drunkard and takes money from me for drinking. If money is refused to him, he creates problems. I had no problem regarding food as long as my mother was alive. But since mother's death due to cancer, I have had to shoulder the entire family responsibility, including its finance. I am so overburdened with work that I am unable to eat properly."
[22-year old respondent who was forcibly married to her paramour. Now in her parent's house after her husband took a second wife]

"I am living with my mother. We have borrowed Rs 10,000 for my sister's marriage, which has to be repaid with interest. There is no other income except mine. With this income we are just about able to repay the loan and feed ourselves. The quality of food has improved though the quantity has not. Mutton is cooked on festival days while cooking of fish depends on the availability of time."
[32-year old respondent, a widow]

"After I started going to this factory my status has improved and I am respected by my society. I have borrowed Rs 20, 000 for my brother's education. Before this job, the quality of food that we ate was less, but the quantity was sizeable; now it is vice-versa."
[28-year old married respondent]

"I have a loan of Rs 4, 000 taken for the purpose of my husband's job. To some extent there is an improvement in the financial position of my family. Due to shortage of time, I invariably end up eating nothing in the morning; I have only coffee. Moreover, due to shortage of time, I am able to cook only vegetables. Only occasionally do I cook non-vegetarian food."
[38-year old married respondent]

"I have borrowed Rs 20, 000 for the kerosene-selling business of my father. I have to repay this loan to the bank every month. Due to my employment, the financial position of my family has improved. Moreover, after this employment, the quality of food has improved but the quantity has come down. I have to do a considerable amount of household work in the morning before I leave for the factory. In the evening, my mother takes care of everything."
[Unmarried respondent, age not specified]

Several comments are in order here:

1. The observation that wage income has enabled the families to improve the quality of food consumed has to be juxtaposed with the respondent's own inability to consume food before leaving for work [because of want of time], and also because [a point we will discuss later] of the odour pervading the work areas leading to loss of appetite and reduced intake.
2. All married respondents, and quite a few of the unmarried ones, spoke of the burden of housework that they had to shoulder with little or no help from male members. The burdensome nature of this work has, in addition, a lot to do with the poor infrastructure in terms of water, fuel, and sanitation — a structural constraint that we have alluded to in our earlier section.
3. The inequitable manner in which households function comes out in the way in which wage-earning, female members are made to borrow and repay loans taken either to fund education of their brothers, support the businesses of male members of the household, the marriage of younger siblings, etc. While there is justifiable pride in being able to help one's family, a little probing also brought out that not many brothers would borrow to support the education of their sisters, or support sister's business ventures.
4. No unionization is possible either at the unit level, industry level, or the geographical area in general. Most

workers are not legally recognized as workers even though the units in which they work are legal entities. The labour and social welfare departments of the government have remained, and continue to remain, inactive and ineffective as far as workers are concerned. Wages, bonus, allowances, etc., are decided unilaterally by the employers, and by contractors on behalf of the workers. The labour is completely at the mercy of the means of production. Given such a scenario, the issue of workplace safety, or addressing the hazards faced by workers because of handling dangerous chemicals, unguarded machines, ill-designed workplaces, etc., hardly figures in anybody's agenda, either official or unofficial.

2.5.2 Work Process and Work Environment

As mentioned in our introduction, we have surveyed 80 agricultural labourers and 180 industrial workers from nine villages. Industrial workers predominantly work in the pharmaceutical-manufacturing units in the Alathur estate. The other major industries are garment export and leather-manufacturing units, salt manufacturing and packing units, and steel vessel manufacturing units. Within each of these production units there are many sub-production processes. The nature of work varies depending on the sub-process in which the worker is engaged.

Pharmaceutical production in Alathur has about seven clearly identifiable sub-processes in producing drugs. Batch taking, mixing, filling, blister packing, strip packing, bottle washing, and packing are the sub-processes. Each one of these processes is clearly defined and the workers assigned to each of these processes have well-specified tasks. In batch taking, the chemist specifies the appropriate mix of the ingredients based on the sample tested earlier. The required material is collected from the stores and taken to the mixing room where they are mixed. Then the machine man and his assistant take over the physical production of the medicine by using the appropriate metal dies moulded specifically for each capsule or tablet. The output is dried and sieved for broken pieces and sent to the packing section. The capsules and tablets are packed

in bottles or as strips using machines. Further, levels of packing take place in the packing section where strips are packed as bundles and again packed in carton boxes to be dispatched. The process is slightly different with liquid medicinal formulations. There is a separate section to wash and clean the bottles. Prepared formulations are poured into bottles and capped with simple, hand-operated machines. Labels are fixed and then the packing section takes over.

In the processes described above, machine operation and batch taking are usually earmarked for male workers while female workers are engaged in all other processes. The former (two) operations are considered heavy and specialised work and hence only male labour is assigned these tasks. These operations also fetch a higher wage. While the male usually enters the trade as an assistant to the machine man, the female workers are relegated to bottle washing, and over time they circulate to other sections. In a sense, none of the female workers are made to work in only one process. When they enter the unit in the morning for the day's work, a supervisor allots the sections in which they have to work that day. Bottle washing is strenuous and is least preferred. Usually, only the new entrants are allotted this work.

Work environment conditions vary, depending on the process. The machine room is clouded with suspended fine particles, and the machine operators and their assistants have to stand in the room throughout the day. Both of them have to lift heavy containers to feed the machine at regular intervals. The output has also to be shifted out of the machine room physically by the helpers, who are generally females. The power-driven machines keep the workers constantly on their toes.

The packing section is where the women workers work in tandem with the speed of the machines. Though the room is not clouded with suspended particles as in the machine room, the odour of chemicals is pervasive. Nausea among the new workers is common till such time they get used to it. Even after they get used to it, the common complaint of the workers is that the odour kills their appetite, which in turn leads to a drastic reduction in the food intake. Headaches and loss of weight seems to be widely prevalent. The more hazardous problem is the danger of maimed fingers while working at great speed with the packing machines. Any loss of concentration is

a sure sign of such accidents, leading to permanent loss of entire fingers, or a part of it. Such permanent damage can throw the worker out of the labour market forever. Given the unorganised nature of the industry, the workers are left to fend for themselves in the event of such accidents. The industrial units take the least responsibility when such accidents take place. As their best effort, they take the injured worker to a doctor, spend on medication only on the day of the accident, and drop the worker home. With that the unit's care ends. The nature of the packing job involves continuous standing, and feeding the machine without any break. Pain in the limbs and fatigue is quite common among the workers working in this section. The fatigue level increases with exhaustion induced by inadequate food intake and the pressure of domestic work, particularly among the women workers.

The nature of work in the bottling section is much more demanding. The worker has to carry the gunny bag, which contains the bottles, from the yard to the washing floor as a head load. They have to squat on the floor for the whole day and wash the bottles manually. The washed bottles are to be dried, and later deposited in the packing section. Pain in the hips and limbs is common among the bottle washers. They are more prone to injuries due to the breakage of glass bottles. Similar problems are common among those who work in the labelling and packing sections as well. Physical strain is high among these workers, as they have to handle heavier objects. Packed boxes are also to be lifted and carried to the stores.

The pressure on the workers is kept up by fixing targets for each of the processes. In bottle washing, the usual demand is to have a worker wash 1,000 bottles per day. However, a worker manages to wash only 700 to 750 bottles a day. Targets in packaging and filling vary, depending on the size of the bottle and the capsule or tablet. In strip packing, 9,000 to 10,000 pills are to be packed. In filling, a minimum of 250 bottles is to be filled. In packaging, a four-member team has to pack 60 boxes, each containing 100 bottles. Batch taking has a target of 600 litres of the raw concoction. If a mechanised material handling system is used, fillers have a target of filling about 6,000 bottles during a shift. The target list is a long and detailed one varying with the nature of the product, the level of mechanisation, the nature of the input material, and the packing requirements. However, what is clear is that these targets are

stiff and the workers are kept on their toes to keep pace with the machines. The intensity of work increases with stiffer targets when the order books overflow.

Workers in other industries also experience similar stiff targets, and unfriendly and unhealthy work environment. For instance, in salt packing, there are five clearly discernible sub processes and all of them are interlinked. An eight-member team is required to complete a process. Many such teams are engaged in the production unit with specific targets. Among the tailors and checkers of the garment export units, the target varies, depending on the nature of the garments that are being stitched for exports. Tailors are normally expected to meet a target of 150 pieces a day. Those who work as checkers have to check around 600 meters of cloth on both sides for defects.

Thus, the work conditions in the factory are clearly defined with specific targets. Breaks for lunch and tea are minimal. Many units insist on over-time work. However, none of the units takes care of the health problems of its workers. In some units, protective gears are provided. However, since these gears hinder rapid movement the workers complain that it would be impossible for them to achieve the set targets. Hence, most of them do not use these protective gears. The problem could be a combination of both: the stiff targets that are set without any consideration for the gradual slowdown in the bodily movement of the workers, as well as the poor design of such gears.

The workers generally attribute their deteriorating health to the working conditions in the industrial units. Their perception is based on their experience of the new time and work regime, the material they handle in the course of their work, their interaction with the machinery in the production process, and the nature of work.

The discussion of workers' perception of their health is dealt with in two ways. In (section 2.5.3, 2.5.4) and (2.5.5) a statistical analysis of the responses of the workers has been presented. To the extent possible, the data here are disaggregated by sex, sector of production (agriculture/industry), nature of job within each, etc., to capture the differential health experiences of the workers. In (Section C), the discussion on health experiences, but with a special focus on women workers, has been carried forward. The analysis in the latter section relies more on the narratives of women, thereby documenting the

multidimensional nature of their work, and therefore, the varied nature of their complaints. (Section C) also points to the methodological inadequacy of such research that expects to zero in on a neat set of conditions that could then be construed as posing a risk to women's health.

2.5.3 Perception of Industrial Workers About their Health

(i) Industrial Workers

As mentioned in the introduction, the survey does not include any clinical examination of the respondents. The categories stated here are those used by the respondents to convey their perception. This approach can have both positive and negative outcomes. For professionals, this could be very frustrating, as they would feel that a particular perception of the respondent could be the outcome of an array of reasons. For instance, perceived stomach-ache need not have anything to do with the stomach at all. The respondents may be referring to the region in her/his body rather than stomach *per se*. But as laypersons, we have perforce to rely on the perceptions of the respondents. While this method enables us to capture the range of discomforts suffered by the workers, it is not amenable to specific categorisation. This is unavoidable and has to be negotiated.

It has been found that cold, fever, and stomach-ache are the most widely perceived health problems by industrial workers Table 2.24. Cold and fever account for about 14 per cent of the total responses among them, and stomach pain accounts for about 12 per cent of the responses. About 11 per cent of the responses are perceived tiredness due to work. Another prominent perceived health problem of the workers is headache, which constitutes about one tenth of the total responses. Pain in various parts of the body is the next most commonly perceived health problem. These together accounts for more than 22 per cent of the responses. Nearly 11 per cent of the responses are complaints about lack of appetite, giddiness, and weight loss since the respondents began working as industrial workers. About 8 per cent of the responses are about injuries during the work, and hair loss due to the new work. In the perception of the workers there seems to be very

low incidence of communicable disease like diarrhoea, possibly due to the protected water supply in most of the settlements.

Table 2.24 : Distribution of Responses Across Various Perceived Diseases- *Industrial Workers*

(Figures in parenthesis are column percentages)

Sl. No.	Perceived disease[3]	No. of Responses
1	Cold/ cough	99 (14.5)
2	Tiredness	63 (9.3)
3	Diarrhoea	5 (0.74)
4	Giddiness	24 (3.53)
5	Lack of appetite	39 (5.6)
6	Skin disease	27 (3.9)
7	Headache	70 (10.1)
8	Pain in the neck	18 (2.7)
9	Chest pain	18 (2.7)
10	Hip pain	38 (5.6)
11	Swelling of legs	36 (5.3)
12	Swelling of hands	40 (5.8)
13	Hair loss	37 (5.4)
14	Injuries	19 (2.8)
15	Stomach pain	82 (12.1)
16	Eye problems	27 (3.9)
17	Weight loss	13 (1.9)
18	White discharge	16 (2.3)
19	Others	9 (1.3)
20	Total	680 (100)

Note: We have taken the number of responses and not the respondents, since each respondent had multiple complaints.

Source: Field Data

[3]*We have grouped some diseases into a single category for the sake of convenience. The grouping is as follows: Cold/cough/fever includes throat infection and wheezing problems; tiredness includes weakness; hip pain includes back pain; swelling of legs and hands, includes pain; eye problems include irritation in the eyes, paining eyes, reddening of eyes, discharge, etc; white discharge includes excess bleeding, urinary problems, irregular menstrual cycle, and abortion; other disease include toothache, depression, blood vomiting, cancer, tension and heart ailment.*

(ii) Agricultural Workers

There are significant differences in the disease panorama as perceived by industrial workers and agricultural labourers. Quite a few diseases do not figure in the perception of the agricultural labourers as compared with their industrial counterparts. Agricultural labourers do not perceive the lack of appetite, hair loss, pain in the neck, injuries, and loss of weight to be a health problem at all. They perceive fewer problems, but these seem to be widely prevalent among their class. Nearly one fourth of the responses among them relate to cold/cough and fever Table 2.25. This is much lower among industrial workers (about 14 per cent of the responses). Pain in the hip and back is another major problem perceived by them (about 15 per cent), whereas only about 5 per cent of the responses among industrial labourers complained about it. Agricultural workers also report of a higher incidence of skin diseases and the swelling of hands.

On the other hand, reporting of tiredness among agricultural labourers is about one-third the level reported by industrial labourers. Stomach pain is another such ailment. While about 12 per cent of the responses among industrial labourers complained of stomach pain, only about 3 per cent of the responses among agricultural labourers accounted for this problem.

A point that came out quite clearly during our field discussions is that the duration of certain diseases and the reasons attributed as causes for the recurrence of those diseases varied quite distinctly between the agricultural labourers and industrial workers. Headache, pain in the hip and back, swelling of hands was mainly suffered by the agricultural labourers during the peak seasons of production, that hardly lasted for a couple of months. On the other hand, the same problems among the industrial workers lasted more or less continuously throughout the year. While the agricultural labourers attribute their headache to the scorching sun, industrial workers attribute it a to a variety of factors. It included higher noise levels in the machine rooms, inability to eat in time, and insufficient quantity of food, nausea due to the pervasive smell of the ingredients used in production, etc. Thus, as the nature of work varies for the agricultural labourers from season to season and operation to operation, the perception about their disease also changes,

albeit, within a small spectrum. For industrial workers, on the other hand, the nature of work remains the same, and they perceive that their health outcomes are permanent as long as they remain in that work.

The above has important implications for our attempts to address health: unless the nature of work, and/or conditions of employment also form a part of the diagnosis of any disease, redressal of the latter will not just remain incomplete, but also futile, since the underlying causes of the disease remain unaccounted and unaddressed.

Table 2.25 : Distribution of Responses Across Various Perceived Diseases – *Agricultural Workers*

(Figures in parenthesis are column percentages)

Sl. No.	Perceived disease[4]	No. of Responses
1	Cold/cough	80 (23.5)
2	Tiredness	12 (3.5)
3	Diarrhoea	2 (0.5)
4	Giddiness	3 (0.8)
5	Lack of appetite	—
6	Skin disease	38 (11.2)
7	Headache	42 (12.3)
8	Pain in the neck	—
9	Chest pain	4 (1.1)
10	Hip pain	50 (14.7)
11	Swelling of legs	19 (5.6)
12	Swelling of hands	53 (15.6)
13	Hair loss	—
14	Injuries	—
15	Stomach pain	11 (3.2)
16	Eye problems	3 (0.8)
17	Weight loss	—
18	White discharge	2 (0.5)
19	Others	9 (2.6)
20	Total	328 (100)

Source: Field Data

[4]*We have grouped some diseases into a single category for the sake of convenience. The grouping is as follows: Cold/cough/fever includes throat infection and wheezing problems; tiredness includes weakness; hip pain includes back pain; swelling of legs and hands, includes pain; eye problems include irritation in the eyes, paining eyes, reddening of eyes, discharge, etc; white discharge includes excess bleeding, urinary problems, irregular menstrual cycle, and abortion; other disease include toothache, depression, blood vomiting, cancer, tension and heart ailment.*

So far the perceptions of two different groups of workers, based on the responses elicited from them during the interview, have been analysed. An individual worker perceives more than one health problem, and hence, the responses are several folds more than the number of workers interviewed. The extent of these health problems can be estimated by calculating the *share of specific complaints in the total number of complaints*. How many workers have perceived each of these complaints would also help us to understand its pervasiveness. Here again, the industrial workers are compared with the agricultural workers Table 2.26.

Table 2.26 : Percentage of Industrial and Agricultural Workers Reporting Specific Ailments

Industrial Workers		Agricultural Workers	
Disease	% Perceived	Disease	% Perceived
Cold	53	Cold	100
Stomach-ache	44	Swelling—hand	66
Headache	42	Hip pain	63
Swelling —hands	37	Headache	53
Hip pain	22	Skin disease	48
Swelling—leg	21	Swelling—leg	24
Loss of appetite	19	Tired	15
Hair loss	19	Stomach-ache	13
Giddiness	15		
Eye problems	15		
Skin diseases	14		
Injuries	11		
Neck pain	10		
Chest pain	10		

Source: Survey Data

The data show that all agricultural workers perceive that they suffer from cold/cough and fever during the work season. Specific work-related problems like swelling and pain in the hands, hip and back pain, headache and skin diseases are perceived by a larger number of agricultural workers than industrial workers. On the other hand, although cold remains a highly perceived health problem among industrial workers, it is less pervasive among them than the agricultural workers, as only 53 per cent of them perceived of it. Even work-related problems seem to be less pervasive among industrial workers. Importantly, industrial workers perceive more number of

problems, but each of these seems to be less pervasive. This could be because industrial workers are engaged in disparate work processes. The nature of these work processes also vary. An individual worker would be engaged only in one work. However, the nature of work does not vary over time for each worker, unlike among agricultural workers. Thus, it is essential to relate the nature of work and the consequent health outcomes separately for each sector of production in order to understand the differential perceptions and intensities of suffering.

2.5.4 Perception of Health Disaggregated by Type of Industrial Task

The nature of work, as noted earlier, is disparate *among* industrial workers. About 35 different types of tasks being performed by the respondents could be identified. Since, such a magnitude would not be easily amenable to analysis, hence, the various tasks have been grouped into a broad grid of six types Table 2.27. Packaging includes works like label pasting, screen printing, foiling, strip packing, salt packing, lamination, painting and sorting. Assistants include those who are assisting in general production, namely mechanics, supervisors, maintenance personnel, operators, coil winders, and spray mechanics. Filling workers include those who wash and seal the bottles. The machine operator category includes screw fixers, metal workers, those who do polishing work, electrical workers and mechanics. The batch taker category also includes lab assistants and combination technicians. The tailor category includes cloth tailors, leather tailors, cloth checkers, and cutters.

Table 2.27 : Distribution of Sample Industrial Workers Across Various Broad Groups of Work

Sl. No.	Nature of Work	No. of Workers
1	Packaging	64
2	Assistants	28
3	Filling	20
4	Machine operators	35
5	Batch takers	7
6	Tailor	10
7	Temporarily unemployed	15
8	Total	179

Source: Survey Data

Most of the interviewed workers fall under the broad grouping of packaging. Machine operators and assistants were the next dominant group to be interviewed. Some technical personnel in the pharmaceutical industry have been included whose nature of work has been broadly classified as batch takers.

The responses have been analysed in two ways: 1) In Table 2.28 effort has been made to understand for each group of workers the order of importance of their ailments, 2) In Table 2.29 the responses to each ailment has been distributed against each group of workers.

Table 2.28 : Perceptions of Health Problems across Various Categories of Work

(As a per cent of total responses)

Sl. No	Health problems	Nature of Work					
		Packing	Assi-stants	Filling	Oper-ator	Batch taking	Tail-oring
1	Cold/fever	8.4	19	13.9	21.5	17.2	23.3
2	Tiredness	10.8	10.3	7.6	8.4	10.3	0
3	Dysentery	0.3	1.7	0	0.9	3.4	0
4	Giddiness	3.5	2.6	5.1	5.6	0	0
5	Loss of appetite	4.9	7.8	2.5	7.5	3.4	0
6	Skin problems	4.2	5.2	3.8	2.8	3.4	3.3
7	Headache	9.8	8.6	10.1	13.1	6.9	10
8	Neck pain	4.5	0.9	2.5	0.9	0	3.3
9	Chest pain	2.8	2.6	5.1	1.9	0	0
10	Hip pain	7.3	6	3.8	2.8	6.9	3.3
11	Swelling—leg	4.2	6	5.1	2.8	3.4	6.7
12	Swelling—hands	4.9	6.9	10.1	3.7	3.4	10
13	Hair loss	7.7	0.9	8.9	4.7	0	6.7
14	Injuries	3.1	0.9	5.1	2.8	6.9	0
15	Stomach pain	11.2	8.6	12.7	15	17.2	13.3
16	Eye problems	3.5	4.3	1.3	5.6	10.3	6.7
17	Loss of weight	1.7	3.4	0	2.8	3.4	0
18	Urinary infection	3.5	0.9	1.3	1.9	0	6.7
19	Miscellaneous	0.7	1.7	1.3	2.8	0	3.3
	Total	100	100	100	100	100	100

Source: Survey Data

This analysis begins with the specific health outcomes for each category of workers Table 2.28. Among the workers who are involved in packaging, stomach pain is the most perceived health problem Table 2.28. Tiredness, headache, and cold/fever are the other prominent problems among them. About 7 per cent of them perceive that they suffer hair loss, while an equal number suffer from pain in the hips. Those who are assisting various production activities perceive cold/fever as the most recurrent health problem that they face (19 per cent) as compared to only 11 per cent among the packaging workers. While they perceive tiredness and headache on the same level as that of the packing workers, stomach-ache is less frequent among the assistants. Similarly, assistants do not perceive hair loss. Loss of appetite is higher among the packaging workers than the assistants. Among those who are in filling type of work,

cold/fever, stomach pain, headache and pain/swelling of hands are the prominently perceived health problems. All other types of workers, except tailors, do not perceive pain in the hands to be as pervasive as among those doing filling type of work. Interestingly, only 4 per cent of the health responses among the filling workers are about tiredness. Cold and fever complaints among machine operators are very high compared to other types of workers. Complaints of headache are also the highest among this group of workers. Pain and swelling of hands and legs are not prominently perceived to be a health problem by these workers. Among the batch taking workers, stomach pain is perceived to be a pervasive ailment, apart from cold/fever. Tailors perceive tiredness to be their main health problem.

In sum, though cold/fever and stomach pain are perceived as major health fallouts by different types of workers, pain in different parts of the body due to strain constitutes the most pervasive ailment for them.

Pain in the neck, chest, hip, hands, and legs account for more than one fourth of all the health problems perceived by the workers. While such perceived set of pains account for about 24, 22, 27, and 23 per cent of the responses among packing, assisting, filling, and tailor workers, it is lower at 12 and 13 per cent among machine operators and batch takers.

So far we have taken six groups of industrial workers and analysed the important health outcomes for each of these groups. Now let us take up some of the major health outcomes and look into its distribution across different categories of workers Table 2.29. The problem of cold/fever is perceived proportionately less by the workers in packaging. Out of every hundred complaint about this problem only 24 are from packaging workers. But the share of this group in the overall response is nearly 41 per cent Table 2.29. However, among assistants, the perception seems to be of a higher order (22 per cent) given their lower share in the overall response (17 per cent). Similarly, operators seem to perceive this problem more (share of cold/fever is 23 per cent, even though their overall share of complaints is just about 16 per cent). By using this method of comparison, we find that tiredness is perceived more by packing and assisting workers. Other important points are that the incidence of neck pain is very high among packing workers as their responses alone account for nearly three

fourths of this complaint. Problems of giddiness and lack of appetite is high among machine operators. Packing workers and assistants perceive skin problems to be a common ailment. Headache is a major complaint among machine operators. Filling workers complain more of chest pain. Hip pain is perceived more by packing workers and assistants, whereas the perceptions of filling workers and machine operators are much less. Swelling of legs and hands is more widely perceived by fillers and assistants than by other groups of workers. Complaints of hair loss are very high among packing workers. Eye problem is high among machine operators and batch takers. Loss of weight is high among machine operators and assistants. A large section that complains about urinary infection is engaged in packing work.

To conclude, we find a clear distinction between the perceived health problems of the agricultural workers and industrial workers. The number of problems perceived by industrial labourers is much higher than what the agricultural workers perceive. The duration of such problems is also different. Agricultural workers seem to suffer *more* from fewer problems as the incidence of such problems are higher (as indicated by the higher level of perception about each of these problems). The problems among industrial workers do vary according to the nature of their work. While certain problems like cold/fever and stomach pain are generally perceived by all industrial labourers, specific variations are clearly discernible across different types of workers. Hair loss is the only long-term visible problem that has been perceived by many industrial workers. Many could recount the experience of their fellow workers in terms of permanent injuries. Our interviews with temporarily unemployed workers indicated that the severity of problems did come down once they discontinued industrial work. Swelling and pain in the limbs, loss of appetite, prolonged headache, stomach pain and sores were some such problems that reduced in intensity when they moved out of work. There are instances when workers had changed to other types of work, as health problems in the previous work got intolerable.

2.5.5 Differences in Perceptions of Health by Sex

Perceptions about work-related health outcomes are generally more among female workers when compared to male

Table 2.29 : Incidence of Various Health Problems Across Various Types of Work

Sl. No.	Health problems	Nature of Work						
		Packing	Assistants	Filling	Operator	Batch taking	Tailoring	Total
1	Cold/fever	24.2	22.2	11.1	23.2	5.1	7.1	100
2	Tiredness	49.2	19	9.5	14.3	4.8	-	100
3	Dysentery	20	40	-	20	20	-	100
4	Giddiness	41.7	12.5	16.7	25	-	-	100
5	Loss of Appetite	36.8	23.7	5.3	21.1	2.6	-	100
6	Skin problems	44.4	22.2	11.1	11.1	3.7	3.7	100
7	Headache	40	14.3	11.4	20	2.9	4.3	100
8	Neck pain	72.2	5.6	11.1	5.6	-	5.6	100
9	Chest pain	44.4	16.7	22.2	11.1	-	-	100
10	Hip pain	55.3	18.4	7.9	7.9	5.3	2.6	100
11	Swelling—leg	38.7	22.6	12.9	9.7	3.2	6.5	100
12	Swelling—hands	35	20	20	10	2.5	7.5	100
13	Hair loss	59.5	2.7	18.9	13.5	-	5.4	100
14	Injuries	47.4	5.3	21.1	15.8	10.5	-	100
15	Stomach pain	39	12.2	12.2	19.5	6.1	4.3	100
16	Eye problems	37	18.5	3.7	22.2	11.1	7.4	100
17	Loss of weight	38.5	30.8	-	23.1	7.7	-	100
18	Urinary infection	62.5	6.3	6.3	12.5	-	12.5	100
19	Miscellaneous	22.2	22.2	11.1	33.3	-	11.1	100
	Total	41.4	16.8	11.4	15.5	4.2	4.3	100

Source: Survey data

workers. Yet there are interesting differences. Between male and female industrial workers, the latter perceive more of hip pain, pain in the legs and hands, hair loss, chest pain, and neck pain Table 2.30. These perceptions together account for about one third of the total responses among women industrial workers, whereas they account for only one tenth of the total responses among their male counterparts. Commonly perceived health problem of cold and fever is lower among female workers accounting for about 13 per cent of the total responses from them as compared to about 20 per cent among male workers. Another common complaint of stomachache is perceived more or less at the same level among both men and women. Headache is perceived slightly more by male than female workers. Giddiness and eye problems are perceived more by male than female workers. Thus women's most common problems are musculoskeletal problems, a point corroborated by several other studies (Messing, 1997).

Between male and female *agricultural* workers, problems perceived by women are more than those of men. Women's perception about cold and fever account for nearly one fourth of their total responses whereas it is only one fifth among the male workers. On the other hand skin problems are perceived more by the male workers (about 18 per cent of the responses) than the female workers (about 11 per cent). Another notable difference is the perception about swelling and pain in legs. It is nearly three times more among male workers than the female workers. This could possibly be because only male workers are engaged in ploughing operations. On the other hand, problems related to hands are perceived more by the female workers. Again, this could be due to the fact women are exclusively engaged in transplanting and weeding operations. Surprisingly, both male and female workers perceive the same level of hip pain though transplanting and weeding operations involve a posture that would strain the hip of the workers, and since only women are engaged in these two operations, one would expect a higher perception level about this problem among them. Apart from these problems, some women workers perceive other ailments that are not perceived by male workers. These include dysentery, giddiness, stomach pain, eye problems, and urinary infection.

Table 2.30 : Perception of Health Problems by Male and Female Workers

Sl. No.	Perceived problem	Industry		Agriculture	
		Male	*Female*	*Male*	*Female*
1	Cold/fever	19.2	12.9	20.5	24.5
2	Tiredness	9	9.3	2.5	3.8
3	Dysentery	2.2	0.19	-	0.7
4	Giddiness	5.6	2.79	-	1.03
5	Loss of Appetite	6.2	5.3	-	-
6	Skin problems	3.3	4.2	18	10.7
7	Headache	11.2	9.9	10.2	13.1
8	Neck pain	0.56	3.3	-	-
9	Chest pain	1.6	2.9	2.5	1.03
10	Hip pain	2.25	6.7	15.3	15.2
11	Swelling-leg	2.28	6.2	12.8	4.8
12	Swelling-hands	2.8	6.9	12.8	16.7
13	Hair loss	1.12	6.9	-	-
14	Injuries	3.4	2.5	-	-
15	Stomach pain	12.4	11.9	-	3.8
16	Eye problems	8.4	2.3	-	1.03
17	Loss of weight	3.9	1.2	-	-
18	Urinary infection	1.69	2.5	-	0.7
19	Miscellaneous	1.12	1.32	5.1	2.4
	Total	100	100	100	100

Source: Survey Data

When we compare *female workers in agriculture and industry*, we find that perception about cold and fever is much higher among the former group. Industrial workers feel more tired than their agricultural counterparts do, while skin problems are perceived more by agricultural workers. Pain in various parts of the body is significantly higher among agricultural workers than industrial workers. Can we then conclude that industrial workers are better placed in terms of the health fallouts of their jobs as compared to the agricultural workers? Our study does not capture the intensity and duration of these problems, which could vary vastly across these two types of employment. Hence, we need to exercise some caution in arriving at such a conclusion. The perceived problem of headache and other bodily pains are of short duration among agricultural workers during their peak-time employment, whereas these problems prevail throughout the year in industrial employment.

We now move on to a discussion of the differential perceptions of health among male and female workers by relating it to specific jobs that men and women are assigned in different industries Table 2.31.

Table 2.31 : Distribution of Sample Industrial Workers by the Nature of Work and Gender

Sl. No.	Nature of Work	Male	Female
1	Unemployed	2	13
2	Packing	10	54
3	Helpers	7	21
4	Filling	3	17
5	Machine operators	25	10
6	Batch taking	5	2
7	Tailors	-	10
	Total	52	127

Source: Survey Data

We have four comparable categories of work that employ both male and female workers, though males are employed in a smaller number. Since no male tailor was surveyed, we are excluding that category from our comparison. Among the packing workers, male and female workers suffer some common ailments along with diseases that are specific to their sex. A large number of male respondents perceive eye problems, whereas more women workers perceive hair loss, pain in the hip and legs. As far as the intensity of the problems (measured through the percentage share of responses for each problem in the overall response) is concerned, it varies among male and female workers. In packing work, women seem to perceive all the problems common to both men and women more severely than the male workers do. Problems like stomach pain, tiredness, headache, and cold/fever are perceived more by the female workers than by the male workers.

If we rank the top six problems perceived by the male and female packing workers, the differences come out more sharply Table 2.32 and Table 2.33. Eye problems (14 %), stomachache (10 %), tiredness (10 %), loss of appetite (10 %), headache (8 %) and cold/fever (8 %) is the order of importance for the male workers. For the female workers, it is stomachache (12 %), tiredness (12 %), headache (10 %), hair loss (10 %), hip pain (9%), and cold/fever (9%).

Among helpers, male workers perceive problems more severely than female workers do, though the number of problems perceived by them is fewer. The order of problems for the male worker is headache (17 %), cold/fever (22 %), and stomach pain (17 %). Female workers perceive their problems in the following order: cold/fever (19 %), tiredness (12 %), stomachache (8 %), loss of appetite (8 %), and headache, hip pain, leg and hand swelling (each accounting for 7 %).

Pain due to strain in work seems to be more intense among female workers in the filling operation. Male workers perceive general problems like cold/fever (43 %), tiredness (14 %), giddiness (14 %) and headache (14 %). The female filling workers perceive stomachache (14 %), cold/fever (11 %), hand pain (11 %), headache (10 %), and hair loss (9 %) as major health fallouts due to the nature of their work.

Workers in machine operation have perceived only general problems. The male machine operators perceive cold/fever (25 %), stomachache (14 %), headache (14 %) and tiredness (8 %) as their major problems. Female workers perceive stomachache and tiredness at the same level. Their perception about cold (12 %) and headache (9 %) are at a lower level. These groups of female workers also perceive loss of appetite as an important problem.

Thus, we find significant differences in the perception of male and female workers as regards impact on their health due to their job. This corroborates an important argument that Messing (1997) advances in her critical overview on women's occupational health issues:

> *"The fact that women and men are treated differently in the workplace makes it inappropriate to consider that women and men with the same job title have the same working conditions. In health research, using job title as a proxy for exposure may introduce inaccuracy and bias according to the gender of the worker" [Ibid, p43].*

We can illustrate the above with the job title 'machine operator'. Almost all women machine operators in the garment units complain of hair loss due to the cotton floss sticking to their hair. Very few men complain of this problem. A more detailed discussion of not just the job at the factory but also

the combination of this job with housework and other chores, as dictated by the social and economic environment, may throw more light on the differences in the perception of health outcomes by women as compared to men.

Table 2.32 : Percentage Distribution of Responses of *Male* Industrial Workers by Their Nature of Work

Sl. No.	Health	Nature of Work				
		Packing	Assis	Filling tants	Oper ator	Batch taking
1	Cold/fever	7.6	22.2	42.9	24.7	19.2
2	Tiredness	9.6	5.5	14.2	8.2	11.5
3	Dysentery	1.9	11	-	-	3.8
4	Giddiness	7.6	-	14.2	6.8	-
5	Loss of Appetite	9.6	5.5	-	5.4	3.8
6	Skin problems	3.8	5.5	-	2.7	3.8
7	Headache	7.6	16.7	14.2	13.7	7.6
8	Neck pain	1.9	-	-	-	-
9	Chest pain	1.9	5.5	-	1.3	-
10	Hip pain	1.9	-	-	1.3	7.6
11	Swelling-leg	5.7	-	-	1.3	3.8
12	Swelling-hands	3.8	-	-	2.7	3.8
13	Hair loss	-	-	-	2.7	-
14	Injuries	1.9	5.5	-	4.1	3.8
15	Stomach pain	9.6	16.6	-	13.7	11.5
16	Eye problems	13.5	5.5	-	5.4	11.5
17	Loss of weight	5.7	-	-	4.1	3.8
18	Urinary infection	3.8	-	-	1.4	3.8
19	Miscellaneous	1.9	-	14.3	-	-
	Total	100	100	100	100	100

Source: Survey Data

Table 2.33 : Percentage Distribution of Responses of *Female* Industrial Workers by Nature of Work

Sl. No.	Health problem	Nature of Work					
		Packing	Assis tants	Filling	Oper ator	Batch taking	Tailo ring
1	Cold/fever	8.6	18.8	11.1	11.9	-	24
2	Tiredness	11.2	11.5	6.9	7.1	-	-
3	Dysentery	-	-	-	2.3	-	-
4	Giddiness	2.5	3.13	3.9	2.3	-	-
5	Loss of Appetite	3.8	8.3	2.6	9.2	-	-
6	Skin problems	4.3	5.2	3.9	2.3	-	3.4
7	Headache	10.3	7.2	9.1	9.2	-	10.3
8	Neck pain	5	1.04	2.6	2.3	-	3.4
9	Chest pain	3.1	3.08	5.2	2.3		-
10	Hip pain	8.6	7.28	3.9	4.6	-	3.4
11	Swelling-leg	6.1	7.28	5.2	4.6	-	6.8
12	Swelling-hands	5	8.32	11.1	4.6	-	10.2
13	Hair loss	9.5	1.04	9.1	6.9	-	6.8
14	Injuries	3.4	-	5.2	-	33.3	-
15	Stomach pain	11.6	7.28	13.8	14.2	66.6	13.6
16	Eye problems	1.2	4.16	1.3	4.6	-	6.8
17	Loss of weight	0.8	4.16	-	-	-	-
18	Urinary infection	3.4	1.04	1.3	2.3	-	6.8
19	Miscellaneous	0.4	2.08	-	6.9	-	3.4
	Total	100	100	100	100	100	100

Source: Survey Data

C THE TRIPLE OVERLAP AND WOMEN'S EXPERIENCE OF WORK AND HEALTH

Perceptions of health between sexes can appear to be paradoxical: women generally report of worse health conditions than men despite the fact that they (women) live longer. Again, problems which women experience may be 'minor' from a medical viewpoint, but are not so in women's daily lives. Verbugge (1985) calls this the "iceberg of morbidity": the visible top of the iceberg is male but the bulk of it is female. We have relied on the subjective judgement of the individual in assessing health. This is because self-assessed health, apart from combining the subjective experience of acute and chronic, fatal and non-fatal disease, as well as perceptions of a general lack of well-being, is also (as per received literature on the subject)

highly correlated with more objective means such as physician's assessment, and with measures of morbidity and mortality.

Our study indicates that apart from a marked excess of symptoms among females, males and females work under unequal physical and psychological conditions. For women in particular, there is a complex relationship between their waged work and health. It is clear that waged work cannot be separated from the rest of women's lives. The boundaries of work and home are more permeable for women than for men; women's mental and physical health is moulded by their experiences as waged workers, parents, and partners. Each area of life has its own positive or negative effects, but they also interact together. In some circumstances, the combination is health promoting as resources and support from one part of a women's life compensate for difficulties in another. However, in other circumstances it creates conflicts and contradictions that are not conducive to well-being.

In almost all the cases involving women workers we have clear evidence of the many spaces that are being straddled simultaneously, and the constant negotiation that goes on to keep to time and targets. The workday for the women, and married women in particular, stretches over almost 16 to 18 hours leaving them exhausted. In fact, 'tiredness' is the single most common complaint recorded by us. In a sense, therefore, lowering the burden of work, as well as raising the capacity for work, will go a long way in alleviating the burden of excessive work.

For most women (married as well as unmarried, with intensity increasing for married women) the daily work schedule is somewhat as follows: their day starts around 4.30 a.m. or 5.00 a.m. After almost three hours of 'work' at home, they have to rush to catch a vehicle (either a public bus or company bus) to the factory. In the absence of any alternative mode of reaching the factory, missing the bus is tantamount to losing the day's wages. The stress involved in leaving home to catch the bus to reach the workplace in time is enormous. Almost all women workers reported that they had too little time for a meal before leaving for work.

> *"I am unable to take breakfast in the morning due to time shortage. This leads to burning sensation*

in the stomach, and frequent stomach pain. As soon as I start eating in the afternoon, the pain in the stomach becomes severe, and because of this, the quantity of intake has reduced…. The foul atmosphere in the work area, particularly smell of chemicals and tablets, causes nausea and even vomiting, which again kills appetite… After joining the factory, I have become lean."

[A common complaint among almost all women workers]

There is no way in which a woman—married and with a family in particular—can relax immediately on getting back home after a day's work. Again, the work stretches for almost three to four hours before she can call it a day. Women with small and/or growing children were particularly stressed. This is because if they failed to cook the evening dinner within a reasonable time, they would have to put up with their children going to sleep on an empty stomach. Very few women reported receiving support on a regular basis from their partners, or the male members of the household. Besides, on days when the public tap went dry, or some such calamity befell the household, the strain on the women was so enormous that she almost had to forgo her leave, or wages, or both.

"Before going to work, I have to finish cleaning the house, fetching water, prepare food for husband and children, and get children ready for school. After returning from work, the same work continues. Sometimes my husband helps in household chores."

[Almost all married women had this to say]

The nature of stress experienced at the worksite is not just varied, but also very subtle. It begins at the gates of the factory where workers are grouped into batches; young women have almost no say in the choice of batches. The organisation of batch work, coupled with the pressure to meet targets, very often means that workers can hardly take time off even to visit the toilet. In fact, most units regulate work time so strictly that they close the toilets 15 minutes before the closing time. For menstruating women, the ordeal of dealing with such a requirement is so enormous that they end up absenting themselves on such days. Almost all women workers have reported disorders of the menstrual cycle. We reproduce a few

of the responses to give an idea of the varied nature of the complaints that we have recorded. We are aware (a la Messing, 1997:57) that research on dysmenorrhoea (or painful menstruation) is conditioned by attitudes that view it as having a primarily psychological base. However, the overwhelming nature of the problem (as revealed by these narratives) has convinced us that work-related dysmenorrhoea needs to be addressed seriously and urgently.

"During menses there is severe pain in the leg, and I suffer from mental depression. Before I joined this factory, I used to bleed for two days, but after joining this duty, bleeding is there for nearly five days; there is more of white discharge almost everyday. I visited the Employees State Insurance Hospital but have not been cured."

"During menses bleeding is as usual, but accompanied with severe hip and leg pain. I feel depressed on those days for being born a woman."

"My periods are delayed and sometimes irregular. Due to constant change of posture, there is numbness and swelling of legs, particularly at such times. On such days feel depressed and curse myself for having been born."

"During menses unable to change cloth and have to remain in wet panties; white discharge has increased."

"After joining this company, periods have become irregular, bleeding is also less. But the white discharge has become severe, to the extent of requiring a change in panties. Unable to change panty since there is no facility. It also leads to itching in the vaginal region sometimes."

"During menses, I get very angry with myself for taking up work in the factory. Stomach pain and pain in the hip make it very difficult to continue with work."

As noted earlier, almost all women said that they were not able to eat any meal (for want of time) before leaving for work. This meant that the first solid meal taken by them was around

noon. They attribute their complaints of constant stomachache and acidity to the prolonged gap in intake of food.

Enormous meaning was read into the content of the food carried by the workers. Eating leftover rice and/or curd rice was so looked down upon that it inhibited the carriers of such food from eating it with other colleagues. Similarly, carrying relatively large tiffin-boxes was also ridiculed; carrying smaller tiffin-boxes and having snacks instead of rice was seen as being 'modern'.

The relationship between women workers and male supervisors/colleagues was another area, which generated enormous stress. The women we interviewed were able to discern the subtle way in which they were discriminated; younger, relatively better-looking, and better-dressed women were able to wrangle many favours from their supervisors, such as choosing the batches they preferred to work in, promotions, etc. The day-to-day operation of such discrimination at the worksite impeded the emergence of any solidarity among women workers.

From among the women workers that we interviewed, we reproduce six narratives *representing* different aspects of the 'gender and health' problematic that we have discussed above. The significance of these narratives lie not so much in the mere perceptions of the 'employment-related health outcomes' that they capture, but more important, the additional and cumulative stresses and strains that are part and parcel of their lives because of belonging to a particular caste, class, age, marital household, etc. The seventh narrative is that of a male worker, which gives an important but different dimension to the 'gender and health debate'. The stress that nurturing roles (wife, parent, and caregiver) produce is considerably less for men than that for women. However, given the sexual division of labour where men have to deal relatively more with machinery, they are more prone to accidents while at work. A male respondent's report on the sexual harassment faced by women is in order here. It was rather late when we realized why women, and particularly adolescent girls, felt constrained to talk about their experiences of sexual harassment either at the workplace or at home. The interviewer had very little opportunity to talk to women respondents *alone*; the presence of elders, including males, inhibited the women and adolescent girls from expressing

themselves freely for fear of being pressurised to discontinue working.

2.6 Case Studies

Case Study 1

S. Shanthi (30), Poonthandalam Village

"My husband is Siva, and we have three male children. The eldest is in the fourth standard. I work for Gandhimathi Appliances. They manufacture a range of household utensils and machines. My job is to fix screws in the kitchen machine. I get about Rs 40 per day, and the monthly wages depend on the number of days I work in a month. My husband is a watchman at a wedding hall. He never comes home and never gives money for household expenses. The burden and responsibility of running the household are on me. I wake up at half past five in the morning. I have to cook breakfast and lunch. Apart from cooking, I have to fetch water from the overhead tank that is located in our street. If the motor fails, or if the water supply is disrupted for some reason, the entire day goes haywire. I feed the children before I go to work. Most of the days I miss my breakfast. I have to leave my home around 7.15 in the morning and cycle down for 15 minutes to reach Thirupporur bus stand. The company bus leaves at 7.30 a.m. and reaches the factory gates just before 8. I work till 5 p.m. I return home by 6 p.m. and again start cooking. The cooking has to be completed before 9 so that the children do not miss their food as they go to bed early. Since cooking on a traditional earthern chula using firewood takes time, my youngest son falls asleep before the food is cooked and served. I am very worried about this and hurriedly cook so that he does not go to bed on an empty stomach. I feel that I suffer so much only to see that my children do not go hungry. Cooking, fetching water, feeding the children, bathing them, washing their clothes and other work within a span of about two hours in the morning puts enormous pressure on me. The deadline of reaching the bus stand at 7.30 a.m. is inviolable. Missing the company bus means loss of wages for that day as the gates are closed at 8 a.m. On many occasion, I have missed the bus and gone without work.

"In the factory, my job is to fix screws in about 350 machine pieces. Sometimes four- member teams are formed, and on such

occasions, the target is to fix screws in 1,500 machines. The work speed is enormous, and without that the target cannot be achieved, and will attract penal deductions from our daily wages. We handle metal sheet, oxides, kerosene, and some other chemicals to polish the metal. The protective gears obstruct our pace of work, and many of us do not use them. Exposure to these inputs results in frequent injuries, apart from skin problems. However, the biggest hazard for those who handle metal sheets is suffering from bleeding injuries. There are innumerable cases where workers have lost their fingers while working on these heavy machines. The management takes least responsibility in the event of such accidents. First aid is provided in the factory, and in serious cases, they take the victims to the hospital but do not meet the medical expenses.

"For the past two days I have not been to work. I have acute stomach pain. The reason being that I am forced to skip my breakfast, and the quantum of lunch that I take is also very low. Many of my fellow workers are young, unmarried women. They too frequently complain of acute stomach pain.

"This job is my only hope since the entire responsibility of feeding my children and running the household is on me. I am 30 years old. I doubt whether I will live for another 10 years. There is no peace either at home or at the workplace. I am tired of this life, and feel extremely depressed. I live with my tiredness. It has increased manifold since the birth of my third son. It was a Caesarean delivery. I plan to consult a doctor when I go to Tambaram (a suburb of Chennai) in a couple of days to visit my sister. My frustration with life is mostly due to two factors. I am not educated, and hence trapped in this low-paying employment. Secondly, my husband is irresponsible. He blows all his income on drinks and does not care for anyone in the family. I am thus forced to survive on my meagre income. I continue to live only for the sake of my children."

Case Study 2

> *''Why do you cry and murmur all the time when you come with us to the factory? Don't you know that our fate is like this? We are all very happy that you have passed your higher secondary examination. But you should realise that your wish*

> *to attend college will never be fulfilled. You know about our family situation. We have neither land nor money nor any brothers to support us. We have nothing. How can you imagine that we can afford your college education? Our father is above 60 and he cannot do any thing. If you persist with your desire to attend college, then we will send you. But remember we all will soon die without food.''*
>
> *(Gandhimathi (20) speaks to her sister Sridevi (19) on their way back home from work)*

Gandhimathi and Sridevi have an elder sister, Anbarasi (22), and they live in Thandalam along with their father, Dhanapalan (about 60 years old). They belong to the Mudaliar caste (ranks very high in the caste hierarchy). They are migrants from another village where they used to own a considerable extent of land but now that is all gone. Their mother stays alone at their ancestral home in the village. When they lost their land, they could not go for agricultural work in their native village as they belonged to a high caste and most of the landowners were their relatives. One of their cousins was working in Alathur, and he fixed a job for Anbarasi in one of the pharmaceutical units in the estate. That was about three years ago. Since then, Gandhimathi as well as Sridevi have joined their sister to work in Alathur. They have rented a house and their father stays with them. While the elder sisters have put in nearly three years of service, Sridevi is on a contractual employment for the past three months. She has joined her sisters after completing her higher secondary education.

Gandhimathi works for Citadel Pharmaceuticals. While she is one of the 10 workers employed directly by the company, Sridevi is one of the 30 workers who are engaged on a contractual basis. The work process includes bottle washing, batch taking, mixing, filling, and packing. While only males are engaged in batch taking, female workers carry out all the other operations. Gandhimathi works in the filling section. The target varies from section to section.

The unit has toilet and drinking water facilities. They are also given protective gears like hand gloves, facemask, cap, and coat in the factory. However, the unit does not have a rest room for the workers. Gandhimathi is paid a monthly salary of Rs 1,500. She

also got a bonus of Rs 1,000 last year. Her elder sister is paid a daily wage of Rs 28, and her younger sister is paid Rs 25 per day. The wages are just enough to pay the rent and take care of their food. However hard they try, they have not been able to save even Rs 100 in the past three years.

Gandhimathi suffers from frequent chest pains. Since she is in the filling section, her limbs pain invariably in the evening, so much so that she finds it difficult to lift her arms above her shoulders. She also suffers from stomach pain and a burning sensation in the stomach. She has not consulted any doctor so far. When the stomach pain is acute, she drinks salt water, and when she suffers from a splitting headache, she takes a herbal concoction that gives some relief.

Their typical day starts at 5 a.m. Since they do not have a toilet facility at home, they have to use the cover of darkness. This poses enormous difficulties for them during daytime, if they happen to stay at home. Then two of them have to fetch water from the street tap that is about 10 minutes away. Another sister struggles with the chula and the firewood. They prepare breakfast and pack their lunch, leaving some for their father. They start from their home at around 8 a.m. and walk for half an hour to reach the factory by 8.30 a.m. Though buses and vans ply regularly on that route, they walk to their workplace, as they cannot afford to spend nearly Rs 12 per day on transportation. They find it difficult to walk during the rainy season. Their working hours extend up to 5.30 p.m. with a 30-minute break for lunch, and a 10-minute break for tea—twice in the day. They walk back home to start cooking again for the night.

Their major concern is about the marriage of the eldest sister, Anbarasi. She is 22 years old, and it is very rare to remain unmarried at this age in their caste. If she remains unmarried for another couple of years, it would be extremely difficult for them to find a suitable bridegroom from their own caste. This, in turn, would affect the marriage prospects of the younger sisters. Since they belong to a high caste, no one is willing to marry them. Mudaliars are traditional landowners in the district and they never work in the fields. They organise the production entirely with hired labour. The males supervise the work; the women are not allowed to go to the farms to supervise the work there. . The women were never permitted to leave their homes and work. The situation, however, has changed. They are now allowed to go to work, but in other spheres like education or government. However,

employment in Alathur and in other such estates is stigmatised. One reason could be that a preponderant number of these workers are Dalits, or from backward caste communities. The morality of such workers is doubted by the upper caste. Since Anbarasi is working in this estate for the past three years, no one from her caste has come forward to marry her. Gandhimathi and Sridevi also face a similar boycott from their caste men. But at present, they do not have any option.

Case Study 3

Kala 23

Kala is 23 years old and remains unmarried. She is from the Dalit community. She stays with her mother in MGR Nagar. Her elder sister is married. Presently, she works as a construction worker. Earlier, she had worked in a pharmaceutical firm and in a salt packing unit. Even now, whenever she does not find work in construction, she goes to the salt packing unit.

She was with Apex Pharma for two years. She gave up her job because her superiors did not treat her properly. She was repeatedly humiliated by them and by her fellow workers. Her complexion is dark, and she has a famished look. She could never be a part of a group as her fellow workers despised her. The supervisors would invariably assign the toughest work to her. She could never relate with any one in the factory and hence quit the job a couple of years ago. According to her, women with good looks and fair complexion always receive good treatment from their fellow workers as well as from their superiors. Since she was dark, poor, and not good-looking, she was forced out of the unit. Since then she has not attempted to search for work in any pharmaceutical unit, or any other place where she fears discriminatory treatment. She perceives that work-groups within the unit are formed on the basis of skin colour and the capacity to dress well. But in construction, she does not find any such discrimination. Construction work is not as prestigious as the work in pharmaceutical units. Young girls and fair-looking ones do not prefer construction work, and it is very rare to find them either in construction or in salt packing. Kala also feels that even the food that one takes for lunch matters in such group formations. Since she was very poor, she could not afford to take tiffin (meaning snacks like chapathi, dosa etc.). Hence she carried only rice for her lunch. She always had to sit alone and have her lunch. She

could never wear a stylish dress or any ornament. Fortunately, she did not find any of these practices among construction workers or among salt industry workers. All of them are like her and are more or less from the same socio-economic background. Hence, she has chosen to work in construction and in salt packing where she is not treated so badly.

Kala was suffering from stomach pain, frequent headaches, giddiness, loss of appetite, and distaste for food while she was employed in the pharmaceutical industry. Since then, she claims that she is free from all these problems and is happy now. Perhaps it is more to do with the work environment.

Her day starts at 5.30 a.m. Since her home does not have an indoor toilet facility, she goes to the field in the darkness. Then she fetches water from the street tap and cooks food for herself and her mother. She leaves home by 8 or 8.30, depending on the distance of the work spot. Construction work usually starts at 9 a.m. She gets a one-hour break for lunch. She gets two cups of tea from her employers when she is at work. It is generally 7.30 p.m. when she gets back from work and cooks her evening meal. If she works in her village or in the nearby town, then her wage is Rs 50 per day, but if she has to travel beyond, then she is paid Rs 60 or Rs 65 along with the bus fare. However, she can reach home only around 9 p.m. if she goes out of the village for work. Whenever she does not find work in construction, she goes to the salt unit to work as a packer. In the salt unit the daily wage varies between Rs 35 and Rs 45 depending on the number of packets she can pack as the payment is based on a piece rate system.

Kala suffers from itching in the fingers and palm whenever she works in the salt packing unit. She is not provided with gloves. Her vision also gets blurred, and there is constant irritation in the eyes. Since she has to sit and pack the salt all through the day, her hips pain when she gets back home in the evening. In construction, body and limbs pain constantly, as she has to carry bricks and mortar all through the day.

She lives in a hut and uses a chulha (cookstove). Cooking with firewood in the chulha proves very difficult during the rainy days. The problem is compounded when the mud flooring becomes damp during the rainy season. The house does not have electricity. She has borrowed Rs 1,000 from the local moneylender to rethatch her hut. She repays Rs 400 every month; she will be free from

the debt if she continues to pay the same amount for the next three months.

Case Study 4

Malarvizhi (17)

Malarvizhi (17) comes from a Dalit family, her parents work as agricultural labourers. She has studied up to the 9th standard. She has been working with Apex Pharma for the past couple of years. She hardly finds time to share the domestic work with her mother. Her day begins around 5 in the morning. Since there is no toilet facility at her home, she and her mother have to answer their nature's call in the cover of darkness. She leaves home for work around 7.30 a.m., and takes a van to the factory. Most of the fellow travellers are women working in various units at the Estate. The shift begins at 8.30 a.m. and ends at 5 p.m., with a thirty-minute lunch break. Most of the days she has to work overtime, and reaches home around 8.30 p.m. She feels very tired, both in the morning and in the evening, and finds it too difficult to share the domestic work with her mother. She goes to bed immediately after her supper. She feels that this is a luxury, and will lose it when she gets married. She says that this has happened with most of her fellow female workers. Moreover, she can continue to work in the unit till she gets married.

Invariably, when the order books of the company overflow, the workers are pressurised to work overtime. The extended shift generally comes to a close around 7.30 p.m. The company vehicles drop the women workers at their villages. They reach home between 8.30 p.m. and 9 p.m.For married women, this had resulted in sharp friction in their patriarchal households where their husbands have strongly protested against such overtime work. The husbands gatecrashed into the unit and wanted the practice of overtime to be stopped. Since then, the unit employs only unmarried women on a contract basis; women workers are retrenched as soon as they get married.

Malarvizhi is paid a monthly salary of Rs 750, and for the overtime she is compensated with three days leave in a month. She is supplied with protective gears like cap, gloves, facemask, etc, while she is at work. The unit has several processes like bottle washing, checking the bottles, batch taking, mixing, filling, packing, and sealing. Women workers are employed in all the

processes except batch taking and mixing. The production target is stiff. A team usually consists of 18 workers. They have to produce 450 boxes of medicine, and each box contains 25 bottles. However, on an average, the team produces about 415 boxes a day.

The most unforgettable incident in her working life is an accident in the factory. One of her friends was working in the sealing section when the glass bottle exploded. The glass fragments pierced her face and she fainted. She was rushed to the hospital and was admitted there for more than a week. She got back to work after a fortnight, but the scare remains.

Case Study 5

Ramani (17)

Ramani (17) is a close friend of Malarvizhi and she belongs to the Dalit community. She has studied up to the 5th standard, and her parents are agricultural labourers. Her family consists of six members. All other children in her family are studying in school, and they are younger to her. After completing her primary school, she did not go to a high school as she had to travel about 6 kms both ways to attend such a school. Though bus services are available in plenty, her parents could not afford to send her by bus. For about 5 years, prior to taking up employment in the factory, she was taking care of her younger brothers and sisters while her mother went to work. Even today she helps her mother in the morning by fetching water from the street tap that lies about 15 minutes away from her home. This takes about an hour, after which she gets ready to go to the factory. Without that help her mother finds it difficult to cook and get the children ready for school in time. However, after returning from the factory around 8.30 p.m., she finds it difficult to cope with any domestic work assigned by her mother. Her mother keeps pointing out to her that working in the farm is more tedious and tiring and hence she should help her with the domestic work.

Ramani has been working with the pharmaceutical unit for the past three years. She says that the workers are formed into separate groups consisting of six to eight workers, and are assigned separate processes. Such groups are formed every month, and the work process is rotated among them. Normally, in the course of a year or so each worker would have covered all the sections, and thereby they get trained in all the processes. Groups

are formed on a random basis, and the management is particular that close friends are not put in the same group. Sometimes, if the supervisor spots some close relation developing between two workers, they are separated and made to work in different sections from the next day. Supervisors use this rotational exercise as a pretext to penalise, as well as favour individual workers. The work groups are assigned targets for a day's work. The supervisors maintain strict vigil over the production process. When she joined the unit three years ago (she was 14 years at that time), she was paid a monthly wage of Rs 500; at present she gets Rs 1,200 per month. She says that the unit deducts Rs 50 from her salary every month as her contribution towards provident fund, but she has not been given any account slip, or any kind of acknowledgement for such a deduction. This deduction has been going on for the past two years.

Ramani feels that working continuously for nearly 10 to 11 hours a day results in pain in her hands and hips. Sometimes, she also suffers from stomach pain. When she works in the packing section, she has to stand all through the day, and her legs swell in the evening.

She vividly remembers an accident in her factory, which took place a couple of months ago. One of her friends, Sumathi, was working in the strip packing section. She is married and has serious problems at home. One day Sumathi was a little slow in her reflexes and her right index and middle fingers got caught in the machine and were chopped off. She was taken to the hospital for treatment. The company paid for just a day's expense at the hospital; the rest of it had to be borne by Sumathi's family. Sumathi's services were terminated when she returned to work. The compensation paid was very low Rs. 10, 000 only.

Case Study 6

Uma (17)

Uma (17) has studied up to the 9th standard and has been working in Citadel Pharma for the past six months. She is from a Dalit family and her parents are agricultural labourers. After discontinuing her schooling, she was at home helping her mother and taking care of her younger brother and sister. Both of them are going to school now. Just six months ago, her parents allowed her to work in the factory.

Her day starts at 7 a.m. She has to fetch water from the street well for all the members of the family. Then she has to wash clothes and rush to the bus stand to catch the company bus. The factory gate is closed at 8.40 a.m. Presently she is in the packing section. She has to be careful with the packing machine. She has to move in sync with the speed of the machine. If she gets slow, she has to frequently switch off the machine, which in turn could affect her productivity. The worst scenario would be when her fingers would get entangled in the machine.

She feels that the work in the company for the past six months has sapped her. The work schedule is punishing, and she hardly remembers any day in the recent past that she could really relax. She says that she is at home only to sleep and eat food. She has the option of working as a farm hand, but she does not want to do that. Farm work is irregular. One has to work in the hot sun, and more importantly, it is not a decent work. Irrespective of the pain and drudgery of factory work, she prefers that to farm work, or even to be just at home. When she goes to work, she feels happy that she is away from her oppressive home, and is among friends. She also gets a monthly salary of Rs 700, and is able to dress well. Her mother gives her some money to buy cosmetics; and these are the pleasures that one can afford when one works in the 'estate'. If her parents could save some money and get her married to some one with a stable income, she would settle down in life. If her future spouse does not earn enough, she always has the option of finding work in some unit in the estate later.

Case Study 7

Ravi (24)

Ravi (24) belongs to the other backward class (OBC) and lives in Payyanur. He is educated up to the secondary level. His parents are agricultural labourers. He works in an electrical machine manufacturing company, and his job is coil winding. There are about 400 workers in the unit comprising 250 male and 150 female workers. His work starts at 8.30 a.m. and ends at 5 p.m., with a thirty-minute lunch break . His monthly wages are calculated at the rate of Rs 40 per day for the number of days he has worked in a month. One cannot be sure of regular employment. On many occasions he has returned home without any work. Even then, he has been working in the same unit for the past three years. Before joining this unit, he was working in a

prawn farm. But the farm was closed down due to water pollution caused by a chemical unit that was set up near that farm.

They have a canteen in the factory. A lunch costs Rs 7.50, and is deducted from the monthly wage bill. The canteen does not provide breakfast. The food is extremely bad. Neither does Ravi take breakfast at home. There is no time. Though he does not do any work at home, he claims that he does not have time to have his breakfast. Because of this, he experiences frequent stomach pains.

There is close supervision in the unit. The managing director of the company is always present, shouting and goading his workers to work fast. The factory insists that he should wind either 1,000 small coils or 500 large coils in a day. But normally, only about 350 large coils or 750 small coils can be wound. Fortunately, there are no penal deductions from the wage for not sticking to the target. The target has been fixed at an unrealistic level, and therefore, it is mainly used to goad and not penalise workers. Though there are separate toilets for male and female workers, they are locked half an hour before the lunch break, and half an hour before the shift ends. The management's argument is that it has found many workers stopping their work quite early and spending their time in the toilets. As a strict supervisory technique, they lock the toilets. The workers have to use their 30-minute lunch break to answer their natural calls.

Steel, plastic, aluminum, copper, and different types of oil are used as raw material in the factory. Many of the workers work with heavy machines. It is very common to find workers who have lost their fingers while working in these machines. According to Ravi, his unit could have the dubious distinction of having the largest number of maimed workers. He can recall many such cases during his three-year service in the unit. Importantly, no worker has ever received any compensation for the permanent bodily loss. Male workers, who are predominantly engaged in machine work, are more prone to such gruesome accidents. Constant use of chemicals results in fumes that pervade the entire floor area of the factory, and is particularly nauseating for the new recruits. This is one reason why many of them find it difficult to eat adequately. The unit provides uniforms and protective gears like gloves, facemask, shoes, and caps. However, these protective gears have not saved the workers from frequent accidents.

Ravi also complains that there is rampant sexual exploitation of women workers by the supervisors. Supervisors are particularly harsh with women who do not yield. Such workers are either shunted out to a strenuous section, or in due course sent out of work. He says that there is hardly any relation among fellow workers. The management is very nasty if it finds workers in groups. There was a bitter labour struggle in the unit some years ago and it had to be closed down for nearly a year. Most of the workers were retrenched and all the new recruits were offered work on a contract basis.

D SUMMING UP

To briefly recapitulate the main arguments of our study:

(a) We began by questioning 'development' from a women's perspective. The equation of development with increasing work participation rate for women has tended to suppress the 'costs' of such development to women, and girl children in particular. Within our study region the pursuance of 'development' has unleashed a kind of social transformation wherein the land-use pattern is being drastically and irreversibly changed from agricultural to non-agricultural uses.

(b) Our study region is witnessing phenomenal growth in manufacturing enterprises, which is providing employment to a large number of women, and adolescent girls in particular. An immediate outcome of the kind of employment being generated in the region is that large numbers of adolescent children (girls in particular) are dropping out of school. For Tamil Nadu as a whole, and also in our district, we find that while the literacy base is wide, formal educational achievement of the population is poor.

(c) The conditions of work in the factories, combined with the nature of tasks that need to be performed at home, render women's lives extremely stressful. The lack of investment in basic infrastructure such as sanitation, drinking water, and fuel, and the almost nil record of maintenance of whatever infrastructure has been provided compounds the problem even further. For example, even on holidays, women and girls are forced to get up early so that they can relieve themselves before daybreak.

(d) The varied ways in which women are subjected to harassment at the workplace have severe implications for their health. Once again, since investment by units in keeping workplaces safe for workers is almost negligible, workers are subjected to a host of health hazards. Women and adolescent girls in addition have to constantly put up and negotiate humiliating and stress-inducing, but subtly administered harassment because of their complexion, caste, class, etc., which takes a heavy toll on their working lives. The case studies that we have included in our study capture vividly the different, and not so pleasant, facets of the lives of these 'working' women and girls.

Yet, despite the long hours and the harsh working conditions, despite the stigma attached to working in the units in the industrial estates, the narratives of these women suggest that the opportunity for employment is generally thought of as a positive development. Factory work is considered modern and therefore superior to agricultural work despite the long hours it demands. Most adolescent workers are able to negotiate within their natal families some independence and autonomy as a result of their earning potential, while remaining aware that traditional marriage will end this phase of their lives.

Where do we go from here? The research team not being equipped to conduct clinical tests, health camps, and/or even initiate epidemiological studies, had perforce to rely on the respondents' own perceptions of their well-being. While this methodology is grossly inadequate to establish any degree of causality between a particular 'work' and its attendant health outcome, the strength of the investigation lies in the enormous amount of insights that it gives into the manner in which people's lives are ordered in particular socio-economic contexts. As Jackson and Palmer-Jones (1999) point out, "[T]he burdensomeness of work, and its implications for well-being is not only a function of its physical arduousness, it is also related to the social relations and valuations of work and personal experiences of the pleasure and the pains of work"(ibid; 560-61).

The particular manner in which development is taking shape in our society involves high work intensity, stemming from a combination of enormous energy expenditure both at home and at the workplace, which is damaging to the well-being of the person. Large sections of the population of our country suffer extreme poverty and deprivation. This section of the population depends largely on physically arduous activity in both

agricultural and non-agricultural livelihood. This immediately implies that lowering the burden of work, as well as raising the capacity for work, could go a long way in alleviating poverty in a nutritionally challenged population. Coming back to Jackson and Palmer-Jones (1999) we find their concept of 'body capital' specially useful to our analysis, since it immediately focuses on the endowment that poor people rely on more than any other, namely, their bodies. "If bodies are seen as valuable assets for the poor, and for women, we question whether development policies should encourage them to be extravagantly squandered in effort intensive activity" (*Ibid;* 562).

What this immediately implies is that the focus on poverty reduction and egalitarian economic growth should necessarily include provision of water and sanitation and other public utilities that reduce human labour power constraints. We have already alluded to the low level of amenities available to large sections of our population in Section I. Joanne Leslie (1991) comes to the same conclusion through her studies on women's nutrition. She makes a strong case for focussing on adolescence as a period of potential catch-up growth because of the long-term reproductive and other implications it has for their health. Leslie notes that

> "improvements in the nutritional status of adult woman may be more easily achieved through efforts to reduce women's energy expenditure rather than in increasing woman's energy intake. Such efforts will be particularly important during high stress times such as the last trimester of pregnancy, the first six months of lactation, the pre-harvest agricultural season, or periods of seasonally high food prices. Wells, fuel efficient stoves, grain hullers, bicycles and ploughs are but a few examples of technologies that could substantially reduce energy expenditure among women, while at the same time increasing their productivity, thus potentially improving their nutritional status ..."(*ibid*: 15)

Thus, workers in the less developed countries are disadvantaged at various levels. The nature and pattern of economic development has been such that bulk of the employment has been generated (and continues to be so) only in the informal sector with its attendant evils of little or no protection. Moreover, wages are relatively at a low level, and worse, the work conditions are unsafe and unhealthy. Most workers are too vulnerable to register their protest against any of these disadvantages. The situation becomes even more vulnerable when viewed from a women's perspective, since, at every level, the disabilities that women have to suffer are several times more intense when compared to male workers. It is our contention that the above problems cannot be redressed solely within the existing legislative and administrative framework, since the latter is not geared to address and tackle such structurally in-built inequities.

Acknowledgements:

The Research Team in general, and the first author in particular, would, at the outset, like to thank CEHAT for having facilitated this study not just financially but also logistically. Our research partners, RUWSEC, supported us throughout and generously, with professional input, time, personnel and contacts. Dr. Sundari Ravindran, Honarary Executive Director, RUWSEC, provided the crucial initial framework that subsequently enabled us to progress towards netting and interpreting data relating to 'work' and 'health'. We remain indebted to them.

The women and men workers whom we interviewed in the course of our survey gave us their time, shared their personal life and work experiences – and much more - without any expectations, expect the hope that sometime in future, accumulation of such knowledge would find its way into some sort of 'policy' that would take cognizance of work-related health outcomes. We hope the findings of this study will not belive their hopes.

Similarly, the Health Workers of the area surveyed provided us with invaluable insights on a range of issues, which insights have also, subsequently, enabled other researchers to build on the initial findings of this study. We need also to record that our ground level officials [in this case, the health workers] are a mine house of valuable information; their absence and remoteness from the scene where 'policy' gets made is not just a loss, but more important, it is also a crucial cause of the poor conceptualization of most of our policies. Interaction with them was a humbling experience.

In the course of this study, CEHAT facilitated several workshops to brainstorm on issues arising out of the field trips, to discuss preliminary findings and to generally help with the progress of the study. We are grateful to the advisors who specially came over to attend these workshops and provided much needed inputs and direction. In particular, we would like to thank, Veena Shatrugna, Sonia Gill, Maithreyi Krishnaraj, R. Nagaraj, and Seeta Prabhu, whose comments in particular helped in the revisions of our draft.

Dr. A Raman, project staff at MIDS, Ms. T. Maheswari, administrative staff at MIDS, and Mr. R. Dharumaperumal, systems analyst at MIDS, need a special word of thanks for having helped in various ways in the production of this study. We are also grateful to the librarian of MIDS for making available literature relevant to our study.

It needs however to be recorded that the views contained in this study are primarily those of the first two authors, namely, Padmini Swaminathan and J. Jeyaranjan.

APPENDIX

Extracts from Ravindran, S. *et al.*1999. "Women's Experience of Utero-Vaginal Prolapse: A Qualitative Study from Tamil Nadu, India."

This paper reports on a community-based study of women's perceptions of the causes of uterine prolapse and the problems they experienced from it. The data are based on information collected from 37 rural, poor women who volunteered to have a clinical examination done by a gynaecologist. Although the data come from a small self-selected sample of women, the relevance lies in the focus on women's perceptions of the causes of uterine prolapse and the impact of this condition on their daily lives.

The women whose perceptions and experiences are reported in this paper come from the villages surrounding Chengalpattu town in Tamil Nadu, India. As part of a community health project, the Rural Women's Social Education Centre (RUWSEC), a grassroots women's organisation working in these villages, which also runs a small non-profit hospital, learned from a baseline survey that 106 of the 4,117 women between 15 and 50 years of age in the villages covered by the project were suffering from second or third degree uterine prolapse (according to the women's own self-reports). Following this finding, there was a demand from the community for a clinical check-up.

All 37 women who volunteered for the clinical examination and attended the workshop were from landless, agricultural labouring households, and belonged to the Scheduled Castes. All of them worked as manual wage labourers in agriculture. Nearly all of them (34 out of 37) were illiterate. Thirty-two of the 37 women (87 per cent) were found to be suffering from utero-vaginal prolapse on clinical examination, while five did not have any apparent gynaecological problem. The high level of correspondence between the women's self-reports and the medical diagnosis in this instance is noteworthy. The mean age of those with prolapse at the time of the examination was 37.5. However, the mean age at which the women had first developed symptoms of the condition was 26.2 years. Indeed, many had been suffering from this condition for more than ten years (mean 12.3 years).

The profile of those with prolapse in this instance appears to vary from that commonly found in medical textbooks. For example, one textbook describes the typical patient who complains of prolapse as a woman aged about 50 years, who has given birth to several children, and who usually gives the history of a difficult confinement or of the birth of large children. Studies from industrialised countries have also reported that the woman's age, parity, and weight are significantly associated with the risk of uterine prolapse. However, according to some developing country studies, uterine prolapse may also occur in a relatively young population.

When the women were asked what they thought had caused the uterine prolapse, 18 of the 32 women mentioned hard manual labour within a week to a fortnight following delivery as the cause. The stories of these 18 women were very similar—of having lifted water pots or the heavy instrument for pounding rice or millet and sensing a protrusion soon after.

The women were suffering from a number of health problems associated with uterine prolapse. The problems mentioned most often were difficulty in standing and sitting because of the prolapse, an obstructed and blocking feeling (16 women) and backache (14 women). Obstruction while passing urine and bowel motion (seven women) was the next most common problem. Four women had acute lower abdominal pain, and six others complained of profuse and smelly or itchy white discharge. Other problems included recurrent episodes of urinary tract infection (four women) and heavy menstrual bleeding (three women). Some women suffered from more than one of these problems.

Uterine prolapse seriously compromised the quality of life of the women affected, with far reaching consequences not only for their physical health, but also for their sexual lives and their ability to work and earn a livelihood. They faced a series of barriers to medical help for uterine prolapse, ranging from their own reluctance to mention it to a doctor, and, husbands unwilling to allow them to seek treatment, ineffective treatment, and high monetary and opportunity costs, especially long waiting time for surgery in hospital.

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PART III

In These Uncertain Times: The Impact of Industrial Decline on the Lives and Health of Women Living in a Slum in Mumbai

Padma Deosthali
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A INTRODUCTION

The city of Mumbai has experienced wide-ranging changes in the past two decades. It is difficult to pinpoint the origin of these changes, or the order in which they occurred. However, if one were to summarise these changes, they could be classified as follows: (i) demographic changes, (ii) changes in the spatial distribution of the population, (iii) the informalisation of labour, and changes in organisation of production. What ordinary citizens have experienced as the combined effect of these changes is complex. Especially the poor have reasons to feel ambivalent about the direction that the development of the city has taken. On the one hand, there has been an expansion of opportunity for employment, but that employment has grown largely in the informal sector. On the other hand, the rising prices of land have displaced the poor from the island-city and they find even their homes in the suburbs threatened as the business district shifts northwards. Above all, the social and political culture of the city has changed as the pressures of economic uncertainty and increasing disparity goad people to seek refuge in the traditional identities of caste and religion. The sectarian politics, which reached a climactic phase during the riots of 1992-93, have left an indelible mark on the psyche of the city.

3.1 Demographic Changes and Changes in the Spatial Distribution of the Population

According to the census (District Census Handbook, Greater Mumbai, 1991), Mumbai had a population of 99.26 lakhs in the year 1991. The population has grown at the rate of 1.9 per cent per annum in the 1981-91 decade. Interestingly, the female population has grown by 27.15% in this decade, while the male population grew by only 17.34% in the same period (Centre for Research and Development, 1994). The reasons for this change in the gender composition of the population are very significant. Mumbai was historically regarded as a city of migrants. This is borne out by the fact that migration contributed 79.7% to the increase in population between 1941 and 1951. These migrants were generally males, who came here alone searching for work. The situation has since then changed: in 1981-91, migration

contributed only 16.8% to the increase in population, while births accounted for the rest (Centre for Research and Development, 1994). This reflects that the population of the city is becoming increasingly settled, with families replacing the male migrant workers of earlier times. Not surprisingly, there has been a phenomenal growth in the population of women in the reproductive age group between 14-45 years, both in absolute terms and also as a proportion of the total population.

However, population growth has not been uniform all over the city. In the decade 1981-91, more than two thirds of the total increase in the city's population was accounted for by just three wards—L, M, and R (Kurla, Chembur and Kandivali/ Borivali), whereas, the southern wards (e.g. Colaba, Churchgate, Kalbadevi) recorded no growth or negative growth during the same period. Consequently, the Kurla ward, where our study population resides, witnessed a sharp increase in population density in the 1981-91 decade. The density of population increased from 17,161 persons per square kilometre to 45.775 persons. The population density grew by 167% in the decade 1981-91. This was more than eight times the density growth for the city. It registered an annual growth rate of 3.5% for the general population, and a growth rate of 11.5% for the SC population and 12.3% for the ST population. If we assume that these groups are among the most deprived, the large increase in the population of these particular groups suggests that the population of the Kurla ward is getting more of a working class character, and that there has been a massive increase in the slum population (Centre for Research and Development, 1994}.

The decades of the 1970s and 1980s were marked by a rapid development of the suburban areas. We find that there was an overall decline in the density of population of the island city wards and a complementary increase in the suburban areas. "Greater Mumbai's current expansion is entirely due to its suburban growth. In 1971, Mumbai city contained 3 million inhabitants, and was still ahead of the suburbs, which accommodated 2.9 million. In 1981, however, the city's population of 3.3 million was far outpaced by the suburban population of 5 million." (Kosambi, 1986; 188). In the 1991 Census, we find that of the approximately 99-lakhs people enumerated in Greater Mumbai, approximately 40 lakhs resided in the suburbs and 28 lakhs in the extended suburbs. The Island

City contributed approximately 32 lakhs (only 32%) of the total population (Centre for Research and Development, 1994).

The growth of the suburbs was a response to the inability of the city to cope with increase in population or economic activity. It was also made largely possible by the improvement of the suburban railway. Apart from the railway network, the development of the suburbs was largely guided by the market (land prices, availability of markets, etc,) "By the 1970s and 1980s, the self perpetuating mechanism of the capitalist city was becoming harder to comprehend, let alone control. Physical and spatial planning was replaced by socio-economic planning, with the physical form of the city no longer responding to the needs or aspirations of its citizens" (Diwedi and Mehrotra, 1995; 320). Coincident with the growth of the suburbs were the changes in the organisation of production. A huge informal sector had emerged in manufacturing and services. The growth in employment has largely been in the informal sector. There are two aspects to this which need to be considered: the growth of the unorganised sector in industrial and commercial establishments, for example, small businesses, home-based manufacturing and self-employment on the one hand, and the increased use of temporary, casual and contract labour within the organised sector on the other. While the former may be seen as an increase in employment opportunity, the latter, to some extent, involves merely the replacement of a formal workforce with an informal one.

Several complex and – interrelated themes are in operation here. One, even if an *industry* employs large number of women, individual units in the industry could be employing only a small proportion of women as workers. The manner in which women are recruited (whether through contractors or directly) has at once an important bearing on their status as workers. Most often, the units deal directly with contractors and not with the women workers. In such cases, most women workers have no status as workers, and therefore go unrecognized and unrecorded. An important outcome of this phenomenon (apart from the serious adverse implications it has for women's upward mobility and terms of employment) is that the workplace is very unlikely to have facilities which are more vital for women than for men (e.g. toilet facilities, crèche, rest room, etc.)

The informalisation of labour has been accompanied by a marginal trend towards an increased female workforce participation. According to the census, work participation of women in Mumbai improved from 9% in 1981 to 11.6% in 1991, and that of men declined marginally from 55.5% to 54.9%. Employment of men increased at 1.6% per annum in the decade, while that of women increased at 5.9% per annum. Women accounted for 31% of the increase in Mumbai's workforce between 1981 and 1991 compared with 21% in the previous decade. As a result, the number of women workers per thousand working men improved substantially from 125 in 1981 to 172 in 1991, and their share in the workforce improved from 11% to 15% (Deshpande et al; 1998).

Women usually occupy the bottom of the employment ladder, not least due to their lower educational achievements. The fact that the service sector is the one which is experiencing growth makes it imperative that general educational levels rise so that the workforce is prepared to meet the requirements of the job. However, we find that, in Mumbai, while literacy levels are fairly high formal educational levels are low, especially for girls Table 3.1. Even these aggregated figures hide the reality of the slum population. In the Mumbai study (CEHAT, 1998) we found that even in the age group of 15-19 years, only 22% of the girls and 37% of the boys in the slum households were in school/college. While very few of the girls in this age group are actually employed, a large number are actively seeking employment Table 3.2. This clearly indicates that dropping out of school is followed immediately by a search for paid work or absorption into full-time domestic labour.

Table 3.1 : Percentage Attending School by Age and Sex

	Greater Mumbai (Census 1991)		Mumbai Study Slum Population (1996)	
Age group	Males	Females	Males	Females
0-4 years	0.04	0.04	9.4	18.9
5-9 years	68.0	66.1	85.7	76.8
10-14 years	87.8	84.6	86.5	83.6
15-19 years	56.6	51.9	36.8	21.7
20-24 years	17.0	12.9	2.9	—-

Source: 1. Calculated from data presented in Census of India, 1991, Part IV A-C Series, Socio-Cultural Tables, Directorate of Census Operations, Maharashtra.

2. Cehat, 1998. Household study on Health Expenditure, Mumbai (The data presented in the table pertain to individuals in 247 slum households sampled in the survey)

Table 3.2 : Occupational Profile of Children and Youth Living in Slum Households by Age and Sex

	Age in years				
Male	0-4	5-9	10-14	15-19	20-24
Student	9.4	85.7	86.5	36.8	2.9
Unemployed			4.1	15.8	5.9
Employed			4.1	44.7	89.7
Non workers	90.6	14.3	5.4	0.0	0.0
No response				2.6	1.5
Total	100.0	100.0	100.0	100.0	100.0
Total Number	96	77	74	76	68
Female					
Student	18.9	76.8	83.6	21.7	
Unemployed			6.0	16.7	1.3
Houseworkers			1.5	51.7	92.3
Employed			1.5	8.3	5.1
Non Workers	81.1	23.2	7.5		
No response				1.7	1.3
Total	100.0	100.0	100.0	100.0	100.0
Total Number	95	82	67	60	78

Source: 1. Cehat, 1998. Household study on Health Expenditure, Mumbai (The data presented in the table pertain to individuals in 247 slum households sampled in the survey)

Employment for the group of young workers (10-24 years) is necessarily of the flexible type, not well paid and extremely uncertain. As J. Seabrook describes in his study of Indira Nagar, another slum in suburban Mumbai, "Most of the companies employ women and young people – children really, except in the heavy metal industries where men predominate. Labour legislation is, in principle, quite stringent, but in practice, is easily evaded; as long as the core of permanent workers remains below 20, they have no right to form a union; bribes to factory inspectors guarantee that the employment of children is not challenged and the minimum wage is a pure fiction. Some companies have an in-house union, some are paternalistic, others brutally exploitative. Many of the substances used here are toxic and dangerous—chemicals, paints sprays, plastics, metal. For the most part protection is minimal" (Seabrook, 1987; 19).

Industries located close to slums or in them are often those which deal with the most hazardous substances. Women, who due to responsibility of child care and housework are not able to travel far to look for employment, have no option but to work in such units. However, this does not mean that their labour is not utilised by large capital. Slum-based units are most often ancillary units for large industrial houses. Kalpana Sharma describes a recycling unit in Dharavi:

> "Just outside the shed, where the plastic is being separated, are stacked large blue drums with the symbol of a well known multinational company. Companies send their drums for repair, and after paying a small amount, get them back, ready to be reused. The badly damaged ones are recycled. Next to plastic recycling, the drum recycling business is the biggest – with 145 establishments doing this. But what about the remnants of hazardous chemicals, which might still be in these drums? Do the workers handling them protect themselves? Such questions are never asked. Indeed, they never occur to the people running the businesses. And clearly, the multinational companies getting the work done at Sanola Compound could not care less. After all, their hands are clean and they can show that

they take good care of all their workers. What is done outside their factory premises, even for jobs done for them, is not their responsibility. So a little bit of First World-Third World politics is on display right here in Sanola Compound, in Dharavi, in Mumbai" (Sharma, 2000; 109-110).

3.2 Health Scenario in Mumbai

The measures of mortality indicate the great advances that have been made in the field of health Table 3.3. The city has experienced a considerable decline in mortality. We find that infant mortality rate has reduced to 39.8 per 1000 live births, while crude death rate has fallen to 7.3 per 1000. However, relative to other localities in the city, the Kurla ward indicates a much lower health status. Infant mortality in Kurla is among the highest in the city.

Table 3.3 : Health Indicators for Mumbai – 1970-1997

Birth/Death Rate	1970	1975	1980	1985	1990	1995	1996	1997
Crude birth rate	28.3	25.5	24.8	26.7	20.1	19.9	19.4	19.2
Crude death rate	9.8	9.2	8.1	8.9	7.5	7.3	7.6	7.3
Maternal mortality rate	0.6	0.5	0.6	0.8	0.6	0.08	0.06	0.04
Infant mortality rate	80.6	76.5	65.7	62.7	48	40.4	40.2	39.8

Source: Brihanmumbai Municipal Corporation, Annual Report of the Executive Health Officer, BMC, 1971-1989, and unpublished records from 1988 – 98, Mumbai

Without adequate nutrition, safe water and sanitation, capacity to resist disease dwindles further. TB remains the major killer disease of the Indian people. If one looks at the pattern of mortality in *Mumbai*, deaths due to TB and respiratory illnesses have been highest, claiming about 25% of all deaths. There has been a rise in deaths due to heart ailments and diabetes, claiming 27% of all deaths in 1997. These two have been the two major causes of death in the city from 1982 to 1997. Deaths due to senility have been steadily rising in this period, and in 1997, they claimed 5% of the total deaths. Deaths due to anaemia have been rising, and their proportion of the total deaths has doubled in the '90s as compared to the early '80s.

This is significant in the context of rising prices, low purchasing power, and low wages. Deaths due to gastrointestinal infections have been decreasing, and were only 1% of the total deaths in 1997. Cancer deaths have been rising, though not with any distinctive patterns. Deaths due to accidents (of all types) are also steadily rising over the years.

In the Kurla ward deaths due to TB and respiratory illnesses have also been the highest, amounting to 27% of all deaths in 1997. The second highest cause of death is heart diseases and diabetes, but they have decreased in proportion, from 22% in 1982 to 17% in 1997. Deaths due to accidents (all types) show a high increase. Its proportion to all deaths has doubled from 5% in 1982 to 10% in 1997. While deaths due to gastrointestinal infections are 1% in the city, they are around 5% to 6% for the Kurla ward. This reflects on the living conditions in the ward. The decline of infant mortality has also been slower in Kurla and the neighbouring wards. In 1985-86, infant mortality in Kurla was the highest in the city. In spite of the overall decline, there are distinct class differences in the rates of mortality. The mortality rates in certain wards, where there is a concentration of slum settlements, for example Chembur, is considerably higher. (Ramasubban and Crook, 1996) A rationale, which could account for these differences, would be that the curative services and emergency care, which are largely responsible for this mortality decline, are not available equitably to all social classes and areas of the city. Hence, differences in mortality (and actual health status) persist. The failure of the state is twofold. Firstly, in failing to provide adequate access to curative care to the working class through the government health system. Secondly, in relying excessively on technical solutions for public health problems and ignoring the need for preventive health care, hygiene and sanitation.

3.3 The Present State of Health Services in Mumbai

The government health facilities, which were built in the last century and the pre-independence era, were concentrated in the island city. The pressure on these facilities remained unabated due to the growth of population and stagnation in the number of beds. On the other hand, in the newly developing suburban areas, there was scarcely any development of state

health facilities. The suburban areas, both in the East and West are served only by handful of peripheral hospitals, which too are very poorly equipped. In 1999, we find that roughly one-third of the public hospital beds are located in the suburbs. Conversely, two-thirds of the total private hospital beds are in the suburban wards. (CEHAT, Database on Hospitals, unpublished)[1] Thus, the health needs of large concentrations of the city's population are not served by the public sector. Private hospitals and nursing homes are the main source of curative care in the suburban areas.

However, the quantum of health services available in the city is still overwhelming. According to the Brihanmumbai Municipal Corporation, in 1993-94, there were 495 hospitals in Greater Mumbai. In 1994-95, in response to a PIL filed by the Medico Friends Circle, the BMC produced a list of 526 registered hospitals. However, when the High Court appointed a committee, which forced the authorities to register all the nursing homes, the number rose to more than 900 institutions. According to our own database, the number of private hospitals presently functioning in the city is likely to be in the range of 1,000 to 1,100 (CEHAT, Database on Hospitals, unpublished).

3.3.1 Utilisation of Health Services

The little community-based evidence, which exists on actual utilisation of health services, also indicates the dominant role played by the private sector in providing hospital care. A household survey covering 1,657 households conducted in three municipal wards in 1988 found that private and public facilities were almost equally utilised for treatment of catastrophic illness (illness that frequently involves hospitalisation). The class differentials were significant, with the lower class utilising public services to a large extent, and the middle and upper classes almost exclusively utilising private facilities (Yesudian; undated). In addition to class, the other factor that affects utilisation is gender. In the Mumbai study, we found that the percentage of non-treated episodes for women above 12 years is around 45%. The reasons given for not availing of treatment

[1] *Sunil Nanaraj, Anagha Khot and Sumita Menon have complied a list of hospitals by using information from various sources, including the BMC and the Nursing Home Owners Association and published by CEHAT.*

were lack of financial resources (22%), perception that the illness was either seasonal, temporary or long drawn (43%), and lack of social support (12%). The high no-treatment rate indicates the secondary status that women are assigned to in the household and the society. Women are conditioned to endure illnesses till the illness incapacitates them from doing any work. This also affects their perception of health problems, as more often than not, they do not even recognise a particular symptom as an illness (Nandraj et al, 1998).

3.3.2 Health Expenditure

The Brihanmumbai Municipal Corporation is the main provider of health services in Mumbai. The BMC is a large corporation having a budget that is higher than some of the smaller states. The health expenditure budgeted by the BMC for 1997-98 (latest) is Rs 3.47 crore, which is three times more than in 1990. The per capita expenditure has increased to Rs 315. The citizens of Mumbai are privileged to have such a good public health care system. One can see that the money is being spent and there has not been a drastic reduction in the expenditure in the '90s. Why then do the citizens prefer to seek private facility? Why are they not utilising public health services?

It is important to analyse the expenditure pattern of BMC. During the year 1960-61, the BMC spent 34.45% of its total expenditure on health care. This declined to 25.84% in the year 1985-86 (Government of India, 1988), and in 1994, the revised estimates indicated that the proportion was even lower at 23.92%. In a joint paper, Ravi Duggal and Sunil Nandraj (1994) have analysed the expenditure of BMC for the period 1989 to 1994. They have brought out the following issues:

- The pattern of expenditure under 'Health' is interesting. From 1989 to 1999, the average expenses on public health was 12%, medical education 7% and dispensaries 3%.
- The three teaching hospitals KEM, Nair, and LTMG accounted for 37% of the health expenses during the period. The 14 peripheral and one dental teaching

hospital accounted for only 20% of the health expenditure.

- The hospitals spend about 60% on establishment/ administrative costs, and it is increasing over the years.
- From 1989 to 1994, the expenditure on dispensaries has remained 3% of the total health expenditure. In the dispensaries, the expenses on establishment were 52.9% in 1986, and 76.5% in 1992. The expenses on medicines have declined from 23.49% to 12.74%; even the expenses on repairs and maintenance have decreased and are one-fourth of that in 1986.

This imbalance gets reflected in the inability to provide services, and the people's hesitation to access these. Further, the peripheral hospitals are located in the suburbs, which are densely populated, but the expenditure on these is half of that on the teaching hospitals. The dispensaries are rarely visited because the patients almost never get medicines. They are forced to go to the tertiary level hospitals for ailments that could have been treated at this level itself. Although the per capita expenditure has increased, it is clear that it is not commensurate with the needs of the people, and hence not benefiting them.

This, then, is the context in which we situate the present study of women living in a slum in the Kurla suburb of Mumbai. In addition to the vulnerabilities that poor people in general, and poor women in particular face, households and communities in slums face additional hazards because they are only 'quasi legal' citizens. Slums in Mumbai stand largely on government land, but they enjoy no security of tenure. As the state (i.e., the individual departments and corporations) doggedly refuses to recognize slum dwellers, political parties have confounded the same through a complex strategy of patronage, corruption, as well as open confrontation with the state.

3.4 Slum Life and Women

In a sense, slums are what typify cities. When we think of cities, we think of slums. The slum is not merely an urban 'problem', but in many ways, an organised strategy for urban development. Wages in the informal sector, as well as the availability of work itself, do not allow its workers to rent rooms

in chawls or buildings as the erstwhile migrants had done. By allowing the growth of slums, the working class are allowed temporarily to house themselves almost free of cost or at very low cost thereby preventing an organised demand for higher returns to labour, either as higher wages or free housing. Thus, though it is conventional to think of slums as the failure of urban planning, they also represent an economical method of absorbing new settlers and older migrants into the city, where they help to keep wages low. In spite of this, slum dwellers are kept permanently insecure. Their right to land is not recognised, and the possibility of eviction or, at least, resettlement always looms over them. "The Government's first ignore the existence of slums and try to get rid of them though demolitions. When this does not succeed, and slums emerge as settled areas through the efforts of their 'illegal' occupants, they are 'recognised'. After this, selectively, some services are offered, such as water and sanitation and even 'redevelopment'. But slum dwellers are never allowed to forget that they have no legal status. Thus, when the land on which slums are located becomes valuable property, people are pushed out yet again, to another uninhabitable piece of land, to another slum" (Sharma, 2000; xvii).

The economy and efficiency with which slums in Mumbai house the poor is evident from the fact that in the 1991 Census, it was found that almost 5 million people (out of the total 9.9 million population of Mumbai) lived in slums, or on pavements, or along the railway tracks. However "this great mass of humanity occupies only 8% of the total land area of the city with densities going up to 18,000 persons per square kilometre" (Sharma, 2000;18). The proportion of slum population was 12% in 1961, and is estimated to have increased to 51% by 1991 (Sharma et al; 1996). Quite obviously, this increase can only be accounted for marginally by a higher birth rate. What it clearly represents is the increasing failure of the city to meet the housing needs of its working class.

It is obvious that slums are indispensable for the existence and growth of the informal sector. Not only do slums help to house the large 'surplus' labour force from which the transient workforce of the informal sector is drawn, the industrial and commercial enterprises in the unorganised sector are themselves located in the slums. Typically, the large slums in

Mumbai are multi-use settlements, consisting of houses, industrial units and shops, and other commercial establishments.

Thus, the slum is variously home, workspace and public arena. For women, living in a slum has both distinct advantages and disadvantages. On the one hand, slum life automatically implies a degraded environment and absence of civic amenities. On the other hand, women in slums are more likely to find work nearer their home, and to be able to create a sense of community that mirrors what exists in the village. S. Thorbek notes in her study of a slum in Colombo that social relations have a distinctly different meaning for women. "For the women, relations with other people, their social relations, are also quite important from the economic angle. They are dependent on their relationships with men and with other women in their daily work, dependent on their incomes, and often they are also dependent on their social relations in order to find work." An interesting strategy that she noted was the tendency of married women to form clusters around their mother.

> "Although female-centred families are not particularly valued by women, they are, in fact, of great importance to them...It is impossible to manage both work and the care of children without the aid of other women, and on their meagre incomes they would under no circumstances have been able to support their children or pay someone else to look after them. This applies to most of the clusters. Without them, and without the help from other women, a number of children would not have survived. It does not always seem like much, but if a young mother can get help with baby-sitting, if an old woman can find a hut to sleep in, if women can get a little money from a man, it makes a decisive difference to their lives" (Thorbek, year; 1994).

In the context of Mumbai, the meagre information on the actual work-lives of women suggests a similar symbiosis. The study of informal sector women workers in Mumbai conducted by Savara and Everett (cited in Deshpande, 1996; 411) indicated the pressure that employed women face in balancing their responsibilities. "Three of every four women workers covered

in the study were married and lived with their families in Mumbai. Their husbands had jobs either in the formal sector or informal sector, though some women reported that their husbands were out of work. These married women reported a very long workday of 16 and 17 hours; of which more than 8 hours were spent in paid work and nearly 7 hours in housework. All of them reported having less than one hour of leisure. Probing questions were asked to find out how much assistance they got from other family members in doing domestic chores which were listed. Almost half of the women reported that they did housework themselves without any help from any family member. If anyone in the family helped, it was mostly the daughter or daughter-in-law, occasionally mother or mother-in-law. Almost never were male relatives listed by respondents as persons helping them in housework. Very few, with their low income, could hire domestics to do housework" (ibid).

In the context of urban life, especially slum life, living in the same locality ensures the support of female relatives. Houses are small, and nuclear families are the norm. However, as noted above, this does not preclude the possibility of creating large networks of extended households. At a larger level, kinship groups, caste groups, and regional groups tend to band together. These are not necessarily merely for the convenience of women, but a tendency found among all migrants. It offers physical security, the possibility of economic assistance and employment. This is well-known phenomenon observed in Mumbai, as in almost all other large cities. But like all urban settlements, there is also a secular aspect to community life in the slum. Mixed neighbourhoods emerge as houses are rented out, resold, and rebuilt. Older settlements are particularly likely to move in this direction. Neighbourhood ties replace family ties, and people begin to build new relationships for mutual gain. In that sense, the riots of 1992-93 following the demolition of Babri Masjid marked a turning point in the social and political life of the city. Kalpana Shrama relates the experience of Dharavi. "Since those riots, a process of ghettoisation has occurred. In some respects, communities of migrants tend to live together. It is a natural and accepted phenomenon... But earlier, there were many mixed neighbourhoods. After the riots, this is where you see the change in Dharavi. If Muslims were a minority in a Hindu settlement, they would move out, and if Hindus were a minority in a Muslim neighbourhood, they would move out"

(Sharma, 2000; xxxi-xxxii). Thus, we find a reversal of the secularising trend that we conventionally associated with urbanisation. Consequent to the revival of fundamentalism, restrictions on women is an inevitable occurrence. Spaces created by employment and education are often constricted by fundamentalism. In the short run, the effect on women is devastating. In the actual days of rioting, women, as well as men were in fear of losing their lives, being thrown out of their houses, which were then vandalised. Muslim women in particular, were very vulnerable. They disappeared almost completely from public view for a long period after the riots. The long-term impact of ghettoisation is also significant. With the creation of homogenous neighbourhoods, the opportunity to mingle with 'outsiders', which is fundamental to the building of 'modern' identity is diminished. Politics organised around traditional identities of religion and caste have little space for women's aspirations and development.

3.5 Summing Up

The city in general has experienced changes in the employment situation, the deterioration of state services and dramatic social change. Historically, the city's infrastructure, physical and social, developed in response to the demands of the economy, and was aided by the investment of private capital. At present, where the demand is largely for well-educated service sector workers, for the households, and workers who traditionally looked to the industrial sector for employment, there has been a definite downturn. The struggle for mere survival has replaced the search for a higher standard of living. There is a reversal of expectations, where the poor can no longer take for granted even a gradual improvement in the quality of life. Instead, households confront the fear of losing all the gains, both material and human (made from the migration from their villages), after having laboured for generations in the city.

With the decline of the share of manufacturing in total income of the city, the demands of industry no longer determine the priorities in the development of the city. Areas like Kurla, which represent the inner city, are being allowed to decay, while the city looks forward to the service sector to transform these neighbourhoods into commercial and service sector centres.

For the working class population, which inhabits this area, however, the transition is very painful. Very few have the requisite skills and education to benefit from the job opportunities made available in the neighbourhood. The only options open to them are in the informal industrial sector that itself struggles to survive.

The changes have led to intensification of women's work as they not only have to stretch dwindling incomes further, but also contribute to household income by engaging in wage labour or home-based work. The conditions of work not only add to their physical stress, but the uncertainty that prevails also leads to mental stress. Research has shown that during periods of impoverishment, cutbacks in personal consumption by women and girls are disproportionately high. When income poverty worsens, and conditions of living in households deteriorate, women generally bear a disproportionate share of the burden of new deprivation. The search for health care also assumes a sense of desperation.

> "Poor people are always at the mercy of the medical profession in the slums. On almost every street corner and in every alley there are signs – Dr. Rao's Clinic, Dr. Abdul Waheed, Physician and Surgeon – and advertisments for miracle cures for everything, from cancer to kidney stone and croup. The more unscrupulous doctors know that money can be made even out of the poorest. It is vital for the poor to retain their health and capacity to work, for that is all that stands between them and destitution. They will go into debt, sell their few possessions, pawn wedding jewellery to pay for medicines; and as long as the money keeps coming, it is in the interests of the doctors to fail to cure, if not actually to exacerbate the illness" (Seabrook, 1987; 33-34)

B STUDY DESIGN AND METHODOLOGY

We have attempted to structure our study around the household, the workplace, and the public space in an attempt to study the health impact of changes in these environments for women. Health in itself is a vast area of inquiry. This being an exploratory study the challenge was to encourage the respondents to narrate their life histories. The use of in-depth interviews, interviews with key informants, and participant observation helped in putting together information.

3.6 Objectives of the Study

The specific objectives of the study are as follows:

1. To document people's perceptions of *change* in the community in terms of demographic factors, land use pattern, and social organization of the community.
2. To record the kind of infrastructure (social and physical) available to the community, and women in particular, and the implications of these for the resources and opportunities available to women for their survival and health.
3. To understand the nature and kinds of stress that women in slum settlements have to cope with on a day-to-day basis, as well as the mechanisms that they have developed to deal with their environments both at the household level and within the community.

3.7 Methodology

Operationalizing the above objectives necessarily meant documenting details of the lives (past and present) of women, their daily routine, and their relationship with the community, their employers, amongst others. A household level survey

conducted by CEHAT[2] (1998) in the same area provided us with the requisite quantitative data relating to demography, education, occupation, and health of the population. In this study, we therefore concentrated more on qualitative methods, the most important being in-depth interviews with women, interviews with key informants, and non-participant observation.

3.7.1 Selection of Area

As already indicated, we selected a slum (Jari Mari) in the industrial suburb of Kerala, Mumbai, where CEHAT had earlier in 1996 undertaken a study of the expenditure pattern on health with a particular focus on women's health (CEHAT, 1998). Within this slum, we selected two distinct settlements, S.Nagar and A.Nagar. Both the settlements are predominantly non-Hindu; while one is principally Muslim, the other is largely Neo-Buddhist. They also have sharply contrasting cultures. We felt that it would be interesting to find out how macro economic changes have affected women's lives in these distinctly different environs.

3.7.2 Selection of Sample

Our criteria for selecting the sample began with standard variables like age, marital status, employment, and duration of stay in the settlement. The variable age enabled us to capture the experiences of women at different stages in the city's growth. We decided to interview young (14-35 years), middle-aged (36-50 years) and aged (50 years and above) women. Employment status was considered so that we could explore the workspaces of women both inside and outside the home, as well as examine the importance of individual income in determining women's status and autonomy. Marital status determines women's position in the household, as well as her access to the social network. We thus recorded experiences of single (deserted/ widows) women and married women. We consciously decided

[2] *CEHAT conducted a household level survey on health in this area in 1996. It covered 430 households, of which 252 households were slum households located in two settlements.*

to select one-third of the sample from each of the religious communities—Hindu, Muslim, and Baudh—so that we could separate the effects of culture from other social and economic factors. We decided to select two women in each category having the same profile, which amounted to 16 women in the middle-aged and young category, and 8 women in the aged.

3.7.3 Data Collection

The first step was to initiate contact with as many women as possible in the two communities. Of the two settlements researched S.Nagar was part of the earlier study conducted by CEHAT (1998), so we renewed contact with the women through a meeting and explained our project to them. In A.Nagar too we had a meeting with the women to introduce our project. In S.Nagar women wanted to know what we could do for them. Their expectation was valid because it was the second time that CEHAT was approaching them. It was very natural that they would expect us to do something for the community. Accepting their request, we agreed to take English classes for the girls who had dropped out of school. That was also a way to build rapport with the community. The class gave us an identity, and it was easier to approach the women. Not surprisingly, the class gained a momentum of its own; it continues although the fieldwork is over.

We spent about 5-6 months building rapport in the community. After having conducted a general meeting in each of the community, we spoke to women in each of the *gallis*.[3] We contacted more than a hundred women and collected basic information about each of them. The profile of each woman was drawn up before a matrix comprising of women selected for in-depth interviews could be constructed.

We met each woman at least twice before conducting the interview. The interactions were important to develop an element of comfort with them. This has helped immensely because women have shared their views without inhibition.

We developed an interview guide to elicit information. It helped us to seek information from all women on certain

[3] *Refer glossary*

common aspects of their lives. The guide enabled us to have a similar focus in each of the interviews. The common areas that we explored were the changes in employment in the family till date, before and after they came to Mumbai, changes in terms of infrastructure and development of the community, local level political activity, and personal details such as the reproductive history of the women, their current health problems, and their health care utilisation pattern. The aim here was to record changes, if any, in the kind of health care sought, and they were encouraged to narrate experiences with the health system in both the past and present. Other areas that we explored were the autonomy and mobility of the women, and access to basic services like market, education, PDS, etc.

3.7.4 Problems Encountered

- During our initial phase of fieldwork we realised that it was difficult to find aged women. According to the information gathered in the CEHAT (1998) study, the proportion of women aged 50 and above was 6% of the total female population. During fieldwork, we found it difficult to locate women in each category in the matrix. Therefore, we decided to reduce the number of people in the aged category. Most of the aged women were widows, so we did not consider marital status as a variable for selecting women in this age group. Consequently, eight women in this age group were selected, instead of 16.
- We found it difficult to find single unemployed women in the young and middle-aged group. While in the young age group, we encountered single unmarried girls who were not employed, in the middle-aged group it was very difficult to find single women who were not engaged in paid work. Even more difficult was to find a woman who was single, unemployed, and a new resident in the community. We realised that the possibility of a single woman (widow/ deserted) being unemployed and residing in a new locality does not exist. Singlehood brings with it a whole gamut of problems for a woman; the immediate one is financial, so she is forced to seek whatever employment she can get. It is essential for her family's survival. A single woman also needs a support network at her place of residence, so we

found very few new-resident single women. The fear of living alone in the absence of a male member in the house makes her very cautious, and hence she prefers to reside in a community that is known to her.

- The work status of women is so ill-defined that when asked, "Do you work?" women would say "No". On revisiting her, after two weeks or so, when we would find that she was engaged in some home-based work, then she would say that she did it occasionally. A contrasting problem was that a woman who was working in a particular unit would be untraceable after a month, as she would have changed her job. We also faced a situation where the whole unit was closed down and all the workers had become unemployed, or there was no way to find out where they were presently working. The implication of this was to start afresh and find new women.
- We intended collection of secondary information relating to the city and the ward. In spite of repeated visits to the respective offices we failed to procure information on most of the indicators that we had planned to. We have obtained information on causes of death and certain aspects for the ward and the city. A substantial amount of time was spent in going to these offices for information. It was a frustrating experience.

3.8 Ethical Issues

- It was difficult for the women working in the industrial sector, and particularly casual workers, to give us time. Two of the women in the industrial sector agreed to speak to us during the lunchtime, which meant that they had to eat their lunch early and give us time. One of them offered to come early one day to speak to us, which meant that she had to finish her housework before that and come to the unit. We went at 7.00 in the morning to a woman who was working as a construction worker because she left at 8.00 a.m. and came home any time after 8.00 p.m. The kind of adjustment that we expected them to make for the interview raised the question of justifying the sacrifices that they had to make in view of the fact there were no immediate gains to these individual women.

- On the one hand, public officials 'entrusted' with public information evaded our requests and often refused to divulge such information; on the other hand, while giving interviews, women trusted us with information which was very personal, merely on the faith that we would use it judiciously. They were also making adjustments in their work schedule to find time for us.
- The fact that we were simultaneously researching and intervening in the same community created certain dilemmas. It is difficult to ascertain whether our understanding of the situation has resulted from the research inquiry, or our casual interactions with the women and girls of the community. While it is certain that women were not conscious of being subjects of a research inquiry, the researchers themselves could hardly maintain the distinction between research and intervention. The insights into the living environment of women in both the settlements have evolved through our observations and interactions with the women and the girls. They are not necessarily and exclusively derived from the interviews with women of the sample. Although intervention eliminated the artificiality of the research situation, it also raised an ethical issue inherent in the method of observation. Was it justified to utilise information, which was generated from interaction outside the purview of the structured research environment, for the purpose of research ?

Matrix Incorporating Criteria Used for Sample Selection

Age	Marital Status	Work Status	Duration of stay	Hindu	Muslim	Baudh/Christian
Young	Married	Employed	Old residence	Mala	Farheen	Rama
			New Residence	Sukanya	Nuzrat	
		Not Employed	Old residence	Shakuntala		Leena
			New Residence	Sarika	Shahnaz	
	Single	Employed	Old residence	Rani	Pheeroza	Lata
			New Residence		Shabana, Reshma	
		Not Employed	Old residence		Afreen	Charu
			New Residence		Reena	
Middle Aged	Married	Employed	Old residence	Kamlabai		
			New Residence		Rehana	Manda
		Not Employed	Old residence		Shakila	Vimla
	Single	Employed	New Residence	Rupa, Suwarna		
			Old Residence	Veena	Razia	Rekha
		Not Employed	New Residence		Rabiya,Amina	Gangubai
			Old Residence		Sultana	
			New Residence			
Aged		Employed	Old Residence		Fatima Begum	Amma
		Not Employed	New Residence			
			Old Residence		Nani, Khala	Rangubai, Maushi
			New Residence			

(The names of the participants have been changed)

C CHANGES IN LIVING ENVIRONMENT

The living environment is a concept that encompasses all the elements, material and social, in the surrounding in which women live. Women interact with the living environment in different roles—as homemakers, as workers, and as community members. They access services and goods for the survival of the household, and are also instrumental in generating community resources through their individual and collective actions. Women are active consumers of marketed goods and services, and of state-run social sector programmes. Thus, as we consider the effect of inflation, privatisation of social sector services, etc., on women, it is also necessary to examine women's involvement in local political and voluntary activities as a means to influence the living environment. This chapter, therefore, aims to describe the dynamic surroundings in which women live and work as active players. It also describes women's strategies to cope with environmental pollution and degradation, and needs such as child care which impinges considerably on their working lives.

3.9 Study Area : A Profile

3.9.1 Physical Environment

S.Nagar is situated in a low-lying area, and A.Nagar is on a hill slope. Historically, *Jari Mari* has been a mixed locality having intensive industrial activity as well as a high concentration of settlements. Due to the high level of industrial and commercial activity, the residents of this place are exposed to serious environmental pollution. The major sources of pollution are the surrounding small and large industries in the neighbourhood and heavy vehicular traffic. In addition to this, poorly maintained water supply and sewerage systems, open drains, inadequate toilets, and the *Mithi r*iver, where the industrial effluents are routinely dumped, aggravate the problem.

There are a number of Urdu medium primary schools, one Kannada primary school and a few Marathi and Hindi primary schools in the vicinity, but Hindi/Urdu secondary schools are at a distance that require a half to an hours journey by bus

from the community. In fact, there is no Municipal secondary school in the entire Kurla ward. There are two private secondary schools located in the area of our study. This has particularly affected the education of girls. Most of them have dropped out after the 7th standard because the family cannot afford the expenses on transport. Another factor for the discontinuation of education for Muslim girls is the community pressure to restrict the mobility of young girls. In the Mumbai study (CEHAT,1998), we found that while 32.5% of the Hindu girls in the slum households between 15 and 19 years were attending school/college, 22.2% of the Muslim girls in the same group were in school. On the other hand, 40% of the boys in both communities, between 15 and 19 years, were in school.

Nusrat is a young girl who has dropped out of school after the 7th standard. She is an intelligent and hard working student. She was a keen learner in our classes. She had to discontinue her school after puberty as she 'looks' big. She belongs to a family, which is relatively progressive and financially sound, but she cannot continue schooling because of community pressure. Shakila her mother said, "I had to discontinue her schooling because she looks older than her age and it is dangerous to send her out of the community. People say all kinds of things and tell me to get her married off. The daughter elder to Nasreen is going to college but she does not look as old as her, so it is okay."

Fatima Begum's family is relatively poor. The expenses of running a household of nine members, with an additional expense on the treatment of her husband's cancer, were so high that her granddaughter's schooling was the last priority. Although she is intelligent and eager to continue her studies, she cannot do so.

In S.Nagar, the gap even between what is possible and what is permissible is itself very evident. Thus, girls find that going to school is for them a very contentious issue.

Afreen who is thirteen years old, wants to become a pilot and her determination to complete her education is so high that she is willing to work and pay for her education if her father refuses to support her.

Although only a child, she reflects the paradoxical situation that young women find themselves in. Afreen appears to have grasped the wide chasm between the possible and the permissible. She acknowledges she will, at least, want to finish

her matriculation even if she cannot fulfil her dream. The constant shifting between uninhibited aspiration shaped, no doubt, by images of the 'new woman' in the media and the more 'mundane' struggle to overcome the more immediate threat of not being allowed to go to school at all, is evident in her narrative. Although this is the general trend, there are specific differences in the two communities that we have studied.

3.9.2 The Oral History of the Area

S. Nagar

The land on which S.Nagar has developed, belonged to a Kannadiga *seth*. He was closely connected with the Congress Party, and "gave it (the land) to the poor and needy". The land was covered with thick grass, and was marshy. The earliest residents were the landlord's own retainers, who settled on the land and grazed his cattle and horses. The residents had to fill the marshy land every day till it became liveable. Gradually, the settlement grew as more and more residents, not connected with the *seth*, also settled down there. Individual residents later marked off plots, constructed makeshift structures of tin and matting, and then sold them. The process of reclamation and house construction still continues on the margins of the settlement, which is inching closer to the airport wall.

The residents here are predominately Muslim here, with some Hindus, Baudhs, and Christians. Interestingly, however, we did not hear any mention of slumlords in S. Nagar.

The access to S.Nagar is by a road, which though *pucca*, is always in a state of disrepair. Flanked by shops, industrial units, and butcher shops among other establishments, this road is constantly being dug up or damaged. Even at the best of times, it is covered with garbage and industrial waste, and occupied by hawkers. Nearly all the houses are one-room tenements, ill lit and ill ventilated, without a singe window. The cooking is done on kerosene stoves on the floor.

There is a distinct pattern in which S. Nagar has grown over the last two decades. It is highly congested. The older residents live in relatively 'better' physical environment in *pucca* houses and cemented lanes. They are located around a society hall (which is a multi-purpose community hall, and which

houses the office of a local organisation). There is a sense of stability in this part of the community. Residents here have built *mala*s (mezzanine construction) too, thus having more living space.

The new residents, on the other hand, live on degraded land, where the lanes have not been cemented. The new houses have come up in parallel rows. The last row is only about 30 feet from the airport wall. The area between the houses and the wall is used to throw garbage and for defecation. It is waterlogged all through the year. The drains have a tendency to clog continuously, and the dampness abets the growth of flies.

When we were sitting in Veena's house, her mother was eating food. After she finished, there were flies all over the place, although she had not dropped anything on the floor. Veena had to clean the floor with an insecticide. She keeps a bottle of it at home. She does this a number of times in a day to keep the flies away.

While the community has become more densely populated in the last decade, the development of basic facilities has not kept pace with the growing population. The water facility has improved in the sense that there are a number of municipal taps and private taps in the community, and women don't have to travel as far to fetch water, as they formally did. Nevertheless, they still have to stand in queues to fill water. The per capita availability of water is very low because most residents have to use common taps. The locality has limited access to electricity; most of the connections are illegal and precariously installed.

The narrowness of the lanes affects garbage disposal as the municipal vans find it difficult to enter S. Nagar. The absence of efficient garbage disposal and the lack of toilets have led to severe degradation of the area. As a result of this, the price of land/hut in this area is relatively low. This is also why the poorest families, who need a home, choose to settle here. During the rainy season, the area gets flooded, and the water levels in the houses rise up to six feet. Those who can afford it have built a *mala*, which they use during this time. The havoc brought about by the monsoons is indescribable. Year after year, repeated flooding badly damage the houses. The residents lose all their belongings and are forced to vacate their rooms till the water recedes, which normally takes about two days. In this crisis, the society plays an active role; it houses the affected in the hall and gives them food.

A. Nagar

A. Nagar has developed on land which was owned by a *seth*, who hailed from U.P. The first residents bought land from him. Gangsters living in the area extorted money before they allowed people to build houses here. The earth on the hill was loose and there was grass all around. There were no steps to climb up. The population of A.Nagar is largely made up of Baudh, and there are some Hindus, and a few Christians and Muslims as well. The hill has always been used as a hideout for gangsters. Thus, they have been quite a menace for the residents all these years. They terrorise the residents and extort money, especially when houses are being built or repaired. Many of the residents in A.Nagar are old residents of the city who earlier lived in other localities; only a few are recent rural migrants.

A.Nagar has no distinct physical boundaries. It starts from midway up a hill to the top and adjoins the Kajupada pipeline. Houses have been built at each level of the hill: those at the foot— when approached from the Kajupada pipeline road— belong largely to Hindus, and those on the top, belong mostly to Dalits, and which constitutes A. Nagar.

We could recognise two distinct segments in A.Nagar. The lower level has a large open square plot surrounded by houses of older Baudh residents. The houses in this part are large, with the kitchen space demarcated by a wall or curtain. They are *pucca* houses and the lanes are cemented. The rooms are airy and well lit. The open plot has been marked for the construction of a Baudh Vihar. The households here are well settled, with at least one worker in most families having a steady source of income, even if it is low. The access to these parts was difficult till 1991 when there were no steps here. Now, broad steps have been built.

In the other segment, which is higher up on the hill, the households are visibly poorer as compared to those at the bottom. The houses are made of *patra (tin sheets)*, the access is by small steps hewn in the rock-face, with no support on either side. As there are no embankment walls, a slip means disaster. There have been many accidents in this area. Because this part has poorer access to basic amenities, as also the physical danger of living on the hill, the houses here are even cheaper.

Rama bought her house, which is at the edge of the hill facing a deep precipice, for about Rs 3,000. Around the same time, Rupa

bought a similar-sized house for Rs 60,000. The cost differed so much because the house was situated in a safer place around the large open plot.

All segments have poor access to basic facilities. There is not a single municipal tap on the hill. Up to the early 1990s, the residents had to walk about 2-3 km to fetch water. Even today, the residents have to climb down the hill to fetch water. This necessarily means long queues early in the morning. Women get up at unearthly hours to fill water and still run into long queues.

Lata used to get up at 2 in the morning and stand in the queue. She remembers doing it all her childhood. She could not concentrate in school the next day because of lack of sleep. She feels that she failed in the tenth standard because of this. Rama, Kamlabai and others get up at 5a.m. to fill water.

There are four private taps that some residents have managed to get by forming groups and paying for it. Even in a group of eight, the cost per member is as high as Rs 3,000. The others have to pay a monthly rent if they want to access these taps. These taps are opened at fixed hours only. There is only one public toilet at the bottom of the hill. There is pressure on that too. The toilet being located at a distance, children defecate in the open drains, thus giving rise to occasional fights among women who are struggling hard to keep the environment clean.

Although electricity has reached the houses, there is not a single street light. The place is completely dark at night and the topography makes it rather dangerous to ascend the steps. In the monsoon, there is the danger of soil erosion, which causes entire houses to sink. Apart from erosion, the houses are exposed to strong winds and heavy rain during the monsoon. The houses of seven women (interviewed in our study) are situated on precipices. They have to be on guard always for fear of accidents. They have to escort their children to school.

Leena has three young children who go to school. She drops them at school and also picks them up. She is afraid they might meet with an accident because of the precipice. Her husband is a construction worker, and there is a need for her to work to supplement his income, but she cannot, because she has to be around for her children's safety.

The primary schools are at the foot of the hill. The secondary schools are at a distance that require about a half to an hours travelling by bus. The young girls usually study up to the 7th standard, and then discontinue because the households cannot bear the expenses incurred on travel. The common complaint regarding the Public Distribution System is that kerosene is not available.

In both the areas, the physical environment poses restrictions in distinct ways on women's mobility. This reduces their public space considerably.

3.10 Men's Employment

S. Nagar

The men in S.Nagar are mostly skilled workers. They have industrial and craft skills, such as tailoring, bakery and leatherwork. Many of the older men had jobs in companies nearby, which closed down, and are now working either as casual workers or are self-employed.

Aunty's husband was working in a mill nearby which closed down after the textile mill strike. He has bought his own rickshaw, and has been earning a living through that. They had a hand-to-mouth existence till their elder daughter started contributing to the family income.

Fatima Begum's father was working in a mill. It was a steady job. He also called his parents to Mumbai. Later, following a strike, he lost his job and could not find a permanent one. This had a disastrous impact on the family. They also incurred debt when Fatima's grandfather had to be treated for cancer. Fatima's grandmotherstarted taking tuition at home and a few years back her father managed to go to the Gulf. But this year he has not been able to get a permit. Needless to say that in the absence of a steady income and with a large family to support, she (Fatima) had to drop out of school after the 7th standard, and this year she had to drop out of the tailoring class too. She, at the age of 14, has started giving tuitions at home.

The middle-aged and the young, enter the workforce as temporary/casual workers or are self-employed, like driving own taxis/rickshaw/trucks. In the absence of employment in the

industrial sector, the male workers need to adopt alternative strategies. Remarkably, among all the Muslim households in S.Nagar, we could not find a single person employed in the municipality or the state government.

There is a growing trend of men going abroad to the Gulf in search of work. The work that they engage in there is based on their skills here; hence similar to the work that they do jobs like carpentry, masonry, baking, leatherworking, tailoring, plumbing, etc. The expenses of migrating to the Gulf are considerable. The household must spend on visa/passport fee, guarantees, and commission. The social character of the community makes it possible for individuals to borrow money from each other to go to the Gulf.

Farheen borrowed Rs 10,000 from her sister-in-law but was unable to go for 16 months. The loan, therefore, shot up to Rs 16,000. The money that she sent was first utilised to pay the loan.

The main problems experienced by workers in the Gulf countries are that they are not paid for months together, have to work for long hours, and are not provided with any occupational health-safety means. Apart from that, many workers who overstayed there were arrested and spent a few months in jail. The workers are entirely at the mercy of the employer, and their only link with India is the agent, through whom they have been recruited.

Farheen's husband was working as a mason in the Gulf. One day, while at work, he met with an accident and fractured his leg. He was sent back immediately. Neither his medical expenses were reimbursed nor his ticket back to India was paid for.

A. Nagar

Almost all the men in the *poorer* segment of *A.Nagar* are unskilled casual labourers. They go from place to place looking for work on a daily basis. This group of households has traditionally been the home of casual workers. The decline in construction activity in the vicinity has had an effect on their employment. The general decline in the industrial and commercial activity in the area has resulted in less construction and repair work. Due to this, the availability of work for daily-wage earners has reduced drastically, and this has had a

negative effect on their employment. Thus, the hardship imposed on these households is tremendous. Construction activity being seasonal, in any case, does not provide work throughout the year. The availability of work, even in the peak seasons, is not guaranteed. This is because the wages are determined purely by supply and demand and fluctuate almost every day; in fact, the wages have not seen a substantial rise. These workers are completely unorganised and unprotected.

In the not-so-poor other segment, the impact of change in employment is very visible. The male workers, who were working as permanent or temporary workers in larger industrial units, have been retrenched. There are many cases of men shifting from permanent work to temporary work because the company closed down after a strike. There are cases of men who have taken to heavy drinking because of this.

Rupa's husband had a permanent job in a company, which has been plagued by 'union' problems. He is being paid half his salary now. He has taken to drinking and does not give all the money at home. Rupa has since taken up home-based work.

The families in this segment are almost totally dependent on salaries and wages. Because women here are also employed in large numbers, we found the existence of a formal credit system. In addition to the 'fund', the residents also take credit from grocers and other shops and moneylenders. In general, we found that the rate of interest, whatever the source of the loan, was 10% a month.

3.11 Social Fabric and Community Life

A. Nagar

In spite of the degraded living conditions, the influx of new residents continues. The primary reason being that the land here is cheap. In addition to this, the fact that it is an old locality with an active welfare society that looks into the needs of the people and supports them in times of crisis, draws Muslim families from the neighbouring areas. Last but not the least, this community did not witness any violence during the communal riots of 1992-93. Although, Kurla, in general, was severely affected, this area managed to keep the peace. According to the women and key informants, during the riots,

the community leaders prevented 'outsiders' from entering the area and fomenting trouble. The few non-Muslim households also remember vividly the support received from their neighbours, and the measures taken to protect them.

The 1992-93 riots were a bitter experience for the residents of Mumbai. It has resulted in considerable resentment between the Hindus and the Muslims and deepened the divide between them. . Following the riots, a process of ghettoisation has been observed in all parts of the city. This is seen in the marked polarisation of the religious communities, and a tendency to concentrate dwellings along religious lines.

"One of the most significant long-term impact of evictions has been the overnight uprooting and dispossession of people from homes in which they have lived in peace and harmony for 20-30 years to seek shelter in places where they feel more safe and secure. Uprootment has been taking place mainly in the localities that lie in between predominantly Hindu-Muslim localities (boundary areas) with families preferring to move inwards into the community where they feel less vulnerable. After the 1992-93 riots isolated families even in the interiors (of areas in which their religious community population was not in the majority) moved to settle in areas in which families of their particularly religion were the majority.

"Many people are unable to return to their homes even now not just for imaginary fear. When they returned to get the panchnamas made, or just to survey their lost homes, they found their neighbours uncommunicative. In some cases, walls had been erected and boards put up saying, "Minoririte not wanted." All of them want to sell their rooms and "live with members of their community if possible," even if it means, as Shahabuddin of Pratiksha Nagar said, "Living in third class surroundings compared with my A-class area." Shahabuddin is not alone in his sentiments. There has been distress sale of properties on both sides, i.e., Muslims selling off properties in the Hindu area and vice versa. Thus, in a way, communal divide is complete." (Asgar Ali Engineer, 1993)

S. Nagar

Similarly, in S.Nagar too, some Hindu families left the locality while there was a massive influx of Muslim families. The fact that this locality was 'safe' was an important factor for Muslim

families choosing to settle here after 1993. This is not to claim that no Hindu/Baudh families have settled here since. They are considerably fewer in number, and they tend to view this locality as not 'theirs'. However, all the women were emphatic in their view that this locality was 'safe'. We also found that the dominant note in all the women's narratives was that the neighbours were 'good' people to live with.

Social relationships in S.Nagar are marked not so much by communal tensions but by class-related tensions. There is a marked class difference in the older and newer settlers in S.Nagar. The newer residents are usually casual labourers, with practically no assets. Their houses are rundown and rickety. The women, whether married or single, are employed because their household cannot survive without their meagre financial support. Thus, though the majority of the households are Muslim, and, in fact, in many cases, have relatives living in the older settlement, the residents of the 'khadi' (which is the way the marshy land is referred to by the residents) are viewed as socially inferior.

3.12 Social and Political Leadership

S. Nagar

In S.Nagar the existence of extended families contributes to the development of a strong community support network. The focal point of this network is the Muslim Society Hall. The Society is engaged in welfare activities like helping the poor and the needy by providing a place to live, collecting donation for funerals, and any other help required by the residents.

When Rabiya came to S.Nagar she had three young children, and was alone as her husband had deserted her. Her daughter was ill, and she died before Rabiya could go to the doctor. The society paid for her daughter's funeral, and provided her with a room in the marshy land. As her shelter is taken care of, she manages the household expenses working as a construction worker.

Apart from this, the Society is also the cultural and religious centre providing instruction in the Koran, organising religious discourses, and arranging *Id* and *Moharram* celebrations. The Society Hall is also the centre of political activity of the area.

The committee in charge of the Hall represents the local leadership. It has control over the only substantial public space in the community, and hence, has considerable influence in the area. Public space is an important feature of politics in both settlements studied by us. Control of that space automatically leads to control over all the social activities taking place in that area. All meetings are held there, all ongoing programmes have to be conducted in the Hall (there being no other well-constructed/enclosed place), and the patronage of the committee members is required for all such programmes. All the welfare activities such as funerals, marriages, and refuge during flooding are organised in the Hall.

The character of the Society also determines the nature of its activities, which tend to be cultural or religious. The politics of the area centres on identity, and the preservation of culture, thus the emphasis on religious functions, education, and festival celebrations. This is not to say that no secular activities take place in the Hall. The Hall is also used for coaching classes for school-going children and dropouts. However, these activities are not central to the existence of the Society. The leadership of the committee, at present, is in the hands of very young men. This is part of the move to groom the 'boys' in leadership. These youth, unemployed and inexperienced as they are, do not command great respect in the community. However, due to the high degree of cohesion within the community, they are accepted as leaders, albeit under training. The lack of experience of this leadership and their isolation from mainstream political activity is evident in the numerous failed attempts to bring public amenities to the slum. This was also the dominant view in the women's narratives.

The Society largely plays a welfare role. It mobilises community resources to assist those who are most in need. The community helps the residents of the 'khadi' every year by giving shelter, food, etc. However, there has been no concrete action taken by the people to demand for the improvement of this area. The Society has not stepped beyond its traditional role of charity, unlike other community-based organisations, which act as pressure groups demanding resources and attention from local representatives, namely, the local municipal corporator or M.L.A.

The character of politics in this area, quite predictably, leaves little room for women. Unlike men, women are hardly seen in and around the Society Hall. Not a single function is organised by the women, or for the women in the Hall. As the Koran is kept in the Hall, menstruating women are not allowed inside. While this may seem like a minor hurdle, it clearly indicates that this space does not belong to the women. Concern about improving the living conditions and providing public amenities, does not figure very prominently in the political strategy of the community. This further reduces the public space for women. The traditional framework, within which the Society functions, clearly circumscribes the role of women. Thus, while women are vocal in the criticism of the Society's functioning—clearly pointing out its failure to improve the infrastructure of the area—it is very difficult for them to create space for themselves within the Society. In order to participate more equally, women may require to develop a parallel structure, which, at present, is unthinkable.

However, the commitment with which the traditional male leadership and the Society has served the community during the individual crises of a family and the protection that it provides them from the threats of outside world. Are women more oppressed by the traditional structures that limit their physical mobility, their employment opportunities, and their participation in public life? Or, is it a reasonable price to pay for the security that they are offered against an increasingly communalised political environment, that, in any case, offers no progressive secular alternative?

A. Nagar

The politics in A.Nagar, as in many other Dalit settlements in Maharashtra, revolves around the Republican Party of India (RPI). The banner of the party is prominently displayed above the steps leading to A.Nagar. Public functions are organised in the settlement, mostly at the behest of the local party leadership. The role of the local party workers, both male and female, in providing community leadership is substantial. Due to the prominent role played by the RPI in state politics as the representative of Dalit interests and as a constituent of the coalition with the Congress (I), the level of awareness in the community about political issues at the national and state level is considerable. The community also gets involved in the

mobilisation for demonstrations and meetings organised by the RPI. Hence, the women, along with the men, also get acquainted with the culture of mass politics. Almost all Dalit women interviewed by us had, at least, at some point, taken part in some demonstration or strike. We witnessed one such demonstration. It was organised outside the L ward office by the local wing of the party to demand water and roads for settlements located on the hills. The women participated in the demonstration in large numbers. Quite characteristically, the group wove its way through the slum areas of Jari Mari and the neighbouring Bail Bazar and Kamani, drawing more and more demonstrators from the settlements.

The mobilisation for such events, of course, is based as much on community pressure and neighbourhood dynamics as on ideological belief and commitment. However, the fact that so many women chose to take a day off from work—and lose wages—in order to participate in the demonstration, showed how well integrated the political process was in their lives. Although most of them are not in any position to make decisions about party strategy, or even community politics, they are able to articulate views about local leadership, which are often quite incisive and critical. However, the lack of cohesion within the party also reflects itself in the politics of the community. There were at least two aborted attempts to construct the Baudh Vihar in the centre of the first segment described by us. As the square plot is levelled and paved with tiles, it is clear that the foundation has been laid many years ago. However, following that, some construction was started which was halted due to arguments among the residents of the community, and the material used for construction (mainly bricks) was also stolen. A similar problem arose when water pipes were laid, and the community members had disagreements about how it should be done.

3.13 Impact of Environment on Women's Health and how Women Cope With Such an Environment

The environment is a major factor in the cause for ill health. The CEHAT (1998) study found overall morbidity among the slums to be 10% higher than among the total population. This is true for all types of illnesses. Living in a congested and unhygienic environment severely affects the health of the residents. They come in contact with toxins in the air, water, and soil, because of lack of sanitation and open drains. This affects the whole population, but women are affected more because of their role and tasks. The unavailability of water hampers housework. The open drains are also often clogged with solid waste, which the women have to clean themselves. As the environment immediately outside the house is filled with pollutants, it is very difficult to insulate the house from its effects. Hence, keeping the house and surroundings clean, is a laborious task that they engage in for the whole day.

The impact on general health of women due to the intensification of housework is fatigue and tiredness. This generally gets reflected in aches and pains. Almost all women have reported this. Lower backache is the most common complaint. It is difficult to link this with any particular task that a woman engages in—whether at home or the work place. It is a result of all the 'work' that she does in a day, and does repeatedly everyday.

The living environment, with its degraded land and unsafe surroundings, restricts women's mobility and their access to public spaces. Whatever little open spaces exist they are taken over by men, or used by children to play. Hence, women are confined all day long to poorly ventilated and dark houses. Apart from the physical effects of this confinement, being cooped up all day long has a psychological impact on them.

S. Nagar

The absence of entrepreneurial activity in S.Nagar most severely affects women's employment. Women, whose husbands migrate to the Gulf, must manage all household problems on their own. Generally, the men remain abroad for two to three

years at a stretch, and then return for a period of three to four months during which they make arrangements for another assignment of two to three years. The women are forced to turn to their natal or marital families for material and social support. The absence of men creates a sense of insecurity—imagined and real. Decisions relating to marriage, health care, children's education. etc., are postponed till the husband, who is absent, can be consulted. The future of young girls is especially viewed with great apprehension, and there is a fear of their being taken advantage of because "there are no men at home."

In S.Nagar, most of the women whom we interviewed had close relatives staying in the same neighbourhood. Hence, the ties between women were based more on kinship than on neighbourliness. Thus, when they help each other by taking on household chores, childcare, etc., during illness or child-bearing, or any such crisis, it is because of family ties and not because of neighbourliness. Their ability to negotiate these relationships itself is limited. They cannot hope for mutuality and reciprocity as the patriarchal hierarchy defines family relations too.

Women also, more or less, accept norms that compel them to avoid venturing into Hindu-dominated localities, especially if they are alone. Work opportunities must be sought in the local area, which actually has very little to offer. That these norms exist is evident to all women, and to all adolescent girls.

When we asked Reena the limit up to which she was allowed to go, she told us that she could go alone up to the Society Hall, and if she had someone with her, she could go a little further. She knew of a mehndi class that was held in a Hindu community, but was not permitted to go there alone.

A. Nagar

On the other hand, in A.Nagar an acquaintance with the strategies of mass politics, helps women articulate their problems and issues. There has been sustained organised action to demand for water supply, and for building the embankment walls. The fact that issues which concern women figure prominently in the political agenda, reflects the greater role that women can play in this situation. Their concerns have legitimacy, and hence, their participation has greater value. It

is not unreasonable to believe that with the rise in employment of women, and the rising dependence on their income for sheer survival, women's needs and demands for civic services is becoming more persuasive. However, in contrast to S. Nagar, here we do not find any organised community work taking place. The presence of individual leaders does not amount to any collective action in the absence of supervision/support from the party leadership.

In contrast to S. Nagar, neighbourly relations in A.Nagar are very strong. We believe that, because women have traditionally worked outside the home in this community, certain social structures have evolved which enable women to reconcile household and paid work. Sharing childcare is done quite naturally among neighbours. It was also very common to find women who had just come back from work going directly to a neighbour's house for tea and snacks. Sharing food and distributing leftovers was a common practice in the community. Much of neighbourly relationships were based on reciprocity and mutual gain. Therefore, women who built these relationships could exercise more control over them. The fact that they need not be guided by family norms, also freed them from the hierarchy associated with family structures. The support offered was more in the form of services, and in providing emotional sustenance.

3.14 Summing Up

The two communities selected by us revealed the contrasting strategies adopted by them to cope with changing living environments. In both communities, a change in the employment pattern had caused widespread disruption of the households. The impact of these changes on women's lives were visible in the greater need for employment to meet the rising cost of living, and to cope with income fluctuations of the main earner. However, the actual choice of work was limited due to their household responsibilities, and the nature of the living environment. The women had adopted different roles in order to adjust with the new family structures emerging due to the migration of male members. The social state, between singlehood and cohabitation, forced women to make decisions not hitherto within their purview. However, their authority to

make such decisions was not absolute, and these decisions had to be constantly referred to the husband living abroad for approval. The nature of community relationships in both localities offered women different kinds of space for participation and imposed different kinds of constraints. In one community, the presence of strong kinship ties, and formal community organisations made it possible for destitute and poor women to receive substantial social and material support, as well as physical security. In the other, the presence of strong neighbourly relationships between individual women enabled them to reconcile the responsibilities of household work and the work they were paid for.

However, the overriding reality of living in Jari Mari was clear. Households could hardly access any public amenities in the form of water, sanitation, and electricity. The increasing congestion and industrial pollution compelled women to work harder to keep their immediate environs clean and safe. The access to space—which is so vital—to defecate, to dispose waste, to get out of the house and be together was extremely limited. This compelled women to spend more and more time inside the house, the environment of which was also not very healthy. Given that the houses were small, damp, and poorly ventilated, the effect on women's health was deleterious.

In contrast, the modern political system had created opportunities for women to participate as citizens in the democratic process. There was some space to articulate local concerns and livelihood issues that were earlier subordinated in the political agenda. The political compulsion to include women in decision-making bodies had provided opportunities to some women to rise to positions of leadership. It is was possible that the long-term effect of their presence in local politics would foreground issues of concern to women, among them the problems related to environment and health.

D NATURE OF WOMEN'S WORK

The women in our study were employed in different settings. However, with one exception, they were all workers in the informal sector. It was also important to note that none of the women in our study were engaged in 'traditional crafts', but were largely using industrial skills like packaging, assorting, cleaning, sorting and cutting. In order to understand the link between women's work and their health, it was important to understand the type of employment that was available to women, and the household circumstances that compelled them to seek paid work.

3.15 Description of Work

3.15.1 Industrial Work

Industrial work includes packaging, assorting, cleaning, sorting, cutting threads. Each unit that one encounters in our study does only one kind of job, which does not require skilled workers. The units are large in number (each employing more than ten workers), and there is competition among the unit to get contracts from big companies. The work availability is irregular; there are days of 'no work' when the unit fails to get a new contract. The wages being on a daily basis, the women have no earnings on such days.

The units where industrial work is done provide no protection to the workers in terms of employment benefits or occupational safety. The job is for 9-10 hours everyday, with a lunch break for half an hour. In a week, the unit remains closed for a day but this closure is not a paid holiday. The units have no separate resting or eating place for women. Workers have to use the common toilet in the area; this facility is not provided for within the unit.

Kamlabai, who works in the garment unit, told us that there was work for only 15 days a month. There were days when there was no work, and days when there was an overload, which implied that they had to do overtime. In the toothbrush packaging unit women didn't know at what time they would be able to go home. We wanted to interview a woman from this unit after the

working hours, but she could not tell on any particular day at what time she would be able to leave the unit.

The work in the industrial units require women to sit on the floor, or stand and work all day. They can move around so that they do break the monotony of sitting in one place. There is also the danger of injury because they work on old machines.

Lata's job requires her to fill tubes. Although it is done by the machine she has to be very alert, sit in one position, and see to it that the tubes are put at the nozzle on the right time. Sometimes she has to work continuously for 2-3 hours. They work in dark galas *which are large in area, but the ventilation and lighting are poor. The machinery with which they work is known to cause accidents.*

Rani lost two of her fingers while working on a machine in one of the units. She is working in the toothbrush-packaging unit, where she has to put the brushes in plastic sheets and press them through a machine. This machine is known to cause accident. She was not compensated for it. Veena has also injured her finger while working in a capsule unit.

In spite of this, most women chose to work in these units because getting away from home allowed them to concentrate better on their work. They were thus able to earn more as they worked on a piece-rate basis. Only those women who had another adult or adolescent girl to help them at home could take up work in these industrial units. Most women expressed a congenial relationship with their co-workers. The hierarchy in the workplace was not between men and women, as much between the supervisor/employer and the workers.

3.15.2 Home-Based Work

Home-based work in the area that we studied was an extension of the work done in units, except that it was not mechanised. Home-based work was generally found in the finishing and recycling stages of production. The various processes in which women were engaged in were tailoring, sorting white paper from cardboard paper, pulling out rubber from threads used in tyre-manufacturing, attaching rubber tops to medicine droppers, and cutting extra threads from stitched garments. The organisation of home-based production,

sometimes, involves a middleman with whom individual women negotiate. However, it was not uncommon, for manufacturers themselves to let out work to women. Home-based work requires women to visit the *seth* (manufacturer or agent), collect the material, carry it home, work on it, and then again go back to the *seth* to deliver it. The payment for home-based work was on a piece-rate basis and was appallingly low.

Leena earns Rs 7.50 for a whole day's work of cutting threads from stitched shirts. Rama earns about Re 1 per kilo of sorted paper. Aji earns Rs 4.50 for cleaning rubber from one kilo of thread.

We found that women who had no other source of household income could not survive on home-based work, but those who had another source of income still engaged in this work, because however meagre the earnings, they were essential for the household. Generally, adolescent girls, women with young children or other household responsibilities, chose to undertake such work. Their role as 'workers' was not recognised at all, instead, it was seen as an extension of their domestic role. However, the fact that they continued to do such low low-paying jobs was evidence of the fact that even that meagre income was a vital prop to their household expenses.

Women work continuously for 5-8 hours every day after cooking the morning meal. The nature of work requires a lot of patience and has to be done sitting continuously in one position. The absence of adequate lighting forces these women to work during the daytime, which is also the time in which household chores must be done. As a result, they combine their work with their multiple household chores and child care activities, which eliminates any period of rest that they may have otherwise enjoyed.

Home-based work is so poorly paid that to earn any significant amount, all the members of the family, who are usually at home—the aged, small children, and young girls—contribute to this work. *Thus, home-based work involves considerable use of child labour, especially the labour of girls.*

The women have to work in their ill-ventilated and cramped houses. Their home environment is further polluted by the presence of the material that they are working on. Dust from the mounds of paper waste, the fumes from melting rubber, the sharp ends of broken glass, and medicine droppers make the house unhealthy and pose additional dangers. The material

that they bring home also reduces the living space available to the family, and hampers the performance of other activities in the house.

3.15.3 Service Sector

The service sector jobs that women engage in include giving tuitions, running a school, running a shop at home, clerical job in the postal department, and working in a municipal hospital as helper. With the exception of the last two jobs, the rest of them are providing some service to the community that they live in. Self-employed women, especially, have to establish a relationship with the community, which is not professional but personal. This has both advantages and disadvantages. The advantage is that they can depend on the community's patronage to start off their endeavour. There is limited competition so they are able to acquire stability. The disadvantage is that they have to negotiate terms based on social relations, and not on professional relations. To illustrate:

Aunty has been charging Rs 75 for tuition. She feels that she should charge more because the rate in the market is higher. But her own children tell her not to do so considering the economic condition of the families that the students come from. They ask, "Have you forgotten our days? Let them come and study."

Self-employment calls for investment on the part of women. To run a shop, or start a school demands time and finances. More importantly, it requires education and skills. Thus, only a handful of women can opt for this kind of work. The only exception to this is the teaching of the Koran. There are several women in S.Nagar, often illiterate, who teach the Koran to young children. Not only are they in stiff competition with each other, but also with the male teachers (maulvis) who command much more respect. The place of work is the house, so household chores have to be combined with paid work. The time for the tuition is governed by the school timings, and therefore is spread out during the day. The woman who runs a shop begins her day at 6 a.m. and has to work till 10 p.m. Although her husband has night duty, and she is alone with small children, she cannot afford to close the shop earlier because she would lose customers. The one who has worked in a hospital as helper

had to work in shifts. Her job was basically washing and cleaning. It was a strenuous job, which she left once her children grew up, and her financial status stabilised.

3.15.4 Construction Work

One of the job-seeking women is a construction worker. The work is again uncertain and seasonal. The general decline in construction activity in the area has reduced the availability of work. She has to go to the *naka* everyday at 8 a.m. and wait for work.

Rabiya, while describing her work, said that she goes to the naka (the cross-road, which is also a casual labour market) every morning. "We are like vegetables, if someone comes and buys us we go, otherwise, we come back home," she said. She works for 8-10 hours, and is required to go to different sites everyday. Carrying lunch is not convenient, nor can she afford a full lunch outside; she therefore survives on tea and pav the whole day.. She chews tobacco; although she has visited hospitals for chest pain, and has been advised not to eat tobacco, she says she cannot help it.

3.15.5 Domestic Service

The women engaged in domestic work wash clothes, clean utensils, and sweep the floor. The work is an extension of their housework. They perform these tasks in about 3 to 9 houses. The physical strain and stress of doing this quantum of work is tremendous.

The women leave home early, on an empty stomach. They eat in the houses where they work, usually being given leftovers of the previous day. They definitely get tea, but getting some food is not a surety. On the health front they have reported of aches and pains, and anaemia.

These domestic helps said they had a good relationship with their employers. Rather than being a purely working one, it was seen as an extension of the family ties. An old woman, in fact, still visits the family where she had worked as a domestic help.

Rangubai still receives invitation for any function in the family that she worked for. Dadi still goes regularly to the house that she worked for. They still help her out in cash and kind.

Due to the other benefits in this work, these women do not perceive their relationship with their employer as exploitative. The other benefits that they get are often in the form of clothes, books, and food, which fulfil their immediate household needs, and hence these aids are deeply appreciated. The possibility of taking advances and loans from the employer also exists, which is crucial for them in running household expenses. In spite of this, younger women are not inclined towards this work. This is because the money earned does not adequately compensate the amount of physical energy expended.

While there are women doing domestic work in India, the ones who are in the Gulf are engaged in childcare, or in washing and cleaning tasks. The burden of work is considerable because the families are large and the houses are big. In spite of modern equipments being used, the work is tiring, as it starts early in the morning and ends late at night with only a short break of two hours in which they have to do their personal work. They live in isolation, away from home, in a new country. They have no access to a social network and are completely dependent on the employers. Being aliens in that country, the employers mediate access to the market, health care and telephone. As they have no citizenship rights, they are extremely vulnerable to exploitation.

In the Gulf too, domestic workers are the least valued. Therefore, women, who see their daughters following them to the Gulf, would rather have them learn some skills like doing a beautician course, learning the art of applying mehendi, or picking up proficiency in tailoring, before emigrating. Not surprisingly, we find that, presently, none of the daughters of those women who are working or have worked in the Gulf, have gone there for employment.

3.16 Entry Of Women Into The Workforce

In the study area the entry of women into paid employment is determined greatly by the availability and stability of their men's work. Most of the women join the workforce either

because their husbands have lost their jobs, or were alcoholic, or were unable to find a steady source of income. Single women have no option but to seek work, as the responsibility of running the household lies on them alone.

But what is worthwhile to note is that amongst the older women the reasons for joining work were either loss of husband's job or widowhood; for the middle-aged women an additional reason was supplementing the household income in order to make ends meet. However, for most of the young women (8 out of 16) the primary reason for working was the need to supplement the family income as their men were engaged in casual labour.

This is a clear indicator of what mass casualisation of labour has done to households. The absence of regular income and/or social security provisions, coupled with rising prices and the withdrawal of the state from social sectors, has exposed the working class directly and completely to the vagaries of the market, where they exercise very little control over wages and prices.

3.16.1 Factors Influencing Women's Paid Work

While women are joining the workforce in large numbers, the decision to join a particular type of work is based on complex calculations. The nature of the family, its age composition, its health status and living environment—all go into such a calculation before women decide to step out to work or take up 'work' at home.

3.16.1.1 Living Environment

A woman's decision to join the workforce, and the kind of work that she chooses, depends a lot on the boundaries imposed on her by the community as well as the perils of living in a degraded environment. Additionally, in a community like S. Nagar the social mobility of women is extremely restricted. Women cannot avail of better-paid work outside the community boundaries.

Shanaz wants to work and has the time and energy to do so, but is not allowed to go anywhere. Her husband is a mason and works on a temporary basis. There are days when he does not get any contract.

Therefore, in S.Nagar, those women who are working are either single or married, and whose husbands have lost their jobs or are alcoholic. Even home-based work is not very common here because it requires the woman to go to the market and negotiate. A few, who are doing home-based work, don't go to the market themselves—the men do all the negotiations. To add to it, the physical environment is so degraded that it is impossible for the women to work at home. There is a high possibility of the material being soiled or damaged, which substantially reduces the returns from piece-rate work.

The need of the household for survival through women's earning is in conflict with the community's need to maintain its distance and isolation. The community and women's actual strategies are compromises that seek to reconcile both interests. Thus, single women are more readily allowed to step out of the community bounds, than married women and young women for whom the restrictions are strictly applied.

The long-term effects of this kind of social organisation are visible in the lives of the older women of S.Nagar. Forced into employment by widowhood or desertion, they enter into the most unskilled and low-paying jobs available. Having little education, or virtually no experience, they are doubly disadvantaged and sink rapidly to the bottom of the employment ladder. Not surprisingly, the most attractive option is migrating to the Gulf. The work in the Gulf, though well paid, is basically domestic work. Unlike men, for women work in the Gulf is not regarded highly. They take it up as a last resort because of the monetary gains that it offers. Moreover, it is the only acceptable form of domestic work for Muslim women as it is in the premises of co-religionists.

The isolation of the community also prompts it to look for resources and services within. This creates employment opportunities for selected women who are somehow able to rise above the general standard of education and training. We found that Pheeroza, who is barely in her twenties and has only a graduation degree and no financial resources, has started her own school. She also runs her own coaching classes. The

support that she has within the community is evident from the fact that she is allowed to use the madrassa hall (society hall) for her classes free of charge. We also found that the male leaders in the community were willing to act as mediators to find space and resources for her new school.

In A.Nagar the women are usually employed outside their homes. They have to support the family as the men have unstable jobs. Traditionally, scheduled caste women have laboured outside the house. The community here does not impose restrictions on women's mobility in the same way as in S.Nagar. In fact, in the narratives, we find that the community has geared itself to the needs of women who are away at work. What restricts young women's mobility the most is the physical environment. Only in dire conditions we found women with young children going out to work. The households are located on a hill with dangerous precipices, making it risky to leave behind young children alone at home. This, coupled with household work (fetching water at odd hours, cleaning, and washing), limits women's choice of work. The only choice left to them is poorly paid, backbreaking, home-based work.

The young girls here join the workforce at an early age. They work at industrial units, or take up home-based work. Girls may work for a few months in the vacations, while still at school, and then go back to the same place to work full-time after they drop out. Essentially, it is accepted that girls will work outside the house, at least for a few years before they get married. The availability of work close by also prompts girls to start working early. This is because they can be home before dark, and can walk to the workplace at most times.

Therefore, though it appears that in A.Nagar the majority of women have opportunities to engage in paid work, the type of work that they do is exploitative and does not give them any identity.

3.16.1.2 The Domestic Role

This is an important factor that determines the woman's choice of work. The community extends its support to women who may be running the household on their own. But in most cases where the woman's job is an additional income, which in

reality is essential for the household, the community does not 'appreciate' her work and hence does not extend any support to the women for childcare. In fact, she is looked upon with contempt. The responsibility of taking care of the ill and the aged also rests with women, which further constraints their choice of work.

Working outside the home is most common for unmarried and single women, and those whose children are above 5 years. It is rare for women with small children, and less common for those whose grown up children are supporting them. Home-based work is the only choice for women whose children are very young. Only after the children are able to look after themselves, women seek work in industrial units, or in houses as domestic workers.

In general, women are not valued as workers. And therefore, workplaces do not provide facilities that could enable them to reconcile their domestic role with work (e.g. crèches, canteens, etc.). Thus, they are never sure how long they will be able to work outside their homes; they voluntarily seek temporary work, which is advantageous to the employers.

To illustrate *Table 3.4*:

Table 3.4 : Age of Youngest Child of Married Women With Children and the Current Status of Work

The Status of Work	< 5 years	5-10 years	>10 years	Earning children
Home-based	4	2		1
Domestic work		2	3	1
Unit work		1	3	
Casual		2	1	
Service			1	2
Not employed	1	1	3	4
Total	5	8	11	8

Source: Survey Data

Among the young women, out of the 14 currently and ever-employed women, 6 are in the industrial sector, 3 are domestic workers, and 3 are engaged in home-based work, while 2 are working in the service sector. Among the middle-aged women, out of the 13 currently and ever-employed women, 5 are in industrial work, 4 in domestic work, 3 in home-based work,

and 1 in the service sector. Among the 7 currently and ever-employed old women, 4 are doing domestic work, 2 are in the service sector, and 1 is doing home-based work.

We also found that the workplace of most women changed several times. The most common reasons for them to leave work were child-bearing and child care. The workplaces, where the majority of them are employed, does not provide any maternity benefits or welfare, which could prevent them from quitting work.

The cost of bearing a child is borne by women in two ways. One, they lose their income because they have to quit paid work, and the other, they suffer resultant deprivation in the most crucial period of their life. Some women whose husbands earlier had permanent jobs, had access to financial help and to health care services needed during childbearing. But this has totally disappeared in today's work scenario.

Even after delivery, the period of rest has shortened due to the breakdown of the social support structure that existed in the past. The whole concept of resting for a period of at least 40 days following delivery does not exist today. Women resume their paid work in some other form (home-based, part time, domestic work) as soon as they are able to do so. This has serious implication on their health, which is reflected in their perceptions of their morbidity.

One way in which women have tried to balance their household and employment is by constantly shifting from one kind of work to another. Table 3.5 attempts to capture the shifts that have occurred over the past three decades.

Table 3.5 is indicative of the type of work that women engage in, and the concentration, over time, of women workers in certain kinds of work. Industrial work has come up in the 1980s, and home-based work is a phenomenon of the 1990s. Women shift from one unit to another if they cannot physically cope with the work. They have also shifted from an industrial-unit based work to home-based work if they find that the work at the unit is very strenuous. What is alarming is the fact that ill health merely prompts women to change the workplace and exchange one set of occupational health problems for another. They do not have either the option of improving their existing workplace or giving up paid work till they recover.

Table 3.5 : Shifts in the Type of Work Reported by Women in the Past Three Decades

Shifts in type of work	1970s	1980s	1990s
Agricultural labour —Domestic work	3		
Housework —— Domestic work	1	5	2
Housework —— Unit		5	1
Unit —— Service		1	
Service ——Unit			1
Unit ——Unit			1
Unit ——Home-based			3
Domestic —— Casual labour			1
Agricultural labour —— Home-based			1
Housework —— Home-based			6

Source: Survey Data

3.16.1.3 Housework

The burden of household labour is invisible, unpaid, and unrecognised. Women are conditioned at an early age to take on housework. Taking care of younger siblings is most often their first responsibility at home. They soon graduate to cleaning, cooking, fetching water, etc. With declining household incomes, girls' secondary education is the most commonly sacrificed component of expenditure. This has a long-term effect on their future in terms of the skills and opportunities that they can draw on in times of need.

When Afreen is at home she has to take care of her siblings. She goes to school and is doing well in her studies but she cannot find any time for studies at home.

Housework takes about 6 to 10 hours everyday. Fetching water itself is an ordeal. While in the past they had to travel long distances, today they have to stand in long queues, or get up early morning, or be awake late into the night. The living environment is so degraded that keeping the house clean is a task by itself. Working women are further burdened by paid work. Although a large number of them are engaged in such work there is no apparent change in the sharing of housework. Women continue to do it all.

Rabiya's day starts at 6 in the morning; after cooking and cleaning she leaves at 8 and comes back any time between 7 and 9. She then cooks the evening meal and fills water, and by the time she goes to sleep it is around 10 or 11 at night.

The women, whose jobs require them to be away from home the whole day, have to do their housework early in the morning and late at night. Their sleeping time gets reduced.

The women doing domestic work are able to come home in the afternoons to do the cooking and washing. Their day starts with fetching water, cooking and then going to work. They come back in the afternoon to finish the washing, cook the mid-day meal, and again go back to work, only to return in the evening to complete the rest of the tasks.

Rehana has chosen to work in five houses nearby instead of working in areas that pay more so that she is able to come home and check if the children have gone to school, have eaten their meals, etc.

When there is more than one woman in the house the work is shared. But when there is only one woman in the house it solely rests on her to do the tasks, and she is bound by these. In case of single woman, the burden of housework as well as paid work is borne by her alone.

Lata, a young girl of about 22 years, shoulders the responsibilities of the household after her mother's death. In addition, she has to take care of an old grandmother and a handicapped brother. She is working in a company and her day starts at 5 a.m., and is busy the whole day. She also does all the purchases.

Maushi, who is an old woman, has no help for her household chores though there are four men in the house. Her day's routine depends on the timings of these men. Her sons' workplaces are far away from their residence so they leave early in the morning and come back late at night. Her husband is a watchman, so his requirements are different. Her youngest son is a student, and he attends school and coaching classes. Her household chores—cooking, cleaning, fetching water, etc.—have to be timed as per the needs of others. She gets up at 5.30 a.m., washes her face, makes chapattis, cooks a vegetable, and heats water for bathing. She has two stoves now; she bought the other one as she used to have a lot of problem getting things done on time. Her younger son leaves for work at 6.30 a.m. and the eldest one at 7 a.m.

They take their tiffins with them. They don't have breakfast, but only tea. Then she takes her bath and has a cup of tea. She usually doesn't have breakfast—the cup of tea, and sometimes a pav, just sufficing. After that she washes the utensils and clothes. She finishes by 12, and has her lunch. After that she gets to rest in the afternoon—up to 4 p.m. From then onwards the evening routine starts: she washes utensils; fills water in two drums; and cooks dinner, which is ready by 8.30 p.m. Her husband leaves for work at 10 p.m., after having his evening meal. He comes back in the morning at 9 a.m. Her second son comes home at 8.30 p.m., and the eldest one at 10.30 p.m. He does overtime. After each one finishes dinner she has her meal, washes the utensils and goes to sleep. By then it is 1 a.m.

3.17 Work and Women's Health

Although women are increasingly joining the workforce, social norms have not changed at the same pace, and thus, traditional concepts about women's identity are in conflict with real-life situations that woman face. Women alone are expected to not only face the difficult challenge of physically reconciling the needs of domestic work and paid work, but they must also struggle to create a new identity for themselves.

Apart from fatigue due to overwork, women working in the industrial units and doing home-based work expose themselves to specific dangers. The greatest health risk here is injury; which they frequently sustain because of handling glass and metal parts. Those working on machines, which are old and not well maintained, also sustain severe injuries, which have led to loss of fingers. Working in such workspaces does take a toll on their health. The units are housed in ill-ventilated and ill-lit *galas*. Those doing home-based work also work in similar environments. Working in ill-ventilated and dark rooms for 10 hours continuously is strenuous. There is no provision of rest during the day. The type of work requires them to sit/stand and do repetitive tasks the whole day. Working in one position continuously causes physical strain. Domestic workers are forced to work for longer hours in postures that cause chronic aches and pains (bending to wash clothes, swabbing, exposure to detergents and other chemicals).

Shabana, who is engaged in tailoring, has to continuously work on the machine in a dark, ill-lit room. This is causing severe backache, and strains her eyes. Sukanya sits on the floor and engages in the task of packaging. She has to work in this posture the whole day. She too complains of backache because of work.

Nita has been working as a domestic worker since she was a child. Even after her marriage she continued to do this work. She was working in two houses then. She is separated from her husband now, but has been falling ill very often for the last 2 years. She has now stopped working because her anaemia has become acute.

3.18 Summing Up

Changes in the economy of the metropolis have adversely affected the lives of households (and particularly women within their households) in slum settlements. Although more women are joining the workforce, it is far from liberating for them. This is because the employment they get today is exploitative, and burdens them further. There has also been an intensification of work—both paid and unpaid—to cope with rising prices, and low family income. Women enter and exit from the workforce at various points in their lives. The exit from paid work is primarily to accommodate child-bearing and child care, and also because of illness.

The burden of paid work and long hours of housework, adversely affects women's health. They survive by substituting the work hazards of one workplace with another. Consequently, the health effects of 'work' (domestic and non-domestic) are difficult to record separately. Even at the level of perception, women are unable to pinpoint the exact causes of their ill health. The articulation of general tiredness and fatigue are indicative of the tremendous pressure imposed on them by the work that they have to do, and by their living conditions.

E WOMEN'S PERCEPTIONS OF FACTORS IMPINGING ON THEIR HEALTH

The perception of health depends greatly on the social circumstances in which women find themselves. Women's perception of their health is intimately linked to the experience of work in its various aspects. All the women in our study are dependent on the labour of their bodies for survival, whether as house workers, manual workers or as mothers. Women's relationship with their bodies is dynamic. They weave their emotions into their bodily experience, and at the same time, their physical state influences not only their mental, but also their material well being. In the absence of opportunities to rest and to receive health care, they try to reduce the quantum of work or change the nature of work in order to accommodate it within their physical capacity. We find that women who cannot get help for their health problems try to find ways in which they can minimise the disability that it causes, and look for temporary solutions which enables them to endure the illness even while they continue to work.

3.19 The Profile of Health Problems

On reviewing the various health problems reported by women of different ages, we found that the younger women talked more frequently of illness than the older ones Table 3.6. Since we asked them about illnesses at any point in their lives, we found a difference in the way in which the young and the aged talked about health itself. Only 7 of the 40 women interviewed said that they had never suffered any major health problem, nor did they have any at present. Of these, 4 belonged to the young age group, 2 were middle aged, and one was aged.

The young women reported of menstrual problems more frequently. Seven of the 18 young women reported of chronic aches and pains. Backache was also a common problem among this group. Among the middle-aged women, we found that backache persisted as a major problem. Tension or anxiety was also reported by 4 of the 15 women in this group. Among the aged, aches and pain were an overwhelming health burden.

The Mumbai study (CEHAT, 1998) data on morbidity of women of different age groups corroborated the findings on this

Table 3.6 : Chronic Health Problems Reported by Women of Different Age Groups

Reported Health Problems	Number of women reporting the health problem		
	Young	Middle Aged	Old
Total women	18	15	8
Aches and pains	7	6	6
Backache	5	7	6
Anemia / weakness / tiredness	3	1	1
Menstrual problems	7	1	
Sensory problems	1	1	2
Tension	3	4	2
Ulcers		1	
Varicose veins		1	
White discharge	1	2	
Heart ailments			1
Skin eruptions			1
Infertility	1	1	
No problems	2	1	

Source: Survey Data

group of women Table 3.7. We found that the prevalence of reproductive problems was very high for young women (39 episodes per 100 women), while the prevalence of aches, pain, and weakness increased for each successive age group. Reproductive illnesses formed the largest group of problems accounting for 28.2% of all episodes of illnesses. Out of the 167 reproductive episodes reported , 127 were related to menstruation and child-bearing (Reproductive illness includes menstrual problems, uterine prolapse, low backache, and lower abdomen pain). Reproductive health problems of this nature often coexisted with nutritional deficiency problems, which also manifested as weakness.

Reproductive problems, aches, pains and injuries, and weakness formed 51.69% of all illnesses reported by women. Acute problems, such as infections and fevers, were high among the young and middle aged. Among the aged, respiratory problems included both infections as well as other chronic problems (e.g. asthma, breathlessness). Problems related to the sense organs were more frequent among the older women. Likewise, the prevalence of 'other' problems, which include cardio-vascular problems, diabetes, etc., was very high among the aged.

It is useful to understand women's health problems as developing over a lifetime, and as a culmination of the various stress-factors operating in their lives. While some problems could be directly linked to the work that women did or to their experience of child-bearing, no specific cause could be identified for most of the health problems reported by them. Inadequate nutrition, lack of rest and health care, overwork, anxiety, and the process of ageing, all contributed to their ill-health.

Shakuntala is suffering from white discharge. She was advised to remove her uterus by one of the private doctors. But she had decided against it (we asked her to make sure if that surgery was required) and was taking medicines. One of her sons is suffering from cancer and the other two also keep falling ill. The housework, the innumerable visits to Tata Memorial Hospital for treatment of her son, and the running around for donations is quite tiring for her. Her reproductive tract infection has also aggravated. She has come to a stage where she now just wants to remove her uterus. She is fed up!

The physical environment and work affect women's health significantly. The combined effect of increased domestic labour and poor economic prospects forces women to struggle really hard to support their families. Women usually cope with this stress by putting their own needs last. The increasing scarcity of public resources means that more and more women sacrifice / neglect their own health. The rising prices of essential commodities in a situation where wages are a bare minimum reduce the purchasing power of a household.

While we were talking to Aunty, she was in tears as she narrated how she used to cook rice and black urad dal for the family, which *was the cheapest food that she could buy. She had to buy everything on credit. The day her husband would get his salary, he would pay back all the loans on his way home. They could never even buy a biscuit for their children.*

Women buy foodstuff every day, only because that is all that they can afford. The wages earned everyday are used to buy food items for the next day. If it is insufficient, they have to borrow. There is practically no scope for any saving.

Table 3.7 : Morbidity Reported by Women in Slum Households in the Mumbai Study in One-Month Recall Period

Total women	Age group of women							
	14 – 35 years		36 - 50 years		51 and above			
	281 No. of episodes	Episodes Per 100 women	*49* No. of episodes	Episodes Per 100 women	*20* No. of episodes	Episodes Per 100 women
Reproductive Problems	109	39	12	24	3	15
Aches, pains and injuries	20	7	11	22	4	20
Weakness	35	12	6	12	4	20
Fevers	28	10	5	10	1	5
Respiratory Problems	29	10	5	10	3	15
Gastrointestinal Problems	14	5	2	4		0
Problems of eyes, ears, skin (sensory problems)	12	4	6	12	3	15
Others	10	4	1	2	2	10
Total	154	55	26	53	11	55

Source: CEHAT (1998)

3.19.1 The Household

The household, not surprisingly, has a deep influence on women's health. The mere size and composition of the household plays an important part in determining the quantum of their work and responsibility. Those living in households without other women to help them shoulder a very heavy burden of housework. This is true for women of all ages and in all social situations. Thus, we find that 16 yearold Reena, who lives with her father and two younger brothers, and 65-year-old Maushi, who lives with her husband and two grown up sons, both have very similar daily routines. It starts very early in the morning and continues till late at night. The possibility of taking a break is remote, and they have to keep adjusting their schedule according to the needs of their earning male members. The workday is long, and there is no one with whom they can share the work and avail of some rest.

As women most often enter the workforce during a financial crisis, their earnings do not supplement the family income, but is used to sustain the household during its most difficult periods. Thus, women are exposed to multiple stressors at the same time—additional work-burden, disrupted schedule, and curtailment of expenditure on food and other necessities. However, although women hope that this will be a phase after which they can return to a less stressful life, this rarely ever happens. When not employed, women become all the more anxious to find work, and spend their energy looking for work or by engaging in home-based work, which is no less exacting.

Nearly half the women reported that either they themselves or a close female relative (mother, sister, sister in law) of theirs had experienced violence in the home at any given time. As we did not probe for violence the information received on this issue is incomplete. However, it is certain that violence is an important health issue for women in the household. Violence itself is a manifestation of the unequal power structure in any relationship (marital or otherwise). Apart from the injuries and trauma caused by violence, it also distorts the relationship and makes women feel vulnerable and helpless. Not surprisingly, we found that some of the women who had faced violence chose to end their marriage. However, most of them continued to live with their husbands and faced the dangers posed by the relationship. Interestingly, widows mentioned / narrated their experiences of

marital violence more often. This suggests that the subject is too difficult for them to broach while the perpetrator is still present in their lives, even if not physically there at home during the interview.

Besides violence, women also experience domination leading to control over their lives in various ways. The girls are kept busy in the house, not only because their labour is required for the household, but in order to control their sexuality, and even more fundamentally, their curiosity. Moreover, they are forced to do paid-work because the adults in the family abandon the responsibility of looking after them. The interviews brought forth the fact that young girls, not yet physically or emotionally mature, bear the burden of work and suffer from lack of rest. Thus, they also complain of chronic pains and aches related to manual work that one would generally associate only with older women. Even more disturbing is the fact that their disposition is far from childlike, and alarmingly fatalistic.

Reshma does not wish to live. She has already made two suicide attempts. She is being exploited in her natal family and is sure that after marriage she will have more problems. She does not like to 'work', she would love to study or stay at home instead and do the housework. Given no opportunities for that, she feels absolutely frustrated. She just does not like her life at all.

Reena has seen many marriages closely and is sure that her life after marriage too will be miserable. Her own mother was forced to move out of the house, without her children, She also sees her own brothers regularly beat up their wives. Although she herself has chosen the man she wishes to marry, she does not feel confident that after marriage he will not ill-treat her.

Anxiety about the future, about financial problems, and health-related problems was frequently cited by middle-aged women, and sometimes, by older women. This anxiety manifested itself in many ways. Some women told us that they worry, while others reported stomach problems due to anxiety. Anxiety also led to insomnia. In some cases, it caused weakness and dizziness as well. In general, mental stress caused women to reduce their food intake, disturbed their sleep, and created a pervading sense of uneasiness. The women realised that some of their health problems were caused by stress, but were powerless to do anything about it. The general sense of

uncertainty (in the economy, society), no doubt, contributed to their mental stress.

3.19.2 Childbearing

We have chosen to study the issue of childbearing to see the kind of changes that women have experienced in the past 20 years. Childbearing is very common, and hence, it is possible to make some comparison across time and group. Due to the fact that most of the women in our study are/were in Mumbai when they were young, the extended family was not physically present during their pregnancy. They have to make a choice regarding travelling to their (mostly) natal homes or having the delivery here itself in the city. The journey would involve not merely expenditure, but would also require that someone be available to accompany her to the village. Most importantly, a majority of the women do not have any alternate arrangement for looking after their home and family while they are away. For a significant minority, staying and continuing to work till almost the last day of pregnancy, is a matter of survival.

For women opting for a hospitalised delivery, the confinement there before discharge is the only period of complete rest that they get. From the women's narratives, it is very clear that, in the past 20 years this period has shortened from 7-10 days to 1-2 days following a normal delivery.

The period of childbearing for most older women started in their late adolescence and continued till the early thirties. The average number of children borne by younger women is clearly lesser than that borne by older women. However, women of all ages have reported health problems related to pregnancy and childbearing. While some of these are short-term health problems, many chronic problems have been linked to childbearing.

Childbearing is also a tense period because it puts a strain on the household's economy as well as family relationships. As stated earlier, none of the women had any access to social benefits, including maternity benefits through their workplace. Thus, the cost of childbearing had to be borne entirely by the woman's household. Many women reported incurring debts during this period to meet the expenses of not merely health

care, but also the survival needs of the household. For them, the phase of childbearing and rearing of small children not merely meant having to take leave, but losing the job altogether. The most common reason for leaving work was that they had small children to look after.

Many women reported that as soon as the labour pains started, they began to clean up the house, feed the children, cook food, and pack their own clothes for the stay in the hospital. The period of rest taken by them depended more on the economic condition of the household than on their health needs or the difficulty of the childbirth. Household work was resumed almost immediately after returning from the hospital/nursing home. The only task for which women asked assistance from neighbours was for filling water. Receiving assistance for all the other work depended on the presence of other women in the household. In this respect, women in S.Nagar were more privileged, being able to depend on the extended family—living in the neighbourhood—for support.

For those women who were dependent on their labour for survival, the post-delivery period was fraught with anxiety. Home-based work was the only option open to them. Those who were engaged in domestic work said they were able to go back to their old job. Similarly, those who delivered in the village, returned to agricultural labour after a few weeks of rest. And those who did not receive any support from their husbands returned to work within a week of delivery.

Dadi, who spent her youth in Mumbai, and Rangubai, who was an agricultural labourer in Pune District, both resumed work almost immediately after their deliveries. Both had husbands who were not able to support them (one was ill, the other unemployed). Dadi and Rangubai both said that while they were young, they did not fall ill, although it was expected that women who worked so soon after delivery would. However, Rangubai who is now past 65, feels that her present problems are due to this neglect.

It has been observed that women have a tendency to link their illnesses to events like delivery and contraception for many years—even decades—after the event has taken place. At least in medical practice, not much value is placed on these observations of women. It is also possible that any such link will not be borne out by clinical investigation. However, the consistency with which women make these linkages is

remarkable. The range of illnesses that are seen to result from childbearing is vast, ranging from pain in the limbs and backache to uterine/vaginal prolapse and reproductive tract infections, to asthma and stomach problems. This leads us to think that deprivation of care and rest during the post delivery period certainly results in tremendous mental stress, which has a lasting impact on women's perception.

No doubt, the intensification of women's work resulting from the creation of nuclear single-woman households, the greater participation of women in the workforce drastically reduces women's ability to secure rest and health care in this period. The fact that younger women are bearing children in the same (if not more) difficult circumstances as their mothers did, is a reminder of how little has been done for making childbearing safe.

3.20 Summing Up

Morbidity is an area where the physical state of the body intersects with social experience. Health and environment are overlapping spaces that have no distinct boundaries. The women studied by us own only one productive resource—their labour. Hence, any threat to the household's survival results in the intensification of bodily exertion. Women not only work harder, but also try to minimise the needs of the body. They reduce their periods of rest, their food intake, and their use of health care. The effects of this deprivation are not always immediately visible, but become apparent over a lifetime.

F ACCESS TO HEALTH CARE

3.21 Health Services in the Study Area

In the study area, like in all slum localities in the city, there is no dearth of health care facilities. The dispensaries of doctors, laboratories, and chemist shops dot the area. In the Mumbai study, we found that the 430 households whom we interviewed, had, within a span of one month, accessed 40 doctors, most of whom were in the vicinity. This indicates the wide range of providers approached by the households in this area. However,

the mere presence of providers does not ensure access to health care. The problems in the health care system, as well as the dynamics operating in the household, make it difficult for women to use health care facilities effectively. As noted in the previous chapter, the nature of health problems suffered by women is inextricably linked to their domestic and work roles. Similarly, the use of health care is deeply influenced by these roles.

A wide range of health services was utilised by women interviewed in this study. They ranged from midwives living within the same slum to the specialist cancer hospital, —the Tata Memorial Cancer Hospital. Apart from the health facilities the use of self-medication and self-care has also been recorded in the study. Women also considered taking time off work as some kind of an alternative to seeking health care.

However, in general, we found that women preferred using private health care as compared with public hospitals and dispensaries. This is not surprising, as most studies have revealed that more than 70 per cent of the non-hospitalised cases are treated in the private sector. However, it would be wrong to assume that women choose to prefer private care as against public health care. The fact is that proper health care is simply not available in the government sector. The increasing use of private health care can be attributed to the changing perceptions about health. Health services are viewed as commodities that have to be bought. Hence, what primarily determines health care use is the availability of resources and not need. That this is the reality is not surprising. However, though disconcerting, women speak about health care as one may speak about wearing better clothes or buying meat.

Rabiya was speaking about her health problems: "I just have one problem. I get palpitations and chest pain. I had taken an X-ray. I went to Rajewadi and Bhabha (municipal hospitals) and after that to Kajupada (private doctor) When there is no money — now you have to buy dal and vegetables—how are you going to buy medicines? If you have money, then you take treatment."

The women are not aware that as citizens they have the right to get health care from the state. The fact that the state has a responsibility towards its citizens is not recognised. This seems to lay the foundation for the complete withdrawal of the state from the social sector. It seems likely that no resistance will be encountered when the meagre services offered by the

government are withdrawn. In contrast, profit motive as a valid basis for private health care is accepted. Not a single woman expects that the private doctor/nursing home will provide care without first ascertaining the patient's ability to pay for the services. The only expectation is that the services should be their money's worth.

Hence, when the symptoms recurred after a surgery to remove kidney stones, Shakila rebuked a doctor and asked him why after taking so much money, he had still not cured her.

3.22 Commodification and Withdrawal of the Public Sector

Although public services may not be the preferred choice for illness-related health care, there is no doubt that they remain the most important source for hospital-based care. Almost all the women in the study approached public hospitals for maternity services. This is the most basic service, which is accessed by women. However, we found that the use of these services was becoming increasingly unsatisfactory. The duration of stay in the hospital after delivery had been shortened drastically—from seven days for older women, to three days for the middle-aged, to just a day for the young. The imposition of fines by public hospital for the third delivery and bad treatment by the hospital staff meted out to pregnant women during confinement violates their basic right to health care and directly affects their safety.

It would be naïve to believe that the public health care system acts as a buffer between the poor and the health market. The commodification of health is equally evident in this system as well, the effect of which can be devastating for some women. There is a growing perception that in any health facility, it is not the severity of the problem, or the possibility of a cure that guides the decision about seeking health care, but the availability of money. However, women (and the household) are not freed from the responsibility of doing their best for the household—irrespective of whether the ill are the youngest or the oldest members of the family. The most dramatic effect of such pressures can be seen in the life of Shakuntala, whose 14-year-old son has Hodgkin's disease.

"I used to bathe the children; I felt a lump in my son's groin. I thought, maybe he had fallen somewhere or he may have hit the fence that could have caused the lump. But then it didn't shrink, and kept growing. Then I realised I couldn't sit quiet. I took him to the dispensary. There the doctor operated on him and removed the lump and sent it for tests to the Cancer Hospital. We got a report saying it was cancer. He was again operated for a lump in the same place. I took him to dispensary, they said that I need to take him to same hospital. There they saw it and said that they were not sure whether it was cancer— they had doubts. They took out the lump and tested it and said he had to be given 12 injections. I told them I didn't have money. I said, 'Where will I go.' In such times of tension one can't think straight—where does one go, whom does one approach. Somehow I gave him some treatment and I told them, 'I have no money.' One injection costs Rs 3,500. I told them, 'My husband's salary is not Rs 3,500, then how will I continue this treatment?' They said, 'Do what you can now, and then when you can get more money, do the rest.'"

As expected, Shakuntala could not find the money for the whole course of the injections. For two years, she did not go to the hospital at all. Instead, she took her son to a *vaid*, who also is a spiritual healer. She feels that the treatment has benefited him. However, when we suggested the possibility of getting financial aid for her son's treatment, she revived the treatment at the hospital. During the period of fieldwork, she was running around for donations with recommendatory letters to various organisations and luminaries. Meanwhile, the treatment got delayed by two years. As a result, Shakuntala's entire schedule revolved around the health care of her son—taking him for treatment to the hospital, , getting in touch with locally influential people to help her out, and procuring the necessary finances. Most of the days, she would leave the house at 11 in the morning after finishing her housework, come back by dusk and complete the rest of her household chores. She herself was grossly underweight, and looked very weak. She also felt that because she did not get time to eat properly and had to run around so much, she had developed the problem of white discharge. She was extremely worried about this, because her older sister had died of uterine cancer. Her other children also have chronic health problems. Not surprisingly, she often wishes that she had not had these children at all.

The fact that her son's treatment had to be discontinued because she could not pay, points to the cruelty of the system. It completely ejects those who can not pay for the services. It also reveals the insidious way in which people's right to free health care is being violated. Although the structures, the doctors and the personnel in the public health system are still in existence, there is no right to free health care. As medicines have to be bought from outside, and all the investigations in the hospital are done at a price, there is no way in which the poor can expect quality health care from this system.

Another strategy for restricting the access of women to public health services has been through the family planning programme. It is almost accepted that women who bear more children must face some kind of punitive measures. We had in our earlier study (CEHAT, 1998) recorded several instances of women being fined when they went to a public hospital to deliver their third or fourth child. We therefore asked the CHV (Community Health Workers) about the actual rules in this matter.

(We were speaking about sterilisation operations, K -Kamalabai, N- Neha, P - Padma)

K- Yes, but now the situation is such that women are very weak so they are not operated. Even if they are ready, it is not done.

N- Less blood ?

K- Yes. And they don't operate, make them pay Rs 250 as fine, and tell them to come back after 6 months. Once the woman is back home is she going to go back after 6 months leaving 2-3 small children at home?

N - Why pay a fine?

K– That is the rule in the municipality; you have to pay a fine.

P – What is the rule?

K – If a woman comes for delivery after having had two children, i.e. has come for the 3rd delivery, she has to pay Rs 250- as fine before leaving.

P– This is for the 3rd child?

K- Yes, for the third and any other.

N - So they don't let her go when she comes for delivery?

K- Yes, she is not allowed to leave unless she pays the fine of Rs 250.

N- Is it imposed in every municipal hospital now?

K- Yes, everywhere. And if you come for operation within 6 months, your money is given back to you. If you don't, the money is gone. Even if you come after a year, the money is lost. But I don't think these women go back after delivery.

Razia's sister was suffering from tuberculosis but was regularly taking the prescribed medicines. At times she was not given all the tablets in the public hospital. Being a single woman, with the responsibility of bringing up a child, her motivation was high and she spent money from her pocket and bought medicines from the market. In an illness like tuberculosis, where completing the prescribed course is important and discontinuation is known to cause resistance, the non-availability of medicines can be disastrous for the patient. She was able to complete the entire course of the treatment only because the local doctor gave her the medicines on credit.

3.23 The Private Health System

For minor problems, the women, not surprisingly, prefer to approach the private sector. The most commonly used private facility is, of course, the local general practitioner. The women prefer to utilise this facility as it is closer to their homes. Going all the way to a public health facility is seen as a waste of time as they have to spend on travel, they do not receive 'good' care, and have to pay for the medicines as well.

For working women utilising the public health facility means that she has to lose the day's wages. At the cost of ethical/ scientific practice, the private sector tailors the treatment according to the needs (or rather compulsions) of women. Thus, Sushma has been, for many years, using sleeping pills for her stress-related problems.

(S- Sushma, P - Padma)

S- What can one do – go to the hospital and take sleeping tablets.

P- Which hospital?

S- Any one of them; whichever I feel like.

P- Private?

S- Not municipal – I never go to a municipal hospital.

P- Never ? Its been 20 years that you have lived here.

S- Yes, but I never go to a municipal hospital; during her delivery (the daughter's birth) I had registered there so I went there.
P- But why don't you go now?
S- Who will go through all that bother of standing in the queue the whole day. Look at Shakuntala. She has gone in the morning, and still hasn't come back. If I go, who will take care of the house in my absence.
P- What do you tell the doctor?
S- That my back is paining, that I'm not feeling well, that I'm feeling tensed up. Then he gives sleeping tablets. I take them and go to work after two days.
P- You go every time to the doctor and get the tablets?
S- I also go out on my own and buy them.

The market has an effect on the distribution of health care at the household level. There is a tendency to economise on health care for the economically non-productive members of the household. The Mumbai study (CEHAT, 1998) shows that the use of health care by elderly women is higher than that by younger women. However, it is still inadequate in relation to their health care needs, which are much greater. The unstable income of the younger members of the household prompts older women to put up with their health problems as long as it is possible. They are respected members of the household and, hence, the younger generation feels morally obliged to care for them. However, their position as elders itself makes them feel responsible for the family's future and they resist any expense being incurred on their health.

Aji is an occasional home-based worker who looks after her grandchildren while her sons and daughters-in-law are out at work. We asked her about her health problems.

(P-Padma, A-Aji)
A - Head pains, I get cramps in the legs and hands...
P - Did you go to a doctor?
A - No I haven't.
P - Never?
A - I feel scared to go to a doctor. They talk about giving injections, and I feel scared.
P - You feel scared so you haven't gone?
A – Yes.
P - Your children haven't taken you to a hospital?

A - They keep telling me to come. Now what is left for me? I have to die some day. Now do I have to read at this old age? (She was asked to get reading glasses)
P - Why do you say that?
A- What else? Why spend on hospital? Sometime you have to go; you have to die.

The buying of health care compels women to incur debt. Women in A.Nagar generally used the chit fund for this purpose. The interest in the chit fund is 10 per cent per annum. Women who borrow money during a medical emergency do not have the privilege of weighing the pros and cons of various sources of credit. Sushma borrowed from the chit fund for her reproductive tract infection, while Rekha borrowed heavily for her husband's treatment for cancer. Mala's husband had to borrow money to send her back to the village when she refused to have her delivery in the public hospital in Mumbai. The constant cycle of ill-health and debt can be debilitating for some households, and compel them to cut down on household expenditure.

3.24 Labour and Health Care

The use of health care is essentially for alleviating symptoms and not for a lasting cure. Women themselves recognise that the root cause of their problems lies in their life situation, which they are powerless to change. The expectation from health care use is merely to restore their energy enough to enable them to return to work. This, in general, is the limited objective of health care in a capitalist society, a fact that is vividly brought out in the narrative of Rani. She is a highly skilled worker who holds a supervisory position in the unit that she works in. Although her wages are only marginally higher than those received by the other workers, she is in charge of organising production on the shop floor on her own. The owner/manager of the unit is conspicuous by his absence. She narrated the events, which followed an accident on the shop floor.

(R-Rani P- Padma)
R - I used to say I have lost my fingers, now give me something. He used to say 'Ya, you get married, I will give you at the time of your marriage.' Till today he hasn't given anything. And now I feel that I shouldn't even ask for it from such a man. A man who has taken Rs 500 from each worker—he

didn't pay us for 10-15 days of work—what can one expect from him? Is he going to give me money for the loss of my fingers?

P - When did this happen?
R - About 7-8 months back.
P - Why did he do that?
R - I don't know, it is a private matter. What can I say?
P - He took money from you?
R - Means we worked for 10 days and he didn't pay us for that.
P - What did he say?
R - When we went to him he said, "I can't give you anything. I have incurred a loss."
P - This was your old or new seth?
R – The old one; this one is new.

The only contribution that the seth made was to pick up her medical bills. After a while, Rani returned to work sans two fingers, because her ability to work had not been affected due to the accident. The ownership of the unit changed hands, and Rani could make no claims from the new boss. Nonetheless, she appreciates the new owner because he, at least, pays the wages honestly and has not retrenched her.

The shift to informal sector employment has further reduced the space that women had to look after their health. As they are not entitled to paid leave or employee benefits in times of illness, they have to bear the financial cost of health care. In the event of not being able to bear that cost, they pay the price by contracting chronic health problems. This is not to say that women who earlier worked in agriculture and in domestic work were more privileged. However, the complete absence of any change in the condition of women who work in these sectors, and those who are now working in the industrial sector shows the extent to which the burgeoning health system has ignored these poor women's needs. A very similar narrative can thus be read for Rangubai, who is in her late sixties, and for Veena, who is around thirty-five. In their youth, both of them did not receive any financial support from their husbands and were, thus, breadwinners and mothers at the same time. The period of childbearing was, for both, the phase when mere survival seemed difficult.

Rangubai had five children in her adolescence and early adulthood. Her husband was an invalid who died (probably) of

TB. So almost as soon as she married, she became the head of the household. She is a Dalit, who worked as an agricultural labourer.

"Yes. Sometimes, midwives do it (the delivery). Sometimes I delivered just like that in the fields. You work all day in the fields and then, in the evening you deliver. As soon as the child was five days old, I used to drop him in a sling; my husband kept a watch over himwhile I was at work. People used to say, why doesn't this woman get ' vaat'. She just delivered five days ago and she is working already. Nothing happened to me at that time. Now, because I am growing old, either my joints are hurting or something else happens. At that time I did not think of anything, nothing happened to me. It would have been good if I had died before my husband. Now I am all right, but tomorrow how well will they (her children) look after me, there is always that worry."

Veena has four children and induced abortion four times as she had no money to supportthem. Each time, she got herself admitted to a private hospital nearby in the evening, had the abortion in the morning, and returned home in a few hours. The next day, she was back at work. She has a chronic problem of varicose veins, skin rash and back-pain, which she feels is the result of the fact that she started working in the damp (her house is in the marshy area and, besides, housework involves constantly working with water for washing.)

For Rangubai, the struggle for survival has eased. Her sons have grown up and secured good jobs. Thus, she has stopped doing paid work (she was employed as a domestic worker after migrating to Mumbai). Having ample time on her hands, she makes almost daily visits to a nearby peripheral municipal hospital for treatment of weakness and dizziness. It is quite obvious that these are results of the neglect that she suffered in her childhood and youth, coupled with the fact that she is ageing. Evidently, a solution to her health problems has proved elusive. On perusing her case paper, we found that the doctor had prescribed prophylactic iron and calcium tablets. For nearly five months the prescription had been routinely renewed. She reported that taking the tablets made her feel better, which indicates that even presently she does not receive adequate nutrition.

For Veena, the possibility of taking a day off and seeking treatment is unthinkable. When we met her, she had left her

job because she could not cope with it, and was looking for some less strenuous work. In the meantime, she was surviving on the earnings of her aged mother who sold vegetables. She could not even afford the meagre health care that Rangubai was resorting to. The obstetric history of Veena highlights the poor quality of health services available to women today. She is forced to seek repeated abortions in private clinics. She has never been able to take rest after delivery/abortion and has immediately gone back to work since the workplace doesn't allow her to take any paid leave. Earning the daily wage is necessary to run her household. This is true of all the working women in our study.

Expectedly, the most memorable narratives about seeking health care were those involving hospitalisation. Hospitalisation is an extraordinary event that cannot be compared with the use of health care as an outpatient. In this study, hospitalisation has been largely used in emergencies and for deliveries. Emergency situations demand prompt action, and thus the range of resources that one may access are even more limited than usual. Often, the person involved is physically not in a position to take decisions, and has to completely rely on the people around her. However, hospitalisation involves major expenditure, it involves all the members of the household, and brings out more vividly the relationship between the household's economy and health.

3.25 Household and Health Care

Having described the context in which health care is used, it becomes easier for us to analyse the process by which decisions regarding health are taken in the household. Women are constrained by many factors, including the conditions of work, the scarcity of resources in the household, and the lack of support from the health care system in their choices of health care use. Within this restricted space, women negotiate with their families to seek health care.

The least empowered are the young, unmarried girls whose physical mobility itself is highly restricted. Reena stated that she has to depend on her father to take her to the doctor when she got a stomachache. Rehana, who has even less family support, is not taken to the doctor at all by them when she

feels unwell. When she can no longer bear the pain, she goes to the BMC dispensary on her way to work.

As the girls grow older and accept more responsibility for the household, they themselves do little for their own health as they are busy looking after others. Rani and Lata are both the eldest daughters of the household. Both are employed and the responsibility of running the household is also on them. Thus, they are so preoccupied with the problems of the other members of the family that they have very little time to pay attention to their own health problems. Lata's mother had died some years ago of a serious illness. She recounts her experiences of dealing with this illness.

(L-Lata, N-Neha, P-Padma)

L – There was hospitalisation in our house for my mother, I was the one who looked after her.
N – What had happened?
L – She got boils on her body. They were full of watery material, and the skin used to burst.
N – The skin grew back?
L – No. It used to look like as if it had been scraped. She couldn't eat or drink.
N – She was taken to the hospital?
L – In MIDC, she was there for 15 days.
N – MIDC means ESIS hospital?
L – Yes.
N – On your father's card?
L – My own.
N – What was your experience in ESIS?
L – Very good; food, cleanliness everything was good. It was not that they weren't paying attention.
P – How many days was your mother in the hospital?
L – 15 days. For the first 4-5 days she was doing everything on her own but later she couldn't sit or get up. Then I had to stay with her. I used to go to work and then go there. I did it for 8 days. I used to leave work at 3 p.m., go home to bathe before coming to the hospital at 8 p.m. That time my maternal grandma was here, so there was no problem. But then later my mother couldn't do anything by herself at all. I had no choice but to stay in the hospital at night. Then I couldn't do anything. We told the doctors that if she could be cured somewhere else then do send her there. Then my uncle and

I thought of transferring her to a bigger hospital like Sion. But they said there was no need.

N - It could be that the diagnosis wasn't done properly.

L - Yes, that could be because when we asked about her illness they couldn't tell anything.

N - They couldn't tell exactly what had happened?

L - They couldn't think of the exact name.

N - Must have suffered a lot?

L - Yes, a lot. I think in my life, I haven't seen such an illness and so much pain....

P - You have any other problem; anything related to MC(Menstrual cycle), etc?

L - Khoop traas hoto (I suffer a lot).

P - What kind of problem?

L - My stomach pains a lot.

P - Can you go to work?

L - No, I can't. If it starts paining in the morning then I don't go to work. But if I am there (at the unit) then I have to work. Now I am used to it; two days I suffer a lot, otherwise it is okay.

P - Two days it is painful?

L - I have scanty periods so it pains (Jatach nahin mahanoon tras hoto)

P - That is why?

L - Yes

P - Stomach ache?

L - Yes, for two days.

P - Any other problem? Headache, or you can't sleep, or you have a lot of tension

L - Tension is always there but I don't have any other problem. I keep worrying a lot too.

P - You can eat food?

L - Yes, when I am busy with work I can't eat much, but otherwise I have no health problems.

Apart from these women, who are the main decision-makers in the household, the involvement of the male members in decision-making is vital. The role that the husbands play is not only that of granting permission, but they are also the means by which women can access health care. The husband is also the one who has to accept responsibility for the decisions made. It is implied that women cannot take responsibility for their own actions. Thus, the absence of the husband itself makes

using health care difficult for women. Shakila lives alone in S.Nagar with her daughters, while her husband is working in the Gulf. She developed a problem of kidney stones, which needed urgent attention.

"I used to get pain, it used to be unbearable. Even when it would stop, I would get tense that it would start paining again. I used to be awake the whole night. The doctor said I would have to be operated upon. I told my husband, I would do so after he left for the Gulf. My family wanted me to do it when he was around. They did not agree to my proposal. So I went alone and got admitted. I got admitted at night after finishing the day's work. They were not ready to come with me. I told them I could not bear the pain any longer, and therefore I had to go ... In 4 hours the operation was over. After that the whole family turned up at the hospital. I decided to get myself operated because the doctor had told me that if I did not do so it would become a deep injury and I might get cancer. For 11 days I was in the hospital. On the 10th day the stitches were removed. After I came home, my sister-in-law's daughter came to help me out."

For women who are new to the city, who do not know the language, and are young, the dependence on men is not merely customary, but very real. Leena is a young migrant woman, who lives in A.Nagar with her husband and young children. Both husband and wife came to the city together, and the husband works as a casual labourer. Both of them knew little about the city and could barely communicate in Hindi or Marathi. At the time of her child's birth, Leena developed a tumour in her breast. She was taken to a municipal hospital for treatment.

"First I went to a private clinic thinking it would get cured. I waited, but when it did not cure I immediately went to the public hospital. The lump became 'big' thenthey said go to the hospital Here, is a Sardar doctor (a private practitioner). I kept going to him but it didn't get cured. In 15 -20 days it became big and started paining. When I went to the hospital (a public hospital) they made me run around for a month; they used to give medicines and send me home. They used to write medicines worth Rs 200-Rs 250 to be bought from outside. That didn't help, and finally they performed the operation. That day was Holi, a holiday. The following days were Saturday and Sunday. So what did the doctor do? I had not even regained consciousness and he told my

husband who is a 'mati kamgar' (construction worker)— not educated, to take me home as that day was a Saturday, and the next a Sunday and the 'big' doctor (the specialist) would now be available on Monday. He said, 'Why admit her for two days? Take her home.' When he adviced so,, my husband brought me home. That very night my speech stopped, the breast started hurting. So my husband said, 'Let's go to the Sardar doctor." Do you know what Sardar said? He said, 'She has got tetanus. I cannot do anything. I can't give medicine. If she was operated there, they should at least have kept her there for a week. Go back there.'When we went there, the 'big' doctor asked, 'Who sent her home?' So he told them in English to admit me in the 'serious ward.' Even if it is a municipal hospital, you have to pay money for the serious ward. They kept me there for 4 days and the bill came up to Rs.1,200. They started asking for the money. We did not have the money. Then they shifted me to the general ward. They kept me there for 20-25 days. They said, 'Before you get discharged, pay the money and go.' My husband told them that we have no house, that I was ill, from where could we bring Rs 1200? We didn't have enough to eat. Finally, he fought with them saying that if this was a free hospital, then why should we pay? Finally we ended up paying Rs 600, and I came out of the hospital after a month."

Decisions about health care also depend greatly on the position of women in the household. The paid and unpaid work of women has to be accommodated within the treatment regimen. Women do not have the privilege of taking time off work merely for treatment or for recovery. This is also borne out by the Mumbai study, where we found that the average period of rest per episode was 0.29 days. The treatment may in fact be avoided because the woman does not have the time to rest.

(K-Kamalbai, N-Neha)

N - Now this method of operating (for tubectomy) soon after delivery exists in the hospital for women.

K- Yes, that is good.

N - That is good?

K - If a women gets operated after 6 months or a year of delivery, she doesn't get rest.

N - So, after delivery she gets rest, so that all these things happen together?

K- Yes, after delivery at least for a month she gets rest in some way or the other. For e.g., avoid lifting things, etc. When she goes after 6 months, she has to pick up her child, clean it, attend to its needs, etc, even if she doesn't do any other work. So it is best to get operated after the delivery. Whatever be the woman's problem in the house, she gets to rest after delivery.

When we used to hold camps for such operations (tubectomy operations) women used to come in the morning to the camp, return home by the evening and start work the next day. So they would have problems. If you have no problems, it's okay, but if you have then it is difficult, so it's better to do it at the time of the delivery.

The absence of help in the household is a very important deterrent for women while seeking health care. This belies the general belief that women on whose labour the household is surviving, either through her paid or unpaid work, are in a better position to access health care.

3.26 Summing Up

Social conditioning prompts women to make sacrifices at the cost of their health. This they do for the sake of the family and at whatever age they may be. This is very relevant in the context of the changes in the health sector. With the withdrawal of public services, the necessity to pay for private services and the need to gather finances thereof deter women from accessing these resources.

Just as individuals are responsible for finding employment and negotiating the conditions of work (in the absence of any legal protection), the individual household has been forced into the health market without any protection. There is no option but to purchase services from the private sector on terms dictated by the health profession. Women who act as invisible workers in the economy also invisibly pay with their own health the cost of the health of their household. They subordinate their needs to that of the other members of the family, as the prime responsibility for financing health care is that of the household. At the same time, they seek health care, not as an end in itself (for their well-being), but only as a means to preserve and sustain their capacity to work.

It is also important to note that the effect of neglect is not visible in a dramatic rise in mortality. Morbidity reported by women is also not an adequate measure of the quantum of illness suffered by them. However, an examination of the condition of women's lives, and the strategies that they use to cope with illness and childbearing, reveals that economic uncertainty coupled with their subordinate position within the household, adversely affects their access to even the most basic of health care.

G CONCLUSION

To capture the dynamics of health status in a changing society and economy is both a challenging and a frustrating task. There have been several attempts to link economic processes to women's health. At one level, occupational health studies and epidemiological studies have linked actual work processes to the incidence and prevalence of specific problems. At another level, basic indicators of mortality and ill-health have been studied across time in relation to indicators of economic growth and equity. Both kinds of studies have highlighted the gendered nature of health impact— whether it be through differential allocation of food and health care or the result of the sexual division of labour at the workplace, whereby women are relegated to certain tasks and certain kinds of labour organisation (casual/temporary/unskilled).

In this study, we have attempted to capture the process by which health status changes in response to changes in the conditions of life. While some aspects of this process are clearly defined, understood, and articulated, other aspects are implied and subliminal. Thus, the direct health effects of some kinds of work, i.e., industrial work, are observed clearly in accidents related to machinery use, backache, and eye strain due to repetitive motions in fixed postures. On the other hand, the aggregate effects of childbearing, housework, and paid work can only be surmised through the narratives of women of different ages and experiences.

Whether the trajectory that their lives have taken has been altered by changes at the macro-level is an issue that is not easy to settle. The effects of ageing, continued poverty, and gender discrimination could not be easily separated from the

changes introduced by macro-economic changes. However, if we assume that 'development' must lead to a gradual improvement in the conditions of life and health, stagnation or deterioration of health status must be viewed as an anomaly. Thus, if we find that experience of childbearing has remained unchanged for older and younger women (except in details, for e.g., the negative health effects of numerous pregnancies are substituted by health consequences of contraceptive utilisation) we can conclude that women's empowerment has suffered a setback. No doubt, individual and collective perception of hardship can be coloured by the context of the interview as well as traditional modes of narration. It is customary to narrate stories of the past in a manner that have elements of romanticism and heroism in them. However, the sense of insecurity about the future is palpable and difficult to relegate to the domain of cultural expression.

The visibly poor health of working class women co-exists with poor working conditions, unstable employment situation, and a commodified health care system. Whether there exists a causal relationship between these factors, and, if so, the means to establish such a relationship are still not clear. However, the existing situation precludes certain modes of action and organisation. A workers' struggle for better working conditions, or merely continuous employment is unthinkable. So deeply fragmented is the workers' movement that even the articulation of the relationship between ill health and working conditions is missing. For women workers, the situation is made even more complex by the fact that they also continue to bear children and maintain households under difficult circumstances. Not merely women themselves, but also those who theorise about them lack the means to conceptualise a relationship of such complexity.

The fact that the health system is also content to offer some palliative measures for deep-rooted problems of ill health is not surprising. It is advantageous for a market-based system to offer small, commodified, individualised packets of services (curative care), instead of a comprehensive public health care programme, which threaten to arouse latent feelings of discontent with other aspects of living environment and employment. Given the scenario of individual providers (albeit very organised as an interest group) and atomised consumers, health reform too seems a distant dream.

Where Do we Go From Here?

The most remarkable development of the last two decades has been the entry of women into the public arena. The exposure that women have gained through participation in community-level developmental or advocacy activities is considerable. No doubt, the political colour that such local groups have assumed is a matter of concern. Also disturbing is the fact that this organisation has not often transcended from the domestic sphere to the area of livelihood and work. However, these groups still represent an opportunity to bring women's concern to the fore of public action. There is need to re-orient existing programmes to suit the needs of women, rather than fit women into programmes designed for them. For e.g., a programme for providing cooked food to pre-schoolers (through the ICDS-Integrated Child Development Scheme) is largely seen as a supplementary nutrition programme. Thus, when implemented on a mass scale, it gets reduced to its minimal component, i.e., the distribution of food. However, in an urban setting, the components of childcare in a *balwadi* is as important as the provision of food. In fact, the absence of women from the home, necessitates the provision of food to many members of the household, such as school-going children, the aged, and the disabled. However, when programmes are formulated within the dominant ideology, namely, that survival needs of the households must be met by women within the family, such a focus is unlikely to emerge. Thus, women are compelled to fall back on traditional modes of support (neighbours and relatives), which themselves are being threatened by the disintegration of families and changing community structures. Likewise, when childcare is seen as the responsibility of the 'working' women and the necessity for providing it is placed on individual employers, it threatens to dislodge women from the workplace and relegate them to the position of home-based workers. Home-based women workers find it even more difficult to negotiate distribution of housework, because even within the household they do not enjoy the status of workers. Moreover, they are also deprived of the opportunity to build relationships in a secular space outside the family and caste circle. By providing childcare as a neighbourhood service, more women would benefit, and it could act as a means to strengthen community structures through secular means. The provision of neighbourhood services would also foreground the responsibility of the state to ensure

that employees (male and female workers alike) contribute to the creation of a social infrastructure, and the responsibility to establish and maintain such a set-up.

More importantly, in order to strengthen women's bargaining power in the workplace, especially when the option of direct action is not available, a long-term goal of increasing the general educational levels for women is indispensable. Higher educational qualifications would prepare more women to compete for jobs in the growing service sector. While it is unlikely that job-creation even in this sector will keep pace with growth in the number of job-seekers, it will bring into the arena aspirants from the marginalised sections (Dalits and Minorities) whose presence in significant numbers could alter the character of these industries. At present, the divide between those who stand to gain from the explosion of the hi-tech service industry and those who stand to lose from the decline of manufacturing (at least in Mumbai) is too wide. The composition of these two groups is also culturally determined. The historical monopolisation of higher education by the upper castes is largely responsible for the predominant presence of these castes among the beneficiaries. Communities, like those whom we studied, where there is no culture of education, start out with a historical disadvantage. Not merely are they threatened by poverty, they are also witness to several generations of skill acquisition lapsing into obsolescence. A craft does not merely define an occupation, it defines a culture and society. The cultural valuation of craft skill led to the creation of a social system that facilitated the transfer of these skills within a restricted kin circle. This co-existed with a disregard for educational achievement and the restriction of women to the home (as a marker of higher status, separating them from the larger group of wage-labourers). In the new order, where skill acquisition has been integrated into the formal education system based on competition, new rules apply. However, the cultural transformation of societies requires an impetus from within in the face of resistance from without.

While it may be acceptable to insist that the state should finance only primary education, allowing households to find the wherewithal for higher education, the definition of what constitutes 'essential' or 'primary' must be situation specific. Apart from the fact that being denied secondary education is tantamount to being ejected from any category of skilled work,

the liberating potential of higher education can hardly be over-stressed. Especially so for communities which have historically been left out of the hierarchy of knowledge production and distribution.

Finally, the health care system is in need of radical reform. Hitherto, the meaning of reform has largely been privatisation of financing and/or service delivery. Health care reform in urban centres like Mumbai is necessarily complex. Apart from the complexity of the health system itself, there is a highly developed health culture, which embodies the ills of the capitalist system. Thus, quick-fix cures, which enable people to keep on working through ill health, command respect for the provider as well as a good price. The fact that knowledge about health technology and its availability is widespread means that even the poor feel compelled to provide the best for their family members, at whatever the price. Thus, even working class households incur debt, sell assets, and forgo other opportunities in order to finance tertiary level health care. There is a need, no doubt, to make free health care available to the poor, but also a need to demystify medical care. The conditions which make illness inevitable for the poor have to be discussed more publicly. This requires innovations in both research and practice. The links between ill health and employment are lost because of the fluidity in people's work lives as well as the firms' own existence. Hence, occupational health research models become irrelevant. Thus, we need to devise methods to conceptualise and capture such health issues. This would, among other things, necessarily involve the creation of community-based initiatives that can work towards a more 'holistic' approach to health, integrating issues of environment, housing and sanitation—all of which, as we have shown, have an immediate and direct bearing on people's health and the quality of their lives.

Acknowledgments:

We thank all our consultants; Dr Abhay Shukla, Ms Sonya Gill, Ms Sujata Ghotaskar and Ms Padma Prakash for providing guidance to the entire project at all its stages. Right from the stage of developing methodology for the individual case studies, to discussion on the first draft and at the final stage.

We are grateful to the discussants at the final dissemination workshop held on 19th May 2000, Dr. Maithreyi Krishnaraj, Dr Veena Shatrughana and Dr Padma Prakash.

We would like to thank all the participants of the Dissemination workshop for enriching the discussion following presentation of research findings. We are grateful to Aditi Iyer, Dr Amar Jesani, Bhavani Shastri, Dr Dhruv Mankad, Dr. K.N. Bavale, Dr K Seeta Prabhu, Lesli Rodricks, Dr Mohan Rao, R Nagaraj, Dr. Preet Rustagi, Shabana Khan, Sunita Bajpai, Vasant Gupte, Veronica George, Vidya Chikte. We would like to thank S. Chattopadhay for language editing.

We would like to thank Anirban Bose, Tejal Barai, Vijay Sawant and Vikas Gamre for their support in organizing the dissemination workshop. We would like to thank Margaret Rodrigues for handling the publication technicalities and logistics.

Finally, we would like to thank the Centre For Environment, Gender and Development (Engender) Pte Ltd. for its generous grant, which allowed us to conduct this study.

GLOSSARY

Baudh Vihar - Place of worship for Buddhists. In the context of the slums of Mumbai, it usually doubles up as a community hall.

Baudh - Followers of Buddhism. In this specific context, they belong almost entirely to the scheduled castes.

Bhhaiya - Popular term for Hindi speaking migrants who have settled in Mumbai. Often used derogatorily.

Chapati - Unleavened wheat bread.

Dal – Lentil.

Galli - Bylanes within the settlement.

Kannadiga - Belonging to the state of Karnataka (ethnic origin).

Khadi - Marsh or creek.

Mala - Mezzanine floor constructed by slum dwellers.

Mehndi - Henna, also the art of drawing decorative motifs with henna on hands and feet.

Moharram - Muslim festival marking the martyrdoms of Hasan and Hussain.

Naka - Street square or crossing.

Patra - Tin sheets.

Pacca / Pucca- If structure, built of brick and mortar; if road, metalled.

Panchnamas - First information reports filed by police.

Pav - Quarter loaf of bread.

Seth - Employer (also used to denote any wealthy man or trader).

Urad - Black lentil.

Vaat – 'Wind' One of humours recognised in Ayurveda, and in lay understanding of illness (others being pitta (bile), and kapha (phlegm). Known to cause problems of digestion and pain of joints and bones.

Vaid - Practitioner of Ayurveda.

Greater Mumbai - Includes the island city, suburbs and extended suburbs. It's a geographical area of 603 square kilometres.

Island city - includes the wards up to Mahim. In the 1960s, the suburban wards were included in the Mumbai municipality and the city limits were extended to Dahisar in the north west, and Mulund in the north east.

Suburban areas - Includes the wards from Bandra to Dahisar in the north west, and Sion to Mulund in the north east.

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PART IV

Impact of Globalisation on the Health of Women Workers in Grape Cultivation

Sharadini Rath

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A INTRODUCTION

Globalisation as a phenomenon that touches the lives of many people in diverse occupations is gaining in importance as a field of study and investigation. For a country like India, this has obvious implications. With a large population that is economically vulnerable and powerless, it would be foolhardy to not track and document the changes that such a fast evolving process brings about. With almost a decade gone by since the first 'liberalised' budget of 1991 was presented, it is time to take stock of how the changes it set off have taken root and how they have affected the lives of different sections of the society.

In this study, we look at an instance of globalisation in the horticultural sector, and how it has affected the poorer section of the society who depend on agricultural labour for their livelihood. The study will focus on the changed nature of their work that was brought about because of globalisation. We shall study the link between the work, health, and economy as engendered by the globalisation of a community of people who work in vineyards in the Narayangao area, about 80 kms north of Pune.

The real connection of horticulture in India with that of the global economy can be seen to have happened in two different spheres. The first is that of information, expertise, and technology transfer; the second that of actual export of fresh and processed fruit. A recent example of successful technology transfer is that of drip irrigation. This was developed in Israel 30 years ago, and despite the basic equipment being costly has caught on in India, especially so in grape cultivation. We have not seen a single grape farm in Narayangao so far that does not use drip irrigation; almost all run on well water. Israeli expertise is also sought, with experts on drip systems visiting these farms from time to time, to advice on its optimal use in grape cultivation.

Indian agro-research has done much in developing, and/or adapting to Indian conditions, varieties of fruit that give high yield and have other desirable properties like resistance to disease, good shape, colour and taste. Such research has given the grape farmer varieties like Tas-a-Ganesh, Sonaka, and Sharad Seedless, which are not only successful in the Indian

market but also fetch a good price in the Middle East and European countries.

Where vision and far-sighted planning has failed the most in Indian agricultural research is in the post-production processing of the fresh produce. Almost no attention has been paid to storage, transportation, and marketing of produce once it has been harvested. The idea of lengthening a season by using cold-storage facilities for a better return in prices has caught on only in the last 10-15 years, and this has been almost exclusively through the initiative of individual farmers.

There is no case in point of a multinational having entered the Indian horticultural scene. Therefore, when we started looking for significant occurrences of globalisation in agriculture, we had to look for instances of local, perhaps individual, or group based, entrepreneurships. They used the policy changes that opened the Indian economy to set up connections with the world economy at large. We found such a situation in the Narayangao area, where a group of farmers has taken grape cultivation, a tradition stretching back some 35 years, to new levels. They decided to export fresh table-grapes to European markets once a year.

On the face of it, the obvious implications of such a venture are the necessity to attract a European market, and to set up the logistics of transporting the fresh grapes from Narayangao to Liverpool or Rotterdam. Moreover, it is in the latter aspect that the 1991 union budget played a role. Harvested fresh grapes had to be packed in boxes and transferred to air-conditioned shipping containers, which would then begin a six-week journey to the European ports. There was a time lag between the packaging and the transfer to the containers, sometimes as long as three to four weeks. This could be crucial as the quality of grapes could degrade considerably during this period. They needed a good cold-storage facility. In the 1991 budget, the import duties on the technology required to build state-of-the-art cold storage facilities were lowered considerably, and completely waived for the agricultural sector. The farmers of Narayangao had been waiting for just such a chance. Indigenous technology had been tried over the previous ten years but had failed to deliver the expected results. In 1991, they did not wait any more, and the Vighnahar Grape Grower's Cooperative came into existence as a working venture, with 40 farmer-members,

about 130 acres of vineyards, and an imported cold-storage facility for storing 300 tons of grapes. Various European countries were visited, exporters contacted, and deals made for the delivery of fresh table-grapes in the months of April, May, and June, every year, for a negotiated price. Apart from taking advantage of the waived import duty on the cold storage, no further help was taken from the government. Farmers took loans for setting up the vineyard with wire trellises and drip-irrigation systems from commercial banks, as did the cooperative for covering the building costs.

It could be thought that for farmers with over 30 years of experience in grape cultivation, this would be the end of the 'globalisation' road. However, it was only the beginning of an ongoing, year-to-year, crop-to-crop process of fine-tuning the method of cultivation itself, *exclusively* in order to satisfy the conditions that the European market imposed on the produce being exported. This demand of the global market brought new techniques of vine treatment, pesticide use, and an awareness of the fact that it is a much more stringent and demanding one than the local Indian market. Then, it also paid handsomely for the produce. In a reasonably good year, profits quadrupled. So, while the production process has become much more convoluted, labour and supervision intensive, with the climate often complicating life by playing the role of an unstable and unpredictable variable, the profit motive is what keeps the Vighnahar farmers going.

In what way was the European market more demanding than the Indian one? The answer lies in two main facts regarding the European consumer: a) they like big grapes in large bunches, without blemishes or other 'aesthetic deformities', and b) the presence of chemicals in the grapes themselves has to be strictly below a certain level. Grapes with 18 mm diameter fetch a significantly higher price than the 16 mm ones. It should be kept in mind that the Indian market imposes neither of these conditions. In fact, the Indian market imposes no physical conditions at all on the produce, and in terms of taste, the Europeans prefer grapes that are slightly less sweet than what the Indian consumer likes. Therefore, the whole business of having to produce beautiful, large bunches of big, unblemished grapes meant having to use new techniques of vine treatment. Experts were pressed into service and a whole regime of vine treatment for the entire year was worked out. It has evolved

over the past few years, and will continue to do so as processes are further refined and newer ones learned. The various chemicals, fertilisers, and pesticides used are carefully monitored, and techniques have been evolved to keep them from appearing in the chemical testing done at the packing stage.

In short, grape cultivation in Narayangao has become an industry driven by an *exclusively* global (read foreign) market. It remains a private enterprise.

Where do the workers enter this picture? They are the fulcrum on which many fortunes are balanced in this game. Most of the workers on the vineyards of Narayangao are Thakars. They are a settled, tribal community and part of a belt that stretches across western Maharashtra, cutting through Junnar *taluka*. The reason why the early grape cultivators in the area used Thakars as labourers in their vineyards is unclear. It could have been simply because they were available and needed the work. However, today they are in demand as skilled workers with years of experience in grape farming. They form the indispensable centre of all operations dealing with the cultivation of export quality grapes. Their economic future has become inextricably tied to the grape industry, which can be seen from the fact that while the total per capita annual income of the Thakar village we surveyed was Rs 3,118, most of it, Rs 2,450, came from grape work. Farmers are reluctant to use any other labour for their grape farms, and consider the Thakars the best in the business. The enterprise of implementing new vine-treatment techniques would have failed but for the existence of this skilled pool of labour. Otherwise, there would have been no big bunches with big grapes to export.

So the process of globalisation comes to the Thakars of the villages surrounding Narayangao, linking them to the farmers and thus to the larger world of British and Dutch supermarkets. This study focuses on the link between the work they do in the vineyards and their health and economic conditions. Before proceeding further to the other aspects of that picture, let us take a quick look at the grape export scenario in which the Narayangao farmers are operating. We will also give a basic profile of a sample of the member farmers of the Vighnahar cooperative.

B FRUITS AND FARMERS

The total horticultural area in Maharashtra is only 0.7% of its gross cropped area with 1.5 lakh hectares of land under various fruit cultivation. These include banana, orange, mosambi, grapes, cashew nut, coconut and areca nut, mango, pomegranates, chikoo and *ber*. Banana cultivation occupies the largest area at 47,000 hectares, and along with orange, mosambi, grapes, and pomegranates forms the irrigated part of fruit production. The rest are purely rain fed. Grapes are the fourth largest fruit crop in Maharashtra occupying 12% of the horticultural area at 17,000 hectares. Over half of this area is in the Nashik district where grape cultivation first began nearly 100 years ago. There are records showing people from far-flung places like Baluchistan and Burma coming to Nashik to learn the art of grape cultivation in the early part of this century. Sangli, Solapur, Ahmednagar, and Pune have about 1,000 hectares devoted to this crop. Maharashtra has the highest acreage under grape in India. Land under grape has seen a lot of fluctuation over the last decade (Indian Economic Data Research Centre, 1999). The reasons for this are not clear, but could be related to unreliable weather conditions that result in farmers deciding to either remove or replant grape gardens. The top three fresh agricultural exports from India are onions, mangoes, and grapes, in that order.

Farmers in Narayangao had been exporting grapes to Gulf countries like Bahrain, Dubai, and Oman for about 5-7 years, unaided by any special facility. This was mostly because the consumers in those countries were migrant Indians who were happy to get what they were used to at home. However, this also meant that prices stayed low and the returns for the farmers were not much more than in the domestic market. The real profit lay in selling grapes to European countries where the demand is incessant and substantial. However, this could not be undertaken without the benefit of cold storage facility, processing, packing, shipping, and marketing. With liberalisation, the farmers decided they could afford the cost. The building was completed in 1993 and export began from the season of 1994. This facility handles about 300 tons of grapes in a good season, exclusively for exporting to the European markets. The member farmers insist that it is the best in India.

The success of this venture maybe gauged from the fact that, while of the 6 lakh tons of grapes produced in India in 1995-96 (Indian Economic Data Research Centre, 1999) about 3.7% was exported [(Agricultural and Processed Food Products Export Development Authority) (various years)], in the same year 50% of the grapes produced by the member farmers of the Vighnahar Cooperative was exported. It is packed, transferred into 16-ton refrigerated shipping-containers, transported to Mumbai, and then sent to Southampton in the UK or Rotterdam in Holland. Distributors there send the packages to supermarket chains in the area for sale.

The rising demand in Western European countries for fresh table-grapes is clear from the increasing volumes exported to them as seen in Table 4.1. The demand in the Gulf countries has long saturated. The peak demand period in the Gulf is during the month of Ramadan. Since this month shifts from year to year, the total export for the year goes down considerably when this event falls outside the Indian harvesting season. The Western European market, however, has seen a steady and high rise over the years.

The value of the export as seen from Table 4.2 gives every reason to suppose that the Gulf market is saturated in terms of value also. However, the European market is still very much on the upswing in terms of both demand and value. There are greater profits to be made here than in the more traditional Gulf market.

The profit incentive is clear when one looks at the simplest figures for cost of production. On an average, in a good year, it takes about Rs 50,000-60,000 per acre to produce grapes. This includes everything, pesticides, fertilisers, and labour wages. An acre will produce about 10-12 tons of grapes. While the domestic market gives a postproduction price of Rs 10-12 per kilo, the European market yields a price of Rs 30-40 per kilo, giving a fourfold increase in profit. In a dry area like Narayangao, if a farmer does not have access to enough water to cultivate sugarcane, then grape becomes the next desirable cash crop. Most farmers have taken loans to the tune of a couple of lakhs to meet the initial cost of setting up the vineyard. The wire trellising to hold up the flowering branches, the drip irrigation, and nets required after fruition to protect from pests—these

Table 4.1 : Volume of Export of Table-Grapes From India to Foreign Countries From 1991 to 1998

(in metric tons)

Year	Region of world					
	Middle East		Western Europe, USA, Canada		Others		Total	
	(No. of countries)	Quantity (MT)	(No. of countries)	Quantity (MT)	(No. of countries)	Quantity (MT)	(No. of countries)	Quantity (MT)
1991 - 92	(6)	9581	(6)	280	(9)	1221	(21)	11084
1992 - 93	(6)	7982	(7)	1013	(10)	1805	(23)	10801
1993 - 94	(6)	10157	(11)	2999	(11)	2781	(28)	15931
1994 - 95	(6)	6012	(8)	7707	(8)	3094	(22)	16815
1995- 96	(6)	6424	(9)	10852	(11)	5136	(26)	22414
1996 - 97	(7)	5269	(8)	12082	(13)	3646	(28)	20999
1997 - 98	(6)	3510	(8)	14391	(13)	5906	(27)	23888

Source: APEDA various years

have all been put up in the past 10 years, on land that was earlier being used to cultivate mostly field crops. Many, though not all, seem to have paid off their loans in about 5-6 years time. This, in spite of facing a couple of very bad years of production and poor returns.

Table 4.2 : Exports of Table-Grapes From India From 1991 to 1998

(in lakh Rs.)

Year	Regions of the World			
	Middle East	Western Europe, USA, Canada	Others	Total
	(No. of countries) Value (Lakh Rs.)	(No. of countries) Value (Lakh Rs.)	(No. of countries) Value (Lakh Rs.)	(No. of countries) Value (Lakh Rs.)
1991 - 92	(6) 1658	(6) 106	(9) 97	(21) 862
1992 - 93	(6) 1652	(7) 339	(10) 186	(23) 2178
1993 - 94	(6) 2185	(11) 884	(11) 323	(28) 3392
1994 - 95	(6) 1486	(8) 2169	(8) 412	(22) 4068
1995- 96	(6) 1752	(9) 3153	(11) 570	(26) 5475
1996 - 97	(7) 1423	(8) 3452	(13) 387	(28) 5264
1997 - 98	(6) 1068	(8) 4911	(13) 621	(27) 6601

Source: APEDA various years

This brings us to the flip side of grape cultivation. It is highly climate dependent. December rains, when the berries are still not firm in the bunch, can wipe out the entire crop, as it did in 1997. Heavy mist has the same effect. One hailstorm can mean ruin. Too much heat in summer, too little or very light rain in August, and not enough cold in winter are all factors that can set off massive pest and fungal infestations, and subsequently raise the cost of production. So while it is a good cash crop, it is also a high-risk one. Thus, only those who have the financial backbone to bear this kind of loss get into grape production.

The cooperative tries to take maximum care to avoid such losses. Every month, starting September, technical meetings are held where experts from various research organisations are called in to give advice and tips about disease control, vine treatment requirements depending on various soil and climatic conditions, and to clarify doubts. A schedule is prepared with

their help, giving full details of not only what tasks to perform and when, but particulars of timings and the exact quantity of chemicals to be used to deal with different problems. Farmers are asked to keep daily records of pesticide and fertiliser application, and this information is documented and widely disseminated.

Another interesting factor on the flip side comes from the very nature of any export business, and brings us to the most important constraint that the export market exerts on the produce of these farmers. The concept of quality control has now firmly entered the vocabulary of Vighnahar farmers. The grape bunches must weigh a minimum of 400 gms, the grapes in them should not be too tightly or too loosely packed. The berries must be large and unblemished. There are preferred bunch shapes and berry shapes, and the process of producing these has undergone continuous evolution since the advent of exports. This process will play a significant role in our study and its details will be discussed in the coming chapters. Despite all efforts, it is seldom that the entire crop will be deemed fit for export, and on an average about 50% will be sold as rejects in the domestic market, and at a lower price.

Lastly, the shipping manifesto must have a document that says the grapes are free of banned chemicals and are of the standards specified by the government of the end-user country. A random sample is taken at the time of packing and tested for such traces. Without this document, the grapes cannot be unloaded at the receiving ports. All these must be controlled within a tight timetable, while tiptoeing around rains, mists, and thunderstorms. It is in this processing that they urgently require the skilled and experienced services of the grape workers, without which grape cultivation for exports will seriously falter. Grapes, which are found to be below the specified standards at the receiving port, are dumped in the sea as garbage.

Even if they do not meet such a sorry end, there is still stiff competition in the global market to contend with. Chile happens to be the major competitor in the European markets and it has a long-standing reputation to back it up. Even if the grapes from India are excellent, exports are bound to suffer if Chile overproduces and dumps them in Europe. This brings down prices drastically, as it happened in 1996. Other than lowering

import duties for cold storage infrastructure and making some token efforts to bring together farmers interested in exporting grapes to Europe, the Indian government has done nothing concrete to boost this sector. The area where this lack is most felt is in providing support to Indian goods, and active help to market them, in foreign countries. There are no subsidies on any of the chemicals used in grape cultivation, and there is no 'foreign office' help at the other end. No amount of wooing chief ministers and other functionaries has brought real returns in this respect.

There is also a small factor of internal competition. There have been instances of other Indian grape exporters, mainly independent traders, trying to undercut other Indian exporters by casting doubts on the quality of their produce to distributors in UK. This has been much deplored in various meetings and write-ups. Calls for national unity have been made. Some independent exporters are also not careful about the quality of their grapes, and this too can soil the reputation of Indian grapes in general.

Therefore, the farmers of the Vighnahar cooperative must strike a delicate balance between bad weather conditions, stringent quality control parameters, and competition in the global markets. It is to their credit that they persist after two bad seasons.

Table 4.3 : Distribution of Land Holdings Among Sample Farmers

Land in acres	Irrigated	Under grape	No. of farmers
Less than 5	2 - 4.5	0.5 - 4.5	4
5 - 9.9	1 - 7	1 – 3.5	5
10 – 14.9	7 - 12	3 - 8	4
15 – 19.9	8 - 18	3.5 - 7	3
20 and above	1.5 - 36	1.5 - 6	3
Total (228.5)	181.5	68.25	19

Source: Survey Data

We talked to many of the Vighnahar farmers during the information-gathering process on the various stages of grape cultivation. We shall present below a profile of the member farmers based on data gathered during conversations with 19 of them. Although this was not a random sample, the profile is quite representative. Table 4.3 gives the size of land holdings

of these farmers.

As evident from the table above, a majority of the farmers fall in the small to medium range in terms of holdings. Most of them have not converted more than 50% of their land into vineyards. Wells are the main source of irrigation, and those farmers near canals use that too. All grape cultivation is done with well water using drip irrigation. They have all been cultivating grapes for more than 5 years with 70% of them doing so for 10 years and more.

These experienced small farmers are trying to get more out of their land than they have ever done before. The level of organisation they are adopting in order to do this efficiently and consistently is a direct result of having to exercise tight control over the quality of the product for the European market. Apart from this being a tough crop to handle in terms of attention to detail, near daily supervision, and the capital needed, it also directly affects the Thakar labour force employed to work on the vineyards for various vine and bunch treatment operations. In the sections to follow, these consequences and their effects on the vineyard workers will be the focus of our attention.

C CHOICE OF FIELD AND SAMPLING

This study looks at the impact that working in the vineyards has on the economy and the toll it takes on the health of the *Thakars* against the backdrop of globalisation.

The vineyards around Narayangao employ workers from the surrounding area of about 30 sq kms. Thakar villages and *wadi*'s dot this area and all the workers come from these. When we first started visiting the farms to find out where these men and women came from we discovered that they hailed from diverse places, and we rarely encountered the same group (or *toli*, as these work groups are called in the area) twice. One reason was that we were mobile over a short range and it was physically impossible to cover all the farms. The second reason was that these groups of workers spent on an average only a few days on any single farm—moving on to the next once they had finished working on the previous. They were not tied to any single farm for the entire season. In order to conduct a systematic study of

their health we needed a group that was easily accessible, both during and after work. This meant picking a Thakar village that was not only easily approachable from Narayangao, but which, most importantly, also had a tradition of grape work among its population. The most obvious choice was the Thakarwadi that comes under the jurisdiction of the Warulwadi grampanchayat, which is contiguous with the Narayangao grampanchayat. The main village of Warulwadi is not physically separate from Narayangao town. The Thakars of Warulwadi live in five settlements separated from each other by an average of 2.5 kms. These settlements or *wadi*'s are about 3.5 kms from the main village of Warulwadi, and are exclusively inhabited by Thakars. These *wadis* are accessible from Narayangao by rickshaw. The most important aspect of this Thakarwadi is that people from here have been some of the first to start working in the early grape cultivation ventures of the Narayangao farmers.

The Thakar settlements of Warulwadi are divided into 5 areas: *Kadale vasti* is the westernmost, then come *Kale vasti, School vasti, Ware vasti and Numberwadi,* all separated from each other by about 2 kms and lined in a southeasterly direction from *Kadale vasti.* These lie at the foot of the range of hillocks that form the southern border of Junnar with Ambegao taluka.

We were fortunate to have made contact with a family in the *Kale vasti,* which had the unique distinction of owning a grape garden as well as being a member of the Vighnahar society since its inception. With their help, we were able to understand many features of how the Thakars of these *wadi*'s were organised around grape work, and how best to get in touch with them.

After a few initial attempts, we realised that qualitative methods were really not very useful in this field situation. There was no NGO presence here to speak of and with the commencement of the grape work season; most people were away for about 10-14 days of the fortnight, leaving home at 8.30 a.m. to return after 6.30 p.m. This left little scope for conversations of any sort. The women would get busy with their housework as soon as they returned, and on the one holiday they had every 2 weeks they had chores to finish, and would go off to the weekly market in Narayangao returning only late in the evening. We conducted a health camp after some preliminary discussions with a few of the women, but in the subsequent months realised that even though some of them

had found the conversation useful, the constraints of their working life meant that there could never be enough time to get any kind of dialogue going. The other impediment lay in the character of these people. They were not a chatty, gossipy lot. We never came across men or women just sitting in groups talking amongst themselves. Life was very businesslike with houses well spaced out. At no point in their social gathering were we able to participate in their conversations.

Given these obstacles, and coupled with our own time and task constraints, we decided to do a quantitative survey of this community.

Having come to this decision, we considered various options for the selection of groups of people to whom a questionnaire and schedule could be administered. We realised that since we wanted to focus on the relationship between grape-related work and health, it was essential to have a control group that did not work in vineyards. Apart from this, we knew next to nothing about the economy, social organisation, and other aspects of this community. The only feasible way in which all these could be worked into a single survey was to carry out a sample survey of all the households in all the five *wadis*.

Who would be the respondents of this survey? Again, we had various options, but time constraints proved to be a major hurdle. We wanted the survey to fall within the grape working season for obvious reasons. By this time we were experienced enough not to expect most people in the *wadi* to be found in, or in the close vicinity of their homes at any given time of the day. Although the men were free to talk later in the night, the women were not so inclined being busy cooking and looking after their children after a long day away at work. While it would have been more informative to have all the adults in a household as respondents, but given these limitations, we decided that it would not be possible to cover such large numbers within the given time. So we resolved to have two adults, one man and one woman, preferably a married couple, as respondents. Though the main focus of this study is the impact of work on the health of women workers, men were included for the simple reason that both men and women did exactly the same tasks in grape work. We decided it would be interesting to hear their voices and compare their health status with that of the women. If the respondents were a married couple, it would be easier to

get information on household economy, and other matters of common interest. If there were more than one married couple in the household, we would select the one that was accessible on the first visit.

We conducted a mapping of all the households of all the five *wadis*, and drew a random sample by picking every third house. The questionnaire for the survey was designed in two parts. One, the family card included information about the household and all the people in it—their age, sex, education and occupation. There was information about the family economy, of the animals that they might keep, the size and condition of any land that the family might have access to for cultivation, share-cropping activities, sources of commonly used food items, and any financial burden the family might be carrying. This information was taken from whomever we met on the first visit. However, many a times women were not aware of land related facts, and that part of the questionnaire had to be filled in by their husbands.

The second part of the questionnaire was the personal card. This was used to collect information from two adults, one man, and one woman, preferably a married couple, in each household. It was applied directly to the respondents. We fixed a recall period of two weeks for various information. The break up of the kind of productive work done in the past 15 days, for example, was used to find out how many working days they spend on grape-related work per fortnight. This was a good unit to use in this community, since they had a holiday from grape work every two weeks. We also used this time slot of two weeks to ask about any illness in the recent past. We could then use it to correlate and validate the working days table, thus ensuring that we had the required information regarding reasons given for not going to work.

Certain questions were applied with a recall period of the running season; the grape tasks done, for example, and the probe list of occupational health complaints suffered. As these were related, we could help memory along in the recall of the latter by using grape-related tasks as markers for the season. Details about health care utilisation and kinds of treatment taken were also noted for both the two-week recall and the season recall. However, the cost of health care was only taken for the two-week recall, since their memory was very poor in

the case of season recall.

We also included a short probe from a list of general health complaints that had a recall period of one year, and was exclusive of the ones in the list of occupational complaints. The question was, 'Have you suffered from any of these illnesses in the recent past?' We concluded that given the short recall period for the current health status, this additional information could be used to round off the health picture. The information was exclusive of illnesses in the 15-day recall period. No further details pertaining to these were taken. No information in either of the cards was obtained from proxy sources. The family card was filled in by one or both the respondents, and the personal card by the respondent alone.

How should a questionnaire addressing issues of relationship between work and health for the people of Thakarwadi most of whom work on vineyards, be designed? A great deal of information had to be mustered prior to drafting such a questionnaire. Extensive discussions with both the farmers and the workers enabled us to learn about the entire process of grape cultivation. We attended the technical briefings held by the Vighnahar Society for its member farmers to update them about vine treatment and disease control, and read literature brought out by the Society for updating and educating grape farmers (Maharashtra Rajya Draksha Bagaitdar Sangha, various years). We talked to the farmers to get a full picture of all the vine treatments that were necessary for the production of export quality grapes, and to find out how they pooled together available labour force to carry these out. We spent time observing the workers at their various tasks and discussed with them in detail the effects of these on their health. We did this to find out if any specific health problem was being perceived as arising out of a particular grape/grape-related task.

We felt that since those being surveyed had long-standing experience of grape-related work, it would be best to do a perception study of their health status. They would be the best judges of how their bodies were affected by the various kinds of work they did in conjunction with their lifestyle. We would make no independent verification of these perceptions.

The time we spent in familiarising ourselves with the entire process of grape cultivation, the discussions we had with the farmers, and the men and women of Thakarwadi who worked

in their vineyards, were crucial elements in establishing rapport with the entire community. We took pains to tell all those involved about our aims in doing this survey. It created an atmosphere of trust and openness, which finally paid off in terms of the willingness of the people of Thakarwadi to patiently sit through the rather lengthy questionnaire. The questionnaire format suited the Thakar community very well, given their inclination for businesslike dealings.

In Section D, we will give an account of the various facets of the work involved in producing export quality grapes, and the way the farmers and the Thakars interact with each other in the course of this exercise. This will give an idea of the possible health implications arising from grape-related work, and reflect the level of organisation being introduced into such work because of export pressures.

D NATURE AND ORGANISATION OF WORK

In order to understand the details of the survey, it would be necessary to understand the various tasks involved in grape cultivation, and the workers' role in carrying them out.

A vineyard is made of grape vines planted in rows at about 6 feet from each other. The branches begin at around 5-51/2 feet and are supported by wire trellises that crisscross the length and breadth of the vineyard.

The next season gets underway as soon as the harvesting of the previous one is over—that is, between April and June the first pruning takes place. This is done to promote the healthy growth of new strong stems. The old branches are pruned all the way down. New growth appears in a few weeks and is nipped off again at the tips to make the stems stronger. The monsoon appears around this time, and then no vine treatment is undertaken. During this time most of the work involves weeding, making sure that there is no water logging under the vines, and spraying chemicals for disease control. The second pruning, traditionally referred to as the October pruning, can start as early as September or be done as late as November. This one is done to promote budding, flowering, and eventual fruit bearing. The vines are stripped of all their leaves, then the bare branches

are selectively pruned with an eye to their capacity to take the weight of at least a few bunches of grapes. The larger, stronger branches are kept long, and the weaker ones are either pruned away altogether or kept very short. This work goes on simultaneously with the chemical treatment of these branches to promote quick and profuse budding. The freshly pruned branches are dipped into a solution containing Dormex (Hydrogen Cynamite 49%, impurities 9%, mixed with water). When new growth starts from these treated branches, it must be selectively retained in order to promote greater fruition within each bud. The thumb rule used is that each branch must have at least ten leaves above the last bud, so that the fruit has a good supply of nutrients from photosynthesis. If this is not done, there is insufficient sugar formation and the berries become watery. Therefore, the shoot tips that lie beyond 10 leaves are clipped, any extra growth not containing buds is trimmed, and only the strong buds are retained. This is done again when the buds have opened and fruition has taken place.

The next stage involves bunch treatment. When the berries become the size of a *dhania* (coriander) seed, the first round of thinning is done. This is done literally to thin the berries in each bunch. Alternate berries are snipped off with a pair of pointed scissors, so that the berries spiral down the bunch. It is delicate work, and if not done properly the eventual shape of the bunch is adversely affected, making it aesthetically unappealing. It is also done to avoid overcrowding within the bunch, and to give individual berries enough space to grow fat. Each bunch goes through two more rounds of thinning in two further stages of the growth of the berries. In between these thinning schedules, there is girdling. This is done to trap the circulation of the plant juices to the top half of the vine during the crucial phase of berry development. A 2 mm wide strip of the inner bark of the vine is stripped off about a meter above the ground level. Next comes the all-important dipping, which is again done in two rounds in between the thinning. Each individual bunch is dipped into a solution containing growth hormones to stimulate the fattening of the berries. This, together with judicious thinning, is what produces the large bunches with large grapes, so coveted by the European market.

How is this process different from what is done to produce grapes for the Indian market? The crucial difference lies in the thinning and dipping processes, which are rarely undertaken

for the non-export produce. Bunches just grow as they bud; and since the grape size is not an issue, the task of removing weak or small buds is not carried out at all. Therefore, a much larger number of bunches per branch is retained. Thinning, if done at all, is minimal, and done only once; there is no place for dipping in the scheme of things. The result of this difference for the workers lies in the length of employment in the vineyards. The export farms provide work over a much longer period than the non-export farms.

Only an experienced hand can instinctively distinguish between a weak and a strong bud, can decide which berry in the bunch needs to be taken off, or how strong a branch is, etc. Skill is of essence, and has become more so since the advent of exports. The eventual tonnage and value of the produce fully depends on not only how well these tasks are performed, but when and how fast they are accomplished. The weather, however, is the controlling factor in most vine treatment operations. These tasks have to be performed at exactly the right time of the season, that is, when weather conditions are conducive for a particular growth stage of the vine and the berries. In order to keep the garden in a reasonably homogeneous stage of growth, these tasks must be carried out as fast as possible.

Work moves swiftly in vineyards. Men and women move through the rows of vines, one on each, +side, that ensure no vine is missed. These tasks require that people stand under the vines with their arms raised to reach the vine branches. Different tasks take different amount of time. A group of 35 people might cover about 3 acres in a day if they are doing shoot removal. However, the same number will take three days to carry out thinning in the same garden.

The farmer and his family members supervise the work in the vineyards. It is necessary to visit the vineyard every day and keep a sharp eye on the first sign or symptom of any disease. These tend to spread very fast, at times over a couple of days, and can cause considerable loss to plant and profit.

The task of spraying pesticides and fungicides, and the sprinkling of fertilisers is done by the farmer with the help of a resident labour (or *saldaar* as they are commonly called since they are hired on a yearly basis) he may have. About half the Vighnahar farmers have *saldaar* labourers. The *saldaar* labourer

is rarely a Thakar. This is a relatively new trend. We met Thakars who had been *saldaars* and had returned to their villages as organised grape-related work became available at higher wages without their having to live on somebody else's farm. Most *saldaars* around Narayangao are now migrants and belong to the Mahadeo Koli community. Farmers rarely use them for skilled work—such as bunch treatment—on the vineyards. They help in spraying/sprinkling pesticides, fungicides and fertilisers, and do weeding and other unskilled routine jobs. They have, as expected, very complex monetary relations with the farmers, and it is hard to ascertain how much they are paid. However, one can safely assume that it is less than what the Thakars get.

Table 4.4 gives an idea of the break-up of the type of labour used by farmers from our sample of 19 Vighnahar members.

Table 4.4 : Distribution of the Number of *Saldaar* and *Thakar* Workers Employed by Farmers

Total no. of workers	Saldaar workers	Thakar workers	No. of farmers
Less than 10	0 – 4	0 - 8	3
10 – 24	0 – 16	0 - 20	6
25 – 39	0 – 8	20 - 30	3
40 and above	6 – 25	22 - 70	7

Source: Survey Data

We found that a significant proportion of the farmers (42.1%) do not employ *saldaar* labourers, a reflection of the fact that many of them are small farmers. In such cases, the farmer and his family alone must do the task of spraying and supervision. Except two farmers who have Thakar *saldaars*, everybody else hires them in large numbers during the grape season. The approximate ratio is about six persons to every acre, for 20 days in the season.

The Thakars have a near monopoly over grape-related work in the Narayangao area. Their skills set them apart from other communities, such as the Mahadeo Kolis, and give them the bargaining power to negotiate working conditions and wages. They have maintained this monopoly essentially by keeping the work *wadi*- and community-based. A woman told us how she first learnt thinning. A group of women used to go with the men to a nearby vineyard to do weeding. However, during the lunch

break they would take the scissors from the men and practice thinning on bunches that had been discarded. It took them about a month to learn the ropes, and by the next season, they were full-fledged *toli* members.

Since the skills required for vine and bunch treatment can be acquired equally well by men and women, there is no disparity in their wages. All members of the *toli* get the same wages. This is quite unlike what happens with casual labourers in field crops where disparity between the wages of men and women exist.

The daily schedule of a Thakar working on grape is very tight, and conforms to the near industrialisation of the whole process. People are organised into work groups, which are mostly *wadi* based. There can be more than one such group or *toli* in a *wadi*.

The *toli* leader is a Thakar. He is well connected with the surrounding community of grape farmers, and is trusted by both Thakars and farmers alike. He draws up a schedule for each of the vineyards his *toli* will be working on during the season. It requires a good deal of coordination, foresight, and a very highly developed sense of planning. We found that most of them kept an eye on the weather, and keenly observed the vineyards, anticipating whose farm was most likely to be hit by disease. They would then meet the farmer and find out if labour was required for emergency measures. This exercise has the dual purpose of keeping good relations with the farmer besides ensuring that no extra work is lost to another *toli*.

The *toli* leaders—all men—are literate. They have to maintain a daily register of the *toli* members in order to calculate wages. For them, the fortnightly holiday means travelling on bicycles to the farms that have been working on that fortnight to collect wages. These are distributed to the *toli* members the same day so that they can go to the weekly market with cash in their pockets. We found no evidence of *toli* leaders getting any extra compensation for this organisational work. Their houses did not stand out in the *wadi*, nor was there anything in any material fashion to set them apart from the rest.

The *toli* leaders also mediate for a *toli* member who would like to take a loan from a farmer. Some even advance small loans themselves—when they can afford it. In their *wadi*, they keep an eye on those who would like to start working on the

vineyards. A great deal of complex accommodation goes on to make place for them in the *toli*. When asked about how they deal with the increasing working-age population of the *wadi*, they are hard put to explain these nebulous and almost subcutaneous processes. However, over the past few years, grape-related work has seen a steady increase and absorbing newcomers has not been a problem. *The toli* leaders are highly valuable to both: their fellow Thakars, to keep them employed for as much of the season as possible, and farmers, to keep them supplied with assured labour at the right time and in the right numbers. We were able to identify about 12 *tolis* operating from our study area. The *toli* leaders gave us an enormous amount of information, not only about the history and geography of grape work, but also about the people who worked in their *tolis*. Some of them became good friends, and all of them helped us to the extent they could to make our work easier.

Over the past four years, the Thakars have managed to strike a few deals with the farmers. One among them is that wages will be increased by Rs 5 per day every year. Another deal is quite interesting and points to the evolving relationship between the workers and the farmers. It is discernable in the increasing level of organisation being introduced into grape cultivation by the latter. For example, small trucks and jeeps are sent to the *wadis* by the farmers every morning to pick up the workers and take them to whichever farm they will be working on that day. After work they are taken back home in the evening. The *toli* leaders say that this is one reason why the number of women working in the vineyards has gone up considerably in the last couple of years. Before this, the women could only work in farms that were close to their houses, or rely on men to give them rides to the farms on bicycles. Now, a working day begins at about 8.45 a.m. when the trucks arrive at the *wadis* for the pick up, and ends at around 6 p.m. in the evening when they bring the workers home.

Working hours in the vineyards have been negotiated to include a rest period. All the farmers we talked to said they had no problems with this, and that working with arms raised all the time meant workers needed that rest. When work begins at 9.30 a.m., it goes in cycles of 15 minutes of rest after every hour of work. There is an hour's lunch break between 1 p.m. and 2 p.m. At around 5.45 p.m. the work ends, and the trucks are ready to take the workers home. The *toli* leader keeps a

strict vigil on the timings, and ensures that these are adhered to. He signals when the rest is to begin and when work is to recommence, and all the workers follow his commands without fail. There is near complete silence when work is in progress, and even so during the rest period when people simply sit, rarely talking to each other. A large pot of drinking water is kept within the easy reach of the workers, and a hand pump or well is available for use during the lunch break. Men and women relieve themselves in the surrounding fields during the day.

Occasionally, one can see a toddler on the farm, brought there by its mother. She ties a sari between two vines and puts it to sleep or it will wander around playing on its own. She feeds him/her in the rest periods. However, such cases are very few. The farmers do not seem to object. If the child begins to cry, and the mother has to take time off to play with him/her, then she works in the rest period to catch up with the others. People generally help out. This is one of the advantages of working in a *toli* that is mostly made up of your relatives.

The relationship between workers and farmers has to be one of trust, a fact that both sides pointed out to us. We observed that most of the time the farmer kept a supervisory presence in the farm, at times lending a hand here and there, or talking to the *toli* leader about various future arrangements, but there was no pushing or prodding. In fact, *toli* leaders are so convinced of their niche in the grape business that they refuse to work with farmers who 'nag'. Farmers are quite aware of this fact and say they have to 'pamper' the Thakars and avoid confrontation even at times when they are not satisfied with the pace of work. The organisational set-up in the vineyards, described above, is quite different from that of plantation labour. Though studies on skilled labourers at export-oriented plantation crops, such as tea and rubber, have been carried out from their perspective, we have, however, not come across any such study on grape workers. (Kurien, undated).

The level of skill required is equally high in these jobs at the plantations. However, the workers are not organised along the lines of a close-knit community, but are individuals making the best of the available work. As a result, the level of exploitation is high, with little or no bargaining power, especially for women. Where there is unionisation of labour, the women again get left out in the patriarchal structures that such organisations follow.

The Thakars have managed to avoid many of these pitfalls because of the manner in which their society is organised, and the way it has adapted to the availability of wage work. This aspect of flexibility of an entire community, acting for the benefit of many, will become clearer in the discussions that follow.

Without the active cooperation of the Vighnahar farmers and the people of Thakarwadi, this task of doing a complex survey in a short time would not have paid such rich dividends. A point worth mentioning now is that both the field investigators on this project were women. However, they never felt unsafe or insecure while roaming around the countryside in a rickshaw, at times in pitch darkness. They interacted with many men—farmers and Thakars alike. In neither case did they ever experience even the slightest patronising attitude because of gender. Everybody interacted with them openly, answering detailed questions on repeated visits, and were appreciative of the interest they took in their work and lives. A relationship with the community was evolved that made the work doubly interesting and rewarding.

In Section E, we look at the social and economic organization of the Thakars as gleaned from the family cards, and against that backdrop look at the health of the individual respondents.

E BASICS REGARDING THAKARWADI

There were 337 Thakar households in the five Thakarwadis of Warulwadi grampanchayat at the time of mapping. Of these, we selected 112 by picking every third household. Of these, seven were eventually disqualified because the members were away on the fields during the survey period, or turned out to be tenants on a temporary basis. Of the remaining 105, members of 16 households could not be contacted for administration of the questionnaire till the end of the survey period, which stretched from the end of January 1999 to the end of March 1999.89 households were thus successfully surveyed. Each household was visited on an average 3 times. The respondents never refused to answer a question.

4.1 Social Organisation

The basic population break up of the sample households as calculated from the family information is given in Table 4.5.

Table 4.5 : Basic Data Relating to the Sample Households

Total number of households	89
Total number of people in 89 households	443
Total number of males	221
Total number of females	222
Total number of adults	253
Total number of minors	190

Source: Survey Data

There are 1,005 females for every 1,000 males, and the crude birth rate is 2.9. Another interesting table that gives an insight into the social organisation of this community is the distribution of the number of married adults in each household.

Table 4.6 : No. of Ever Married Adults in Households

No. of ever married adults per household	No.	%
1	7	7.9
2	55	61.8
3	5	5.6
4	17	19.1
5	1	1.1
6	4	4.5
Total	89	100

Source: Survey Data

Table 4.6 shows that households consist of nuclear families (2 ever-married adults in a household) in a very large number of cases. We observed that as long as a small piece of land was available, a married son rarely stayed in the same house as his parents. Most people built their own houses with mud, stones, bricks, and tiles; at times sharing a wall with the parental house. As a result, the *wadis* have grown to become groupings of extended families. The names by which the *wadis* are referred to reflect this phenomenon. Kadalewadi is made up almost entirely of people with the surname Kadale, and they are all related to each other, sometimes being second or third cousins. This is true to a large extent of Warevasti and Numberwadi.

The latter is a well-settled Thakarwadi, which most occupants describe as their ancestral home.

Women who marry into this community come from other Thakar villages in Ambegao or Junnar talukas, and conversely, women from here marry into those villages. The men of Thakarwadi pay bride price to bring home a wife. Bigamy is rare but not absent. Widowed or divorced people, men and women, might marry again, even at a late age. Some live by themselves and support themselves and their children. Women can take the decision to leave their husbands for various reasons of incompatibility; and going back to the parental home is considered normal. We saw cases of such women building their own huts next to their parents' and earning their own living by working on the vineyards. We have seen a woman and her daughter-in-law, both widows, living next door to each other, and leading independent lives. There was little evidence of violence in the Thakar community.

4.2 Occupation

The break up of occupations in this population of sample households can be divided into six categories: Grape, Farm (wage and non-wage), other (wage and non-wage), None, Student, and for children less than 5 years of age — not applicable (NA) Table 4.7.

Table 4.7 : Occupational Profile of all the Members of the Sample Households

Occupation	Males		Females	
	No	Per cent	No	Per cent
Grape	82	37.1	68	30.6
Farm	32	14.5	42	18.9
Other	7	3.2	12	5.4
None	10	4.5	20	9.0
Student	52	23.5	49	22.1
NA	38	17.2	31	14.0
Total	221	100	222	100

Source: Survey Data

In the 'Other' category, we have included the work of tending household animals, gathering firewood, and any non-

agricultural wage work that people might be engaged in. A couple of men worked in a local coal kiln, another did tailoring at home, and one was a primary school teacher in a nearby village. The 'None' category simply implies those who are not engaged in work that can be included in the categories of Grape, Farm or Other. Housework such as cooking, cleaning, fetching water and taking care of children was common to all women and was not separately categorised. It also set the women apart from the men.

The number of males and females not in gainful work was identical, 100 (None + Student + NA). There were 10 more male children than female, while 10 more females than males did no work mainly because they had children of less than 2 years to take care of. There was an almost equal number of students of both sexes. Parents, most of whom are illiterate, were very particular about sending their children to school. Of the gainfully occupied males (121) and females (122), a larger number of males (82, 67.8%) were engaged in grape work than females (68, 55.7%). A larger number of women were engaged in farm and other work than men. Although women took most of the responsibility for tending household animals, men and women alike shared the wood gathering. Farm work was done mostly on their own farms or as wage labour on farms close to their homes.

Overwhelming 85% families have at least one member engaged in grape work. Overall, an industrious community has taken full advantage of the wage labour available locally.

Table 4.8 gives an idea of the occupational distribution according to age in the main categories of Grape, Farm and Other, and None. These throw up some interesting patterns of where the peak working age for men and women lie, and the jobs they work on.

The difference in the figures for the 'None' category for women, which comprises mostly of old women, comes from those who have children less than 2 years of age. The differences between the figures for grape workers are accounted partly by this, and partly by the fact that a slightly larger number of women tend to work on farm-related activities.

The usual age of marriage for women is about 15 to 16. Many women start working before marriage and continue to do

so after marriage until the arrival of the first child. Time off for pregnancy, especially from wage work, begins around the 6th month and can stretch up to the time the child becomes eighteen months old. This is considered normal. No contraception is used for spacing children, and the usual gap is 1.5 to 2 years. Most of the child bearing is over around 23. The largest number of women going to work lies mainly in the age group 23 - 42. They work not only on vineyards, but also in farm-related activity. Women with very young children tend to stay at home. They might decide to work on a farm closer home if all their children are of and above the walking age; or where possible, take the youngest one with them to work. Young or old, most people work most of their lives.

Table 4.8 : Occupational Profile of All Members of Sample Households by Age

	Members in Sample Households		Grape		Farm & Other		None	
Age	Males	Females	Men	Women	Men	Women	Men	Women
Less than 13	79	79	0	2	1	2	3	2
13 – 17	24	30	9	14	1	8	0	2
18 – 22	18	18	17	8	0	5	0	4
23 – 27	18	33	17	18	1	12	0	3
28 – 32	24	12	16	9	8	2	0	1
33 – 37	9	16	7	10	2	6	0	0
38 – 42	18	9	11	3	7	6	0	0
43 – 47	8	8	3	2	4	5	1	1
48 – 52	6	4	0	0	5	2	1	2
53 – 57	4	6	1	1	2	4	1	1
58 – 62	8	2	1	0	6	1	1	1
63 >	5	5	0	1	2	1	3	3
Total	221	222	82	68	39	54	10	20

Source: Survey Data

Men and women above 42 years did not go for work in the vineyards; only five men and four women from this age group did this job. Most workers of this age (19 men and 13 women) while engaged in farm-related tasks preferred to opt out of grape related work.

An explanation of the cut-off age of 42 for men and women to stop working on the grapes and the vines can be given as

follows. The marriageable age for women is in the range of 14 to 16 years, while for men it is between 16 and 18. Depending on the number of children, most women finish childbearing around 20 or 23. As can be seen from Table 4.8, men continue to work throughout this period. However, women take breaks and get back into the workforce on a regular basis only after the youngest child is more than 2 years old. After this, men and women work uninterruptedly till their early 40s, at which point, most of their children are old enough to be married and live separately according to the custom of the community. Those who are yet to be married would at least have become earning members of the family. The responsibility of the parents' vis-à-vis supporting their children is more or less over. It might then be felt that there is no real need to go long distances, and work full time on grape gardens. Working on their own land, taking up casual farm or other wage work on neighbouring farms is preferred, and this is reflected in Table 4.8.

Our data show that Thakars are not keen on acquiring consumer goods. Out of the 89 households, surveyed only six had television sets. Sixty-one of them had a bicycle; but this really cannot be considered a consumer item. Only 36 had radios; which is low for a device that is cheap and has been commonly available for decades. This behaviour would also support the argument that needs drop considerably when children leave home and/or become independent, greatly reducing the incentive for people in their early 40s to worry beyond being able to afford three meals a day.

4.3 Cultivation

To complete the picture of work choices, one needs to look at the land-ownership pattern in Thakarwadi. We asked people how much land from the household was available to them for cultivation. Most people did not own the land they cultivated, since it had not been formally divided among the inheritors. Therefore, they had informal deals with their brothers or uncles about who cultivated how much. There were very few cases of separate households pooling in their resources to cultivate a piece of ancestral land. Those who owned the land preferred to cultivate it themselves. Some had access to irrigation from well water. About 62%, i.e., 55 of the 89 households were

cultivating some land on their own. Of the remaining, 24 had no land to cultivate, and from 10 we failed to get this information. A good 46 of the 55 cultivating households had less than 4 acres of land each, and no one had more than 9 acres. The households with more than 4 acres of land had no irrigation facility at all, but 32 of the 46 cultivating households, with less than 4 acres of land, had some land under well irrigation.

The availability of well water was at its maximum just after the monsoon. Therefore, a quick rabi crop of wheat was possible. However, having land did not preclude working on the grape farms. An examination of the occupational break-up with respect to the availability of cultivable land in Table 4.9 gives the number of people in a household who worked on a grapevine or a farm. The population has been divided into those who have land and those who do not. Of the 89, only 13 (14.6%) households had no one working on the grapevines (3 with no land, 8 with land, 2 about whom there was no information). Among the households with land, a pattern emerges: people are evenly divided between grapevine work and farm work, which is consistent with the earlier trends. There were households where the husband did only farming while the wife did full-time work on the grapevines, or vice versa. Most members of households with land spent the monsoon doing cultivation, when grapevine work was not available.

Table 4.9 : Occupational Profile of Households According to Availability of Land for Cultivation

No. of household members	No. of Households					
	No land		With land		No information	
	Grape	Farm	Grape	Farm	Grape	Farm
0	3	20	8	22	2	6
1	9	3	16	18	0	1
2	7	1	22	10	7	2
3	3	0	5	3	0	0
4	1	0	3	1	1	1
5	1	0	1	1	0	0
Total	24	24	55	55	10	10

Source: Survey Data

Most households cultivated cereals for consumption at home; these were bajra, wheat, and some amount of a pulse

called matki, which everybody in Thakarwadi ate. However, this did not suffice the whole year and everybody had to supplement it by buying from the ration shop and the open market. Flowers and vegetables were cultivated mostly for the market. The former was proving to be profitable, and it could catch on in the future. Production costs of vegetables are high, and returns very unpredictable. For people with very little available capital, this was risky. Moreover, this was another reason for the growing interest in flowers. Of the few families who had taken loans, most of them had done so for buying seeds and fertiliser for cultivating vegetables.

A majority of the people kept a few chickens at home. Many kept goats, and in Kadalewadi, some kept cattle too. However, these domestic birds and animals seemed to contribute little in terms of income—barring the occasional sale of a lamb, a fowl, or some eggs.. The milk from the goats and the cows was mostly consumed at home.

4.4 Economy

While calculating the annual household income the following rule of thumb was applied. The period for computing the income was fixed from April 1998 to March 1999, with the entire season's work on the grapevine being taken as 160 days a year. If a person did not work for the entire season then an approximate number of days were noted, based on the information provided by the household members. The same procedure was followed for non-grape wage work. The wage for all the work that a person did during this period was noted, and if s/he did not do so then the approximate number of days, based on the information provided by household members was taken note of.

The average vineyard wage per day for women was Rs 48 and for men Rs 50. This was consistent with the farmers' claims that they paid the same wages to both men and women since they did the same work in the vineyard. An inconsistency has crept in because a *toli* leader paid Rs 50 to women and Rs 60 to men. The difference in the daily wage for farm labourers was expectedly much larger; the women got Rs 30 and the men Rs 40.

Information about what was cultivated on how much land was noted, and an average per acre was worked out for cost, and income from each item. These were backed by discussions with a few key people in Thakarwadi. The same was applied for sharecropping, which were very few. The income from household animals was taken as specified by the respondents.

Table 4.10 shows the distribution of households according to income, which is again broken up into income from work on the grapevines, and income from other work.

The effect of grape work on the finances of the households becomes very clear from Table 4.10. Those households whose members work on the vineyards are in the higher income category Rs.15001 – Rs 35,000 above. The share of other sources of income, which include household agriculture and other wage work, is much smaller in these cases. It cannot, however, be concluded that this indicates a shift from non-grape work to grape work, since the availability of water and other resources for household agriculture has not changed in the last decade, nor is there any change in the conditions of employment in the non-agricultural sectors. We believe that this table indicates why many of the Thakars said that grape work had succeeded in keeping them from starving in the lean months. There were 13 households where none of the members worked on the vineyards. They all fall in the lower income categories.

The per capita annual income stands at Rs 3,608, of which grape work alone contributes Rs 2,470. This is a slight underestimation, since incomes from non-grape work sources for 25 households could not be obtained fully. The per capita figures are based on the available income figures.

4.5 Nutrition

Nutritionally, Thakars appeared to have a well balanced diet. Everybody has two meals a day at the least, with a large number having three. The diet consists of bajra (coarse cereal) *roti*, some vegetables in the morning, and, some additional rice, and daal at night. They drink tea once in the morning; and many do not do so at all. They eat non-vegetarian food, on an average, once a month. This includes eggs, meat, and fish—that they catch themselves. Many households have nets for the purpose.

Table 4.10 : Average Annual Household Income for Sampled Households

Income in Rs.	Average annual income				No. of households
	Total	(%) Grape work		(%) Other work	
Less than 5000	4500	(33)	1500	(67) 3000	1
5001- 10000	7977	(67)	5318	(33) 2695	11
10,001 – 15000	12560	(38)	4725	(62) 7835	10
15,001 – 20000	17425	(61)	10586	(39) 6839	14
20,001 – 25000	22293	(70)	15629	(30) 6665	14
25,001 – 30000	29100	(62)	18133	(38) 10967	3
30,001 – 35000	31770	(68)	21760	(32) 10010	5
35,001 and above	48241	(58)	28000	(42) 20241	6
Not calculable	—	—		—	25
Total	—	—		—	89

Source: Survey Data

Nobody goes hungry, even when cash reserves are low, especially during the monsoon season when no wage work is available. Many people attributed this to the availability of work on the vineyards in recent years. The grape wages are used to judiciously stock basic reserves, and even shopkeepers in town are willing to give provisions on credit, knowing it will be paid back once the grape season begins.

4.6 Basic Amenities

In terms of infrastructure, the one basic amenity that is easily and abundantly available in these *wadis* is the supply of clean drinking water. Hand pumps dot the *wadis*, and a few families use well water as well. The auxiliary nurse midwife (ANM) from the Narayangao Rural Hospital, who visits these *wadis*, says that there have been no instances of major gastric outbreaks in recent memory. All households have a source of water, that at most takes five minutes to reach, and is available all day. Since the *wadis* are situated close to the hills on large open tracts of land, people have not built toilets—except in rare cases—but walk some distance from the cluster of houses to relieve themselves. The houses and surroundings are very clean. This is especially true of the immediate environs of the hand pumps and the wells. Very few houses have electricity, and street lighting is mostly absent, as are roads.

4.7 Health Care Infrastructure

As far as access to health care is concerned, there are various options, but all of them are available in the Narayangao town. The Rural Hospital (RH) is there, various private practitioners are there, but all of them are at an average distance of about 4.5 kms. No private practitioner visits the *wadis*, and we have not heard of any quacks. The ANM and a MHW (Male Health Worker) who visit the *wadis* were very clear about the fact that they only did work related to family planning. They did not have supply of even iron/Ca tablets for the past 2 years, so they visited the *wadis* once in a couple of months and took notes about the health of the pregnant women. Quite a few women attributed their decision to undergo tubectomy to the

persuasions of these personnel. The MHW told us he distributes chloroquine tablets freely. Of what use these could be in places where there are no mosquitoes was unfathomable. Old people sometimes gave some herbal preparations for minor injuries or ailments, but that did not seem to be very common. Most people used allopathic medicines; they bought it directly from a medicine shop or on the prescriptions of a doctor. People walked or cycled to town, and those who were too ill to walk were given a lift on somebody's bicycle.

The use of the Rural Hospital was very rare. During the health camp conducted by us, a woman diagnosed with a prolapsed uterus did not go to the RH despite being repeatedly adviced to do so. The reason given appeared very logical. The OPD hours at the RH fall during the working hours of most of the women in the *wadis*. Moreover, on the market day, when the OPD is too crowded, they are brusquely treated, and do not believe that they have been properly checked. Therefore, they go to a private doctor, either in the evening on a working day, or on the market day. In another case of what appeared to be an acute vaginal infection, the woman did not get any medication for quite a few days mainly because all the available health care was at a long distance, and a visit had to be planned in advance. With housework and farming to do, she simply could not make such a slot available and suffered a good bit in the interim.

All deliveries took place at home, and women in the village assisted in the process. In very rare cases were women taken to a private hospital due to complications. Even in such emergencies, the RH was not used. On the decision to undergo tubectomy, a large number of women said they decided that themselves, some said it was a joint decision with their husbands, and a very few said they did it because their husbands asked them to do so. Vasectomies were reported by the older men, but not by the younger lot.

With this introduction to the overall economic and social organisation of Thakarwadi, we shall now turn to the main point of this survey, the health of its people. We shall analyse the data gathered from personal cards in order to see what impact work on the grapevines has had on the health of the people engaged in it.

F WORK AND HEALTH

Of the 89 households whose family cards were filled, three had only male and no female respondents, and six had only female and no male respondents. Of the 86 households that had a woman respondent, two could not be contacted, giving us 84 valid responses of women for the personal cards. Of the 83 households which had a male respondent, 17 could not be contacted giving a total of 66 valid responses of men for the personal cards, of which—in 2 cases—the respondents were not married.

The sample of occupational break-up of individual respondents is given in Table 4.11.

Table 4.11 : Occupation of Individual Respondents

Occupation	Men		Women	
	No	%	No	%
Grape	45	68.2	43	51.2
Farm	16	24.2	27	32.1
Other	2	3.0	6	7.1
None	3	4.5	8	9.5
Total	66	100	84	100

Source: Survey Data

The difference in numbers between men and women that appeared in Tables 4.7 and 4.8 persist here. These have been somewhat magnified during individual sampling, probably because in households where there were more than one married couple, the younger and the more visible ones were chosen to respond to the questionnaire.

The 45 women involved in grape-related work during the season when the survey was conducted are compared with the women who did not work in the grape farms, but came in the Farm, Other and None categories, 41 of whom would form the control population. While 45 men worked in the grape farms, the control group of 21 did not.

The age and occupation distribution of the sample of individual respondents are similar to that of the household population seen in Table 4.12

The difference in the working patterns of men and women seen in the previous section can be highlighted here with the

help of the number of grape-related tasks that men and women engaged in during the season Table 4.13. This gives a picture of how much of the season was typically covered by women and men. Women tend to cover less of the season than men, taking time off to look after cultivation of their land, or household chores of various kinds, such as gathering firewood, attending functions of all sorts and assisting in their organisation, taking care of ailing family members, and in general participating in more diverse occupations than men. Although these other occupations are also important, they have to do grape work in order to supplement the family income as much as possible.

Table 4.12 : Occupational Break-Ups of Individual Respondents by Age

Age	Occupation					
	Women (84)			Men (66)		
	Grape	Farm & Other	None	Grape	Farm & Other	None
Less than 18	4	1	0	0	0	0
18 – 22	2	1	2	5	0	0
23 – 27	14	11	1	11	1	0
28 – 32	8	2	1	10	4	0
33 – 37	9	7	0	7	2	0
38 – 42	2	4	0	7	4	0
43 – 47	2	3	0	3	0	1
48 – 52	0	2	1	0	3	1
53 – 57	1	1	0	1	0	0
58 – 62	0	1	0	1	3	0
63 and greater	1	1	2	0	1	1
Total	43	34	7	45	18	3

Source: Survey Data

Table 4.13 : No. of Grape-Related Tasks Done in the Season by Individual Respondents

No. of grape tasks done	Women		Men	
	No	%	No	%
0	41	48.8	21	31.8
1	3	3.6	2	3.0
2	3	3.6	0	0
3	1	1.2	3	4.5
4	6	7.1	1	1.5
5	5	6.0	2	3.0
6	11	13.1	10	15.2
7	11	13.1	20	30.3
8	3	3.6	7	10.6
Total	84	100	66	100

Source: Survey Data

The assertion by many *toli* leaders that more women have started working on grape farms since the advent of trucking and greater organisation on the part of the farmers is reflected in *Table 4.14*. It shows the number of years that respondents have worked on grape farms.

Table 4.14 : No. of Years that Individual Respondents have Worked on Grape Farms

No. of years in grape farms	% of women	% of men
Up to 5	25	25.8
6 - 10	16.9	19.7
11 – 20	8.3	18.1
21 and above	0	4.5
Non-grape	48.8	31.8
Total	100	100

Source: Survey Data

Men have been working on grape farms for much longer period than women have, and even today, their numbers are larger. However, both sexes have seen a substantial increase in employment in grape-related work in the last 5 years, as a direct result of increasing wages and easier access to work.

Let us now move to the data regarding one of the main aims of this study—the link between work and health.

We will divide the presentation of the health data into 3 sections. The first will deal with the occupational hazards probe-list in the personal card. The second will look at the reporting

of illness in the 2-week recall period, and the third will look at the general health probe-list in the card with one-year recall period.

4.8 Occupational Health Risks

This is a study of how the Thakars perceive their work to be affecting their health. The discussions we had with some of the workers, both men and women, about which tasks they found physically the most demanding, enabled us to pinpoint the most crucial hazard of this work, namely, posture-related aches and pains. To perform various vines and bunch treatment tasks, workers have to stand under the wire-trellised vines, with their arms raised at least to shoulder level, and almost to head level for short people. The posture has obvious drawbacks when held for several hours a day over a stretch of about 6-7 months. We found that the farmers were not oblivious of this strain on the workers. In all the vineyards we visited, people worked for about an hour and rested for 15 minutes. This rest was separate from their one-hour lunch break. Even so, the daily strain did give rise to fatigue and various aches and pains. Many people reported that this got better as the season progressed, and they got used to the posture.

Contrary to our expectations, there were no general complaints about the effects of pesticides. This was because the farmer himself, or his saldaar labour, did the spraying of chemicals when there were no workers in the garden. However, occasionally residual drops or flecks, along with other dry stuff, did fall into the workers' eyes since they had to look up at the vines. The chemical that the workers came into direct contact was Dormex/Bordeaux used to treat the pruned branches. This was a corrosive mixture and led to the peeling off of the skin from the hands and even caused mild chemical burns when it seeped into their clothes and remained in contact with the underlying skin. The peeled skin became heat sensitive and women complained that cooking had become a painful activity. The severity of the reaction varied from person to person, but all those who handled it suffered some side effects. Because of this adverse health effect many Thakar workers refused to do Dormex work. Of the surveyed, 85% men and 80% women did not do Dormex related work. They did the pruning, but refused

to treat the branches. The family of the farmer and the saldaar labour took up this load. In cases where this was not enough, those Thakars willing to do Dormex work were brought in from further afield. This work lasted for about 3-4 weeks during the grape season.

The main reason why farmers themselves took up a good bit of the spraying was that some of the pesticides and fungicides that they used in order to conform to European standards were very expensive and their application had to be strictly monitored. We saw sons and nephews of the farmers doing the spraying. The son of one of the rich and influential farmers supervised the Dormex phase in their vineyards with his hands and arms completely covered in the chemical. The work lasted for almost 2 weeks. This was the upper limit of the time taken per farm to finish this work. Spraying went on throughout the year, except for a strictly monitored 2 weeks just before harvesting.

Eyesight was affected due to the close and minute work of thinning. One worker said that staring into an open and sunlit sky during pruning was harming the eyesight. We decided to examine respiratory problems to see if there were any significant cases of pesticide-related effects, even though they may not be perceived as such. Some women complained of the problems of working during their menstruation.

Some narrated the adverse effects of travelling to work in trucks everyday. A few *toli* leaders tended to pack the trucks, and the long journeys to grape farms over bad roads meant a lot of discomfort. One woman said she had a stillbirth in the 6th month of pregnancy because in the crowded truck somebody had fallen on her lap. That very afternoon she had to be rushed to the hospital. In another case, a few people changed their *toli* because the trucks were too full and they had to hang out for most of the journey. However, if the journey is long, just the fatigue could be enough to make people snappy and uncommunicative in the evenings, as we found on a few occasions.

However, working conditions in the vineyards themselves are not unduly taxing apart from the posture-related discomforts that are an unavoidable part of the work itself. The rest periods do help, but various aches and pains are an inevitable accompaniment to grape-related work.

The control group of women in non-grape related work were engaged in weeding, digging, harvesting various crops, sowing, etc. These tasks also gave rise to posture-related problems. The major difference between grape and non-grape-related work was the length of employment. While grape work started in October and lasted until April in a nearly continuous stretch, farm work came in brief patches. On an average the women who did casual wage labour in field crops worked about 80 - 90 days of the year, which was about half of what an average grape worker had to do. However, the occupational health risks that we had focused on applied to the farm workers as well. The personal card began with a probe on occupational health details relating to posture-related problems of the musculo-skeletal system, such as, upper back, lower back, arms, neck, and head. The period of discomfort was noted as occasional, periodic, or chronic. While it was easy to put down some ailment as chronic, it was at times difficult to distinguish between occasional and periodic. If a person said that her neck pain stopped when she returned home but recurred when she went to work, and was totally absent when she was not working, we put it down as periodic. If she complained that she suffered from neck pain sometimes, or used to have it at the beginning of the season, it was put down as occasional.

In the spirit of the assumption that people who have long standing experience in grape and/or other agricultural work are the best judges of what kind of work gives rise to which specific health problems, we asked respondents to give their perceptions of the kind of work that led to their particular ailment—grape work, farm or other work, or neither. We asked them to name the tasks like thinning, digging, etc. that led to aches and pains. A list of these, as reported by the respondents, is given in Appendix C. whether the ailment was treated, and if so how, was also noted. The recall period for this probe list was the period commencing from October 1998 until the date of the interview. All the interviews were conducted during the months of February and March 1999.

In Table 4.15, we give the break-ups of the number of positive responses received for each occupational complaint according to sex and occupation.

Especially for women, the difference between grape-work and any other occupation lay in the kinds of physical discomforts

they had to endure, namely neck-ache, skin problems, giddiness and fainting, and menstrual problems. Most of these ailments were direct fallout of grape-related work. The skin troubles were entirely due to the handling of Dormex. All the 11 women interviewed unanimously stated that having to stand continuously for long stretches during menstruation posed a serious problem. The neck-ache resulted from having to look up for long periods, especially during dipping and thinning. Of the 13 complaining of neck pain, 11 of them said it was due to grape work. However, of the 11 complaints of giddiness/fainting reported by women working on grape farms, only three attributed it to grape work. For the rest, no particular cause was stated other than the occasional exposure to sun or the lifting of weights. The non-grape women had more vision problems, and women past 40, who needed spectacles, mostly reported of this.

Table 4.15 : Number of Positive Responses for Each Occupational Complaint According to Sex and Occupation

Occupational complaints	No. of occupational complaints					
	Women			Men		
	Total (84)	In grape (43)	Not in grape (41)	Total (66)	In grape (45)	Not in grape (21)
Upper back	7	2	5	3	2	1
Lower back	44	24	20	22	15	7
Neck	17	13	4	12	9	3
Head	24	13	11	12	9	3
Arms	16	9	7	12	10	2
Vision related	11	3	8	11	6	5
Eyes- burn/water	13	8	5	16	12	4
Skin related	12	12	0	11	9	2
Giddiness/fainting	15	11	4	5	4	1
Breathing trouble	2	1	1	6	2	4
Menstrual	15	11	4	0	0	0
Total	176	107	69	110	78	32

Source: Survey Data

Among the men, the skin problems were all due to Dormex, otherwise, there was no clear connection between grape work and the larger figures for aches in neck, head, or arms.

However, evidences showed women reporting of more complaints than men did. It would be interesting to note how

the various groups of women—of both grape and control populations respectively —perceived the connection between work and their health.

Table 4.16 shows the number of occupational health complaints as reported by women and men in the three occupational categories, namely grape work, non-grape work, and neither. The non-grape category consisted of both farm and other work. It should be remembered that a single person could report of complaints pertaining to different categories for example, neck pain due to grape work, backache due to farm work, and headache due to acidity. Morbidity rate was per 1000 men/women.

The highest percentage of women registering complaints was from those who worked in grape farms, and so was their morbidity rate The next highest percentage of complaint and morbidity rate came from men who worked in grape farms, followed by women who did not work in grape farms, and lastly by men who were not involved in any grape-related work. This pattern of complaint made apparent what the Thakar men and women perceived as health hazards related to grape work.

That women report more complaints than men can be seen from the fact that though a smaller percentage of women than men work in grape farms, their morbidity rate is higher. This is true of complaints in the 'Neither' category as well. In fact, the comparison of all women with all men shows that fewer women than men report any complaint, mainly because women who do not work on grape farms have lower prevalence of illness than men. Nevertheless, when women do report complaints, they have a much larger number of them than men. It has been verified that all differences are statistically significant.

While referring to Table 4.16 it should be remembered that the questionnaire was administered to both men and women in an identical manner. The requisite amount of time was spent in all cases. There was absolutely no proxy reporting. The striking aspect of our experience while collecting this data was the overwhelming feeling a majority of the respondents gave us that they were not suffering from any ill health at all. When coaxed into looking at our probe list, some even asked if we wanted them to be ill. Answers were brief, almost monosyllabic, and without embellishments. "How was your health this season? 'Fine.' Any aches and pains? 'No.' Has your head been hurting

this season? 'Yes.' Why do you think it hurts? 'Sometimes I roam around in the sun.' Is it because of some work you do? 'No.'" And so on.

This briskness was not restricted to the questionnaire alone. Questions were always treated literally and exact answers given, even by men and women with whom we had become quite friendly. Women past 55 - 60 years of age were the most dismissive in the matter of reporting health. For example after a vehement 'no' to a query about upper or lower back ache, if the neck was mentioned next, they would emphatically say that there was nothing wrong with any part at all. One woman told us that she was healthier than we were. These responses were not in any way influenced by the ambiance of the interview, other people's presence, or any perceived effect of their answers.

Women carry out the tasks of cooking, cleaning, fetching water, and looking after the children. It is this household work that sets all of them apart from the men in the 'Neither' category. However, it must also be pointed out that none of the women specified this work as being the cause of any of their complaints (peruse Appendix). We can only infer this from the figures in Table 4.16.

The women in the 'Neither' category, who have reported of complaints, are about equally divided between grape and non-grape occupations. This, with the greater morbidity rate of women in grape related occupations, goes to show that the women working on grape farms carry a far larger burden of the illnesses probed by us, than either men who work in grape farms or women who do not work in them. They end up being the worst off, having to deal with the miscellaneous illnesses of the non-grape workers as well as those problems inevitably related to grape work. Although women who do not work in grape farms report a higher number of complaints in the 'Non-grape work' and 'Neither' categories; these cannot be offset by the number of complaints that the women in grape farms report as arising from their work.. Of the 176 occupational complaints reported by women, 108 were related to the musculo-skeletal category. Grape workers experienced 61 of these while non-grape workers experienced 47. Table 4.17 gives the break-up of complaints by periodicity and occupation.

Table 4.17 also reflects the claim by most people in grape-related work that the aches and pains were at their worst toward

the beginning of the season, getting less frequent as the body adjusted to the posture, leading to more complaints in the occasional category. Most of the periodic ones arose from menstruation-related problems, and the skin-related ones were evident among those grape workers handling Dormex. No

Table 4.16 : Complaints Reported in 3 Occupational Categories by Sex and Occupation

Source of complaint	Women			Men		
	No. of complaints	% making complaint	Morbidity rate	No. of complaints	% making complaint	Morbidity rate
	Women in grape - 43			Men in grape – 45		
Grape work	67	61.8	1558	49	64.4	1089
Non-grape work	4	9.3	93	4	8.9	89
Neither	36	55.8	837	25	42.2	555
Total	107	88.4	2488	78	84.4	1733
	Women not in grape work - 41			Men not in grape work– 21		
Non-grape work	20	26.8	488	11	28.5	524
Neither	49	61.0	1195	21	66.6	1000
Total	69	68.3	1683	32	80.9	1524
	Total women - 84			Total men – 66		
Grape work	67	32.1	798	49	43.9	742
Non-grape work	24	17.9	286	15	15.2	227
Neither	85	58.3	1012	46	50.0	697
Total	176	78.6	2095	110	83.3	1667

Source: Survey Data

Table 4.17 : Complaints of Women by Occupation and Periodicity

Type of complaint	Occasional			Periodic			Chronic		
	Total	Grape women	Non-grape women	Total	Non-grape women	Total	Grape	Grape women	Non-grape women
Upper back	4	0	4	2	2	0	1	0	1
Lower back	30	18	12	8	4	4	6	2	4
Neck	15	11	4	2	2	0	0	0	0
Head	22	12	10	0	0	0	2	1	1
Arms	15	9	6	1	1	0	0	0	0
Vision related	1	1	0	0	0	0	10	2	8
Eyes (burning etc.)	13	8	5	0	0	0	0	0	0
Skin related	12	12	0	0	0	0	0	0	0
Giddiness/fainting	15	11	4	0	0	0	0	0	0
Breathing	1	0	1	0	0	0	1	1	0
Menstrual	0	0	0	15	11	4	0	0	0
Total	128	82	46	28	20	8	20	6	14

Source: Survey Data

breathing problems were reported. Women grape workers reported of giddiness and fainting, but their causes did not necessarily arise from grape-related work. Musculo-skeletal problems and poor vision were equally evident under the chronic category. Moreover, mostly older women no longer engaged in any work reported them. What was not clear was whether these problems were a fallout of prolonged grape work done earlier in life. However, this seemed unlikely since such intensive grape work was not the norm 10 years ago.

We categorised the women according to their age, the number of offspring that they had, and those who had recently become mothers. Women in the age group of 23 - 42 constituted the largest portion of the sample population. This section of women was the one engaged in a variety of occupations and in the largest number. Apart from reflecting this basic statistic, no clear-cut pattern emerged to suggest that any particular group from this section was the more susceptible to any of these complaints. This was consistent with the observation that women did not, of their own accord, link any of their complaints to child bearing Table 4.18.

Table 4.18 : Reported Occupational Complaints by Age and Sex

Age	Women		Men	
	Total	With at least one complaint	Total	With at least one complaint
Less than 18	5	3	0	0
18 – 22	5	4	5	5
23 – 27	26	20	12	7
28 – 32	11	9	14	13
33 – 37	16	14	9	8
38 – 42	6	6	11	11
42 – 47	5	4	4	3
48 – 52	3	2	4	3
53 – 57	2	1	1	1
58 – 62	1	1	4	4
63 and greater	4	2	2	0
Total	84	66	66	55

Source: Survey Data

4.9 Access to Health Care

Women who worked on the grape farms showed a greater degree of independence in using their wage money. Of those who were not involved in grape-related work, some cultivated their own pieces of land, which meant that although they were working, they did not have access to any regular source of income. The important question was did this lead to any significant difference in the seeking out of health care? For the women who worked on grape farms and reported at least one complaint, 28% of those complaints were treated. For those who did not work on grape farms, 32% of their complaints were treated. In the case of men, 38% of all their complaints were treated. Table 4.19 gives a break-up of the kind of complaints that were left untreated for those women who worked on grape farms and those who did not respectively.

We felt that this difference in health care seeking stemmed directly from the fact that women who worked in grape farms followed the 9 a.m. to 6 p.m. routine for 13 days of the fortnight. And this left them with no time to go and buy tablets, or take some rest, or get an injection from a private doctor. They could presumably do so only on holidays, because to go on any other day meant that they had to forgo a day's wages. In severe cases, we have seen women do it, but obviously, the figures bear us out on the overall lower access to health care by women who worked on grape farms. Women who mostly worked on other farms or stayed at home had more time for a visit to the town, though not as much as the men had. Men enjoyed more mobility, especially in the evenings when they could go to the town while the women got absorbed in housework. However, this did not result in a significantly increased rate of seeking treatment, again due to lack of time in general.

Table 4.19 : Untreated Complaints of Women by Occupation

Type of complaints	Total no. s of complaint	Total no. of untreated complaints	No. for women in grape work	No. for women not in grape work
Upper back	7	4	1	3
Lower back	44	30	18	12
Neck	17	12	10	2
Head	24	17	10	7
Arms	16	14	8	5
Vision related	11	11	3	8
Burning/ watering eyes	13	12	7	5
Skin trouble	12	5	5	0
Fainting/giddiness	15	12	9	3
Breathing related	2	1	0	1
Menstrual	15	6	5	1
Total	176	123	76	47

Source: Survey Data

Could this fit into the concept of 'risk taking' in order to earn a higher wage? We think that such an interpretation would not be out of line. Both women and men were aware of the aches and pains that arose directly from grape work. The small fraction that handled Dormex also suffered from the temporary effects of chemical burns. However, the response towards any sympathy expressed in the matter was always a brisk answer to the effect that in order to procure such high wages and for a long period of the year, one had to put up with such inconveniences. We came across only one woman who had actually given up grape work after 2 years due to the resultant body ache.

The type of health care used did not vary a great deal. People generally went to one of the many medical shops in Narayangao and asked the shopkeeper to give them something, mostly a painkiller. The grape workers showed us Crocin and Brufen tablets. A private doctor was consulted only when the patient had decided, quite independently, that she needed an injection.. This was not really the norm. Saline was seldom given. Ointments like Moov and Iodex were locally applied on the affected area. Those with eye problems usually disregarded them, considering spectacles as the ultimate in making a

spectacle of oneself, even when they knew that they needed them. A rare enterprising soul had kept a handy bottle of what looked like one of those eye-cleansing drops for himself and his wife. They used it whenever they felt some irritation. A few people availed of antihistamines like Avil and steroid creams that some doctor had prescribed for Dormex related problems.

We had seen that grape-related work resulted in a greater morbidity load, mostly because of the posture that had to be adopted. The cumulative effect of the long working hours in grape, coupled with the distance that had to be travelled in order to avail of medical help, successfully deterred the workers from seeking health care. This resulted in a large fraction of the complaints going completely untreated.

It must be pointed out at the end of this section on occupational health complaints, that the method of data collection had a singular bearing on the details that was thrown up about the effect of grape-related work on the women of Thakarwadi. If we had not used a clear probe-list of various possible complaints that could arise, we would have been left with one answer from most people: 'There is nothing wrong with me.'

4.10 General Health—Two-Week Recall

In this section, we present the data collected in the personal cards on the two-week recall period for general health complaints, and the probe-list at the end of the questionnaire regarding any illnesses suffered in the recent past.

Of the 84 women, 28 (that is about 33%) reported some illness during the two weeks prior to the administration of the questionnaire. Of the 66 men, 23 (about 35%) reported of an illness. Table 4.20 gives the break-up of ailments reported.

Table 4.20 : Morbidity and Prevalence for 2-Week Recall Period

Type of ailment	Women (84)		Men (66)	
	No. of complaints	% making complaints	No. of complaints	% making complaints
Aches and pains	10	11.4	13	19.7
Cold, cough, fever	18	20.5	8	16.9
Respiratory	0	0	2	2.8
RTI	2	2.3	NA	NA
Swollen arms	1	1.1	0	0
and legs				
Upset stomach	1	1.1	0	0
Total	32	33.3	23	34.8

Source: Survey Data

The higher percentage of men reporting an illness might have been a local phenomenon. On the other hand, there was no probe method used for this recall and the difference may have reflected the fact that women reported more illnesses when probed than without it. Women exhibited similar reporting behaviour as earlier, giving multiple complaints. Most of the illnesses were of the minor variety.

As stated earlier, the centre of all available health care was the Narayangao town. Mobility was an issue between men and women; Table 4.21 tabulates the figures for the different types of health care utilised by men and women respectively.

Table 4.21 : Type of Health Care Providers Used by Men and Women for the 2-Week Recall Period

	Women		Men	
Type of provider used	No.	%	No.	%
Not treated	10	11.9	1	1.5
Self Treatment	6	7.1	6	9.1
Private hospital	10	11.9	11	16.7
Rural hospital	2	2.4	2	3.0
Traditional practitioners	0	0	1	1.5
Home remedies	0	0	2	3.0
NA (not ill)	56	66.6	43	65.2
Total	84	100	66	100

Source: Survey Data

The difference in the numbers of untreated complaints between men and women was obvious and consistent with

earlier figures. More women reported of colds/coughs/fevers than men did. Another important factor in the seeking of health care was mobility. This resulted in an even higher percentage of women not seeking treatment as they were by necessity more home bound than men. The figures for self-treatment reflected the trend among most people to go to the medical shop and buy some medicine over the counter with the help of the pharmacist. The use of private hospitals was a result of the poor services at the Rural Hospital (RH). A very large number of people had never been to the RH at all. Warulwadi used to have a PHC until about three years ago. It was closed down when the RH was built. When asked, people said that they used to go to the PHC occasionally. Most of them knew the ANM, who had been working there for 12 years. However, they no longer had the same kind of contact with her, or with the male MPW. They were both at pains to tell us that the Thakars were a generally healthy lot; one went so far as to say that 'nature had gifted them with amazing constitutions'. Private doctors were freely mentioned and there were a large number of them in the town. We visited a few to find out if they could say something about the Thakars in particular, but we did not get any useful information. None of the respondents in our sample had had any kind of diagnostic tests done when ill during the recall period. However, people had shown us blood and urine reports and x-rays. For those with very little time to seek any kind of health care, these time-consuming tests were even more difficult to undertake. One woman, who had been suffering from persistent pain in the legs, found the time to get an x-ray done only at the end of the grape season. The doctor had of course recommended it much earlier.

Of the 18 women treated, all took oral medication, with six getting an additional injection. Of the 22 men treated for their ailments, 20 took oral medication, and two men used local medication. Nine took an additional injection while one had to be administered I/V fluids. The data showed that the average expenditure per illness was Rs 54 for men and Rs 44 for women for this 2-week recall period.

4.11 General Health —One Year Recall

The break-up of general illnesses from the one-year recall probe-list did not throw up any surprises on this point, but rounded off the health scenario of the community Table 4.22. Women reported more illnesses than men did, strengthening the feeling that the results of the two-week recall period were a local phenomenon.

Table 4.22 : Complaints and Prevalence in One-Year Recall Period

Type of illness	Women (84)		Men (66)	
	No. of complaints	% making complaints	No. of complaints	% making complaints
Weakness	27	32.1	8	12.1
Abdominal pain	18	21.4	12	18.2
Chest pain	11	13.1	10	15.1
Joint pain	19	22.6	12	18.2
Lower abdominal pain	1	1.2	NA	NA
Acidity	19	22.6	19	28.8
White discharge	5	6.0	NA	NA
Vaginal infection	1	1.2	NA	NA
Total	137	57.1	96	47.0

Source: Survey Data

We suspect that many people—both men and women—were not sure what weakness meant. Some simply nodded their heads instead of saying no. Those who suffered from acidity did so mainly because of alcohol or tea.

Alcohol was a sensitive issue among the Thakars. The traditional methods of brewing liquor at home had been totally discouraged by the police, but the general impression among the non-Thakars was that they were 'drunkards'. So questions on a person's alcohol consumption were frequently greeted with smiles and the invariable 'no'. Some did say they drank occasionally, and only a few among them admitted to drinking more or less daily. However, we did not see any signs of alcoholism among the people. Both men and women drank, mostly on market days, which were also the paydays, and therefore holidays. As some women pointed out, they did their shopping and then had a few drinks. We saw nothing to

contradict this picture. Tea was usually taken once in the morning, and many did not drink it at all.

Most other ailments were in the minor category and were not prevalent at the time of the interview, except the odd chronic one that had been experienced in the 'recent past', which usually meant about a year.

G SUMMARY AND CONCLUSIONS

The Thakars have become a part of an industrialisation of the business of grape cultivation in the Narayangao area, solely due to the initiative taken by farmers to export their grapes to European markets. This venture has led the farmers to introduce new techniques and methods of vine and bunch treatment that require the explicit involvement and cooperation of a skilled labour force. And the Thakars are providing it.

The new tasks introduced in the vineyards provided increased employment with better wages. However, they also gave rise to health complaints caused by the postures that had to be adopted when performing those tasks. We undertook a quantitative survey of the Thakarwadis, coming under the jurisdiction of the Warulwadi grampanchayat, to examine the extent of the effects this had on the health of the grape workers. A questionnaire was administered to sample households in these wadis. The family card collected information about the various economic and occupational activities of the household, and the personal card took care of the information on health and other personal aspects of two adults in each household.

The occupational health data showed that women working on vineyards carried a greater burden of occupation-related morbidity than women who did not work on grape farms as well as men who worked on them. Women overall reported more of these complaints than men did. We felt that this could be because of the additional burden of housework that women had to perform: cooking, fetching water, bearing children and taking care of them. Women grape workers sought health care lesser than either women who did not work in grape farms or men in general. This was because the women lacked the time and mobility needed to travel to Narayangao town, which was the nearest place where health care was available. This was a

direct result of the working hours that these women had to keep in the vineyards. Most of the troubles were of the occasional variety, supporting the view of the workers that as the season progressed they got used to the posture, and aches and pains reduced.

We felt that the management of this kind of work-related occasional pain could be better served through appropriate exercises. This would relieve body stress. However, any mention of such activity generated giggles, and sometimes disbelief. A rare woman was ready to try out something different, though, and we believe that with some persuasion of key people such methods could be introduced.

The skin problems related to Dormex work might have interesting implications. Since some Thakars had started refusing to do this work and farmers were suffering from its ill effects, it might lead to a less virulent alternative being introduced in the future. This, of course, depended on the availability of such a solution, but there was no doubt that the need was felt in all quarters.

The data on the two-week recall period for aliments showed that while women might seek treatment in less number of cases than men, when they did there was no discrimination regarding the cost. It pointed to the equitable gender relations in the Thakar community. Many people bought their own medicines from the medical shops in the town or consulted a private doctor. The Rural Hospital was rarely used.

Overall, it appeared that the Thakars of these wadis had taken advantage of the availability of well-paid work, which was a direct result of extensive and intensive cultivation of grapes for the export market. While they were aware of the ill effects on their health, they considered it a risk worth taking in order to considerably improve their economic lot.

Acknowledgments:

We would like to thank the member-farmers and office-bearers of the Vighnahar Grape Grower's Cooperative for the openness with which they provided information, gave their opinions, and clarified technical points regarding grape cultivation. The friendly atmosphere was greatly appreciated.

Without the full cooperation of the people of Thakarwadi, this project would have been impossible. The toli[1] leaders were an invaluable source of insight, and the open and friendly approach of the Thakars went a long way in helping us make this work as relevant to their lives as was possible. We can only hope that we have done justice to the views they expressed with such willingness and patience.

We greatly appreciate the people of Narayangao who provided us with services and unfailing support. It assured us help and comfort during the long period of fieldwork. Personnel of the Rural Hospital and the Warulwadi grampanchayat gave information and provided insights on various issues without hesitation.

We would like to thank the CEHAT research staff for critical inputs throughout the survey. Some crucial suggestions went a long way towards getting data that was very comprehensive. Consultants also helped to clarify matters by posing interesting questions and providing overall guidance. The CEHAT administrative staff and other colleagues provided all the support necessary during fieldwork, and in general made things easy in the day-to-day running of the project.

Finally, we would like to thank Engender for providing the basic idea and funding for this project. The process of looking for effects of globalisation led us to this particular community of people, with its unique situation and characteristics, the study of which has provided food for thought and lessons on many fronts.

[1] *Toli = group*

APPENDIX

List of tasks that led to occupational health complaints as specified by respondents

Grape related tasks

1. Dormex
2. Standing
3. Looking up
4. Vineyard work
5. Staring at bunches
6. Vineyard chemicals
7. Holding the scissors
8. Handling insecticides
9. Work tension
10. Dipping
11. Packing
12. Dirt in the eyes
13. Thinning
14. Raised arms

Farm and other work related causes

1. Bending to work
2. Lifting weights
3. Exposure to the sun
4. Too much work
5. Sitting and weeding
6. Digging
7. Harvesting vegetables
8. Farm chemicals
9. Not enough work
10. Smoky stove
11. Well/ canal work
12. Working on sewing machine

Non -work related causes

1. Walking long distances
2. Age
3. Asthma
4. Change of water
5. Bad food
6. Cloudy weather
7. Old injuries
8. Menstruation
9. Waat (rheumatism)
10. Internal heat
11. Food allergy
12. Acidity
13. Irregular meals
14. Black magic
15. Weight gain
16. Smoky stove
17. Late nights
18. Exposure to sun

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PART V

Concluding Observations

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The Strengths Of Our Limitations

This volume has traversed a fairly wide terrain attempting in the process to (a) map the multidimensional nature of women's work; (b) address the contexts in which such work is carried out; (c) bring together women's perceptions of their well-being, and, (d) analyze these perceptions for their links between 'work' and 'health'. This exercise has, in turn, made us re-examine several debates:

- between nature of development and the consequent pattern of employment being generated;
- between women's non-changing household responsibilities but ever increasing incorporation into the labour force in unfavourable conditions in order to assure the survival of their families;
- between (male) perceptions that view women's work as light, easy, less hazardous, and requiring fewer skills, and, increasing documentation by gender sensitive researchers of the *range*, *intensity*, *discriminatory*, and *hazardous* nature of women's work.

We are challenged to focus on the "simultaneity of oppressions" (Whittle and Inhorn, 2001; 148) in order to understand how interlocking systems of oppression shape the daily lives, survival strategies, and health and well-being of women. The resolution of these oppressions cannot be achieved *merely* by addressing differences at an individual level but require that exploitative political and economic relationships existing between the genders and, between castes and classes within these genders be frontally confronted.

The three case studies have preferred to *listen* actively to women and connect women's local lived experiences of health and illness to their immediate work and living environment as well as to larger changes occurring at the regional, state, and national levels. We have drawn strength from Whittle and Inhorn's (2001) observations, namely,

> "Valuing experience as knowledge has epistemological implications for how we produce knowledge; conceptualize agency, subjectivity, and authority, test truth claims, and create social policies, including those directly related to women's health. Embedding women's experience within broader politico-economic structures and processes helps to reveal how women's agency and authority may be undermined or ultimately curtailed in ways that are deleterious to their health and well-being." (ibid:161)

Women's self-reports of the *experience* of reproductive health and illness are valuable because of their potential to draw attention to the prevalence of conditions otherwise not reckoned with, or more often marginalized, by health providers and the health services in general. More important, these feelings of ill health provide useful pointers to the disability or burden associated with reproductive health and illness.

Implications For Policy And Research

In a context where even basic infrastructure such as fuel, water, and sanitation is not in place, the combination of household chores and paid employment outside the household for women workers in particular, leads to not just enormous stress and strain but also disease and ill-fare. The risks of being poor, a person of a particular caste, a woman, and so forth, will be experienced differently depending upon how they are combined. A resolution to the problem of investment in basic infrastructure and in making living environments safe and liveable will go a long way in reducing the level of deprivation of large number of poor households, and, particularly, women of these households. The repeated emphasis on women stems from the fact that the structure and organization of households, workplaces and institutions like trade unions, labour departments, etc., are so gender-biased that much of what women do, experience, and suffer remain invisible, hence unaccounted, thereby adding to the marginalization and devaluation of women's work and health status.

An equally important and related issue that needs to be addressed is how to net information about occupational effects on women's health. Although some knowledge exists on this theme, this does not form part of the database of policy makers. In a sense, it is futile to expect policy makers to address women workers' occupational health issues when most women still do not have, officially, a 'worker' status.

Coming to the issue of generation of information on occupational health *per se*, we agree with Messing (1997) "women's health problems are relatively invisible to scientists because they are using inappropriate methods" (ibid: 16). Even in the developed countries, scientific studies of health consequences of women's work have systematically been omitted because of a perception that not many women get occupational diseases. The cumulative effect of such neglect is that there are few prevention programmes in jobs where women are employed. Consequently, hazards are not discovered and standards are not developed for these jobs; this in turn implies that, when women experience health problems they cannot claim compensation based on known risk factors. The tendency by and large is to dismiss women's discomfort at work as being the result of "personal weaknesses, psychological difficulties, or imagination" (Messing, 1997: ibid:17).

The immediate requirement is to build a credible body of information on the health impact of women's work. For this, researchers will have to devise indicators innovatively. Messing (1997) has indicated a few, which she has deployed in her studies, the principles of which we can apply to our situation in India. The Messing indicators have been developed in consultation with the workers involved and represent what the workers consider to be critical aspects of their jobs. Further, the indicators arise from the observations of the work activity *in situ*. As an illustration, we summarize the following from Messing's (1997) work.

i. For certain factory and service jobs, it is important to consider *repetitive gestures* and to *count the number of times* a gesture is made, since repetitive movements can cause musculoskeletal disease (emphasis added) (Messing, 1997: 21).
ii. Some repetitive gestures involve the use of force, and the total amount of force exerted may be an important determinant of joint inflammations—ergonomic standards for the workplace generally concern the types of lifting all at once. This standard setting is not appropriate for those jobs, usually held by women, where small forces are exerted repeatedly even though the cumulative force may be greater. For the type of lifting more common among women, limits should be put on the total force exerted in a day (Messing, 1997: 21)

iii. Light work/heavy work comparisons have been made in cleaning jobs and show that women in light work are exposed to postural constraints. For example, the examination of the sequence of objects dusted by women cleaners in a hospital showed that cleaners spent 74 per cent of their working time with their trunk flexed. Ergonomic standards do not cover the proportion of time spent in a flexed position although such limits could be set (Messing, 1997:21).
iv. Because regulations have evolved in relation to a male-pattern lifestyle, the need to meet family responsibilities has not always been included in labour standards. Workers, usually women, who must arrange childcare in order to work, bear this burden alone. Messing compiled childcare arrangements made by 30 telephone operators (with children under 12) who received their schedules every Thursday for the week starting three days later, on the following Sunday. These operators kept records for two weeks. Messing notes that these operators made a total of 156 attempts to change their work hours (5.1 per operator) to meet family responsibilities. On the average less than one of these succeeded (Messing, 1997: 22).

In another context Gwatkin (2000) has very succinctly pointed out how the evolution of the 'basic human needs' school of thought gave rise to a tradition of expressing general development goals not in terms of society's average per capita income growth (which was the earlier tradition) but in terms of what was happening to the incomes of the people in poverty. This, according to Gwatkin, also led to the establishment of data collection systems specific to the poor.

> "But nothing similar happened in health. ... Almost inevitably, health goals are stated in terms of some societal average; say, a decline of 'x' per cent in a country's infant or maternal mortality rate or an increase of 'y' years in its life expectancy.... The principal health targets make no reference to the health of those living in poverty.... The result is a deficiency that has two aspects: a lack of health goals that are relevant for the poor; and a lack of the information needed

to track progress towards such goals" (Gwatkin, 2000:11).

Taking Gwatkin further we submit that work-related illness and death cannot be understood without recognizing social inequality *along* with the hierarchical differences that continue to exist between women and men, and which impact on the relation between work and health. We believe that this volume has contributed in some measure in "revealing the invisible and highlighting the visible" (Gomez, 1997:7) stressing the consequences of work on women's health and quality of life.

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ABOUT THE CONTRIBUTORS

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Padmini Swaminathan holds a Ph.D in Industrial Economics from the University of Bombay, Mumbai. She currently is a Professor at the Madras Institute of Development Studies, Chennai. She holds the Reserve Bank of India Chair in Regional Economics at the Institute. Her academic publications cover studies relating to the following themes: Industrial Organization, Employment and Labour, Education and Occupational Health - all from a gender perspective. She is a Member of the Executive Committee and Treasurer of the Indian Association for Women's Studies, Member of the Advisory Board of the Journals, Gender, Technology and Development, and The Journal of Entrepreneurship.

Dr. J Jeyaranjan

Jeyaranjan is currently Director, Institute of Development Alternatives, Chennai. He holds a Ph.D from the University of Madras. He has worked earlier as Lecturer in Economics with the Pondicherry Educational Service. He has co-ordinated several field-based studies on a wide range of subjects including village studies, wages and wage determinants in rural areas, child labour, occupational health, and masculinity, among others. He has several publications on these subjects to his credit.

Padma Deosthali

Padma Deosthali has done her Masters in Social Work, is working with Centre for Enquiry into Health and Allied Themes (CEHAT), an institute engaged in research, action, service and advocacy on right to health and health care for the past 6 years. She is working on issues of women and health, focusing on women' work and violence against women and ethics. She is presently coordinating Dilaasa (means reassurance),a joint initiative of CEHAT and the Municipal Corporation of Mumbai. This is an attempt to sensitise the public health system to domestic violence and provide crisis counseling to women facing domestic violence. She is coordinating the research, training and counseling functions. She is also trustee of CHEHAK that runs a community based school called SAHAYOG for adolescent girls and health care programme. She is member of the Mohalla Peace Committe, Mira Road, Mumbai.

Neha Madhiwalla

Neha Madhiwalla has a postgraduate degree in social work. She worked in CEHAT from 1996 to 2004 as researcher on studies on women's health, ethics and human rights. Her research projects include a study of morbidity, healthcare use and health expenditure on women in Nasik district, a qualitative study of the impact of deindustrialisation on women's work, living environment and health and a study on the human rights' implications of involuntary resettlement of a an urban slum community in Mumbai. She was awarded the John. D and Catharine T. Macarthur Foundation fellowship for Leadership Development in 2002 to develop a programme for imparting life-skills education to out-of-school adolescent girls through a community based programme. She is currently the managing trustee of Chehak Trust which runs a community based programme for primary education and health care called Sahyog. Sahyog includes a non-formal school for adolescent out-of-school girls, a rehabilitation programme for children with special needs and a community health programme for women and girls.

Sharadini Rath

Dr. Sharadini Rath is a consulting economist at the Centre for Budget and Policy Studies, Bangalore. Presently working in the area of municipal governance in Karnataka, she is studying the effects of State policy under the 74th constitutional amendment on the financial and operational functioning of urban local bodies. Following another broad area of interest, she is also working on a study that attempts to link levels of nutritional intake of poor households to their employment and wage status.

(ii) Agricultural Workers

There are significant differences in the disease panorama as perceived by industrial workers and agricultural labourers. Quite a few diseases do not figure in the perception of the agricultural labourers as compared with their industrial counterparts. Agricultural labourers do not perceive the lack of appetite, hair loss, pain in the neck, injuries, and loss of weight to be a health problem at all. They perceive fewer problems, but these seem to be widely prevalent among their class. Nearly one fourth of the responses among them relate to cold/cough and fever Table 2.25. This is much lower among industrial workers (about 14 per cent of the responses). Pain in the hip and back is another major problem perceived by them (about 15 per cent), whereas only about 5 per cent of the responses among industrial labourers complained about it. Agricultural workers also report of a higher incidence of skin diseases and the swelling of hands.

On the other hand, reporting of tiredness among agricultural labourers is about one-third the level reported by industrial labourers. Stomach pain is another such ailment. While about 12 per cent of the responses among industrial labourers complained of stomach pain, only about 3 per cent of the responses among agricultural labourers accounted for this problem.

A point that came out quite clearly during our field discussions is that the duration of certain diseases and the reasons attributed as causes for the recurrence of those diseases varied quite distinctly between the agricultural labourers and industrial workers. Headache, pain in the hip and back, swelling of hands was mainly suffered by the agricultural labourers during the peak seasons of production, that hardly lasted for a couple of months. On the other hand, the same problems among the industrial workers lasted more or less continuously throughout the year. While the agricultural labourers attribute their headache to the scorching sun, industrial workers attribute it a to a variety of factors. It included higher noise levels in the machine rooms, inability to eat in time, and insufficient quantity of food, nausea due to the pervasive smell of the ingredients used in production, etc. Thus, as the nature of work varies for the agricultural labourers from season to season and operation to operation, the perception about their disease also changes,

albeit, within a small spectrum. For industrial workers, on the other hand, the nature of work remains the same, and they perceive that their health outcomes are permanent as long as they remain in that work.

The above has important implications for our attempts to address health: unless the nature of work, and/or conditions of employment also form a part of the diagnosis of any disease, redressal of the latter will not just remain incomplete, but also futile, since the underlying causes of the disease remain unaccounted and unaddressed.

Table 2.25 : Distribution of Responses Across Various Perceived Diseases – *Agricultural Workers*

(Figures in parenthesis are column percentages)

Sl. No.	Perceived disease[4]	No. of Responses
1	Cold/cough	80 (23.5)
2	Tiredness	12 (3.5)
3	Diarrhoea	2 (0.5)
4	Giddiness	3 (0.8)
5	Lack of appetite	—
6	Skin disease	38 (11.2)
7	Headache	42 (12.3)
8	Pain in the neck	—
9	Chest pain	4 (1.1)
10	Hip pain	50 (14.7)
11	Swelling of legs	19 (5.6)
12	Swelling of hands	53 (15.6)
13	Hair loss	—
14	Injuries	—
15	Stomach pain	11 (3.2)
16	Eye problems	3 (0.8)
17	Weight loss	—
18	White discharge	2 (0.5)
19	Others	9 (2.6)
20	Total	328 (100)

Source: Field Data

[4]*We have grouped some diseases into a single category for the sake of convenience. The grouping is as follows: Cold/cough/fever includes throat infection and wheezing problems; tiredness includes weakness; hip pain includes back pain; swelling of legs and hands, includes pain; eye problems include irritation in the eyes, paining eyes, reddening of eyes, discharge, etc; white discharge includes excess bleeding, urinary problems, irregular menstrual cycle, and abortion; other disease include toothache, depression, blood vomiting, cancer, tension and heart ailment.*

health facilities. The suburban areas, both in the East and West are served only by handful of peripheral hospitals, which too are very poorly equipped. In 1999, we find that roughly one-third of the public hospital beds are located in the suburbs. Conversely, two-thirds of the total private hospital beds are in the suburban wards. (CEHAT, Database on Hospitals, unpublished)[1] Thus, the health needs of large concentrations of the city's population are not served by the public sector. Private hospitals and nursing homes are the main source of curative care in the suburban areas.

However, the quantum of health services available in the city is still overwhelming. According to the Brihanmumbai Municipal Corporation, in 1993-94, there were 495 hospitals in Greater Mumbai. In 1994-95, in response to a PIL filed by the Medico Friends Circle, the BMC produced a list of 526 registered hospitals. However, when the High Court appointed a committee, which forced the authorities to register all the nursing homes, the number rose to more than 900 institutions. According to our own database, the number of private hospitals presently functioning in the city is likely to be in the range of 1,000 to 1,100 (CEHAT, Database on Hospitals, unpublished).

3.3.1 Utilisation of Health Services

The little community-based evidence, which exists on actual utilisation of health services, also indicates the dominant role played by the private sector in providing hospital care. A household survey covering 1,657 households conducted in three municipal wards in 1988 found that private and public facilities were almost equally utilised for treatment of catastrophic illness (illness that frequently involves hospitalisation). The class differentials were significant, with the lower class utilising public services to a large extent, and the middle and upper classes almost exclusively utilising private facilities (Yesudian; undated). In addition to class, the other factor that affects utilisation is gender. In the Mumbai study, we found that the percentage of non-treated episodes for women above 12 years is around 45%. The reasons given for not availing of treatment

[1] *Sunil Nanaraj, Anagha Khot and Sumita Menon have complied a list of hospitals by using information from various sources, including the BMC and the Nursing Home Owners Association and published by CEHAT.*

were lack of financial resources (22%), perception that the illness was either seasonal, temporary or long drawn (43%), and lack of social support (12%). The high no-treatment rate indicates the secondary status that women are assigned to in the household and the society. Women are conditioned to endure illnesses till the illness incapacitates them from doing any work. This also affects their perception of health problems, as more often than not, they do not even recognise a particular symptom as an illness (Nandraj et al, 1998).

3.3.2 Health Expenditure

The Brihanmumbai Municipal Corporation is the main provider of health services in Mumbai. The BMC is a large corporation having a budget that is higher than some of the smaller states. The health expenditure budgeted by the BMC for 1997-98 (latest) is Rs 3.47 crore, which is three times more than in 1990. The per capita expenditure has increased to Rs 315. The citizens of Mumbai are privileged to have such a good public health care system. One can see that the money is being spent and there has not been a drastic reduction in the expenditure in the '90s. Why then do the citizens prefer to seek private facility? Why are they not utilising public health services?

It is important to analyse the expenditure pattern of BMC. During the year 1960-61, the BMC spent 34.45% of its total expenditure on health care. This declined to 25.84% in the year 1985-86 (Government of India, 1988), and in 1994, the revised estimates indicated that the proportion was even lower at 23.92%. In a joint paper, Ravi Duggal and Sunil Nandraj (1994) have analysed the expenditure of BMC for the period 1989 to 1994. They have brought out the following issues:

- The pattern of expenditure under 'Health' is interesting. From 1989 to 1999, the average expenses on public health was 12%, medical education 7% and dispensaries 3%.
- The three teaching hospitals KEM, Nair, and LTMG accounted for 37% of the health expenses during the period. The 14 peripheral and one dental teaching