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Psychosocial Well-being in Vidarbha

A Study of Communities in Distress

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PREFACE

The Vidarbha region of Maharashtra state in India is said to be one of the most distressed regions of the country. In recent years there have been reports of numerous suicides induced by agrarian crisis in this region. In response to the farmers' distress Sir Ratan Tata Trust (SRTT) and Sir Dorabji Tata Trust (SDTT) jointly initiated a holistic livelihood promotion strategy for the region with the key objective of reducing distress among the farming community and enhancing the livelihoods of the people. The Trusts requested the Tata Institute of Social Sciences (TISS) to conduct a baseline survey in the project area so that it would provide bench mark information for the Trusts to monitor the programs supported by it.

The present paper is the outcome of the baseline survey of Psychosocial Well-being, conducted during August-November 2009 in 71 villages spread over 6 districts namely, Akola, Amravati, Buldana, Washim, Wardha and Yavatmal that are considered highly distressed. The special focus on psychosocial well-being explored the stressors, social support, social network and psychological distress of people in the Vidarbha region. We take great pleasure in presenting the study findings and hope that the working paper will provide an understanding of the patterns and trends in psychosocial well-being among the people of the Vidarbha region.

Our special thanks to Prof. Parasuraman, Director, TISS and his Research Team led by Prof. Rajeratnam and Dr. Sunil for providing us the opportunity to conduct the Psycho-social wellbeing component of the baseline survey. We gratefully acknowledge that it is through provision and sharing of such 'spaces' that new frontiers of research are explored!

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ABSTRACT

Considering the numerous instances of agrarian crisis induced farmers' suicides in the distressed region of Vidarbha, an extensive baseline survey was initiated by the Tata Institute of Social Sciences – with a special component on psychosocial well-being. This study was undertaken under the aegis of the Sukhi Baliraja Initiative (SBI), funded by Sir Ratan Tata Trust (SRTT) and Sir Dorabji Tata Trust (SDTT) in six high distress districts, which has holistic livelihood promotion as its main agenda – with a special focus on social strengthening in order to reduce distress. The aim of the survey was to understand the psychosocial and economic factors that cumulatively contributed to distress among farmers and to arrive at the first level of basic broad social characteristics that determine psychological distress. It also aimed at identifying the presence (or rather absence) of resources and protective factors that could have shielded individuals and the community as a whole in the face of the distress. To assess the psychosocial well-being of individuals and to identify the factors impacting psychosocial well-being in the context of Vidarbha, the study adopted the conceptual framework of psychosocial intervention in complex emergencies evolved by the Psychosocial Working Group in 2003. Based on the conceptual framework, indicators were identified or incorporated for each of the components, namely *human capacity, social ecology, culture and values, physical resources, economic resources* and *environmental resources* – both from among the quantitative measures generated in the TISS baseline survey of livelihoods and also in the specific psychosocial well-being survey questionnaires namely Critical Life events Questionnaire (CLQ), Social Support and Network Questionnaire (SSNQ) and the Self Reporting Questionnaire (SRQ).

Using these questionnaires, specific components of psychosocial well-being were explored. ¹ *A considerable number* (41.8 percent) of the total respondents expressed significant psychological distress. Almost three-fourths of the respondents reported poor social support. Cumulatively, 57 percent of the respondents stated weak social networks and 93 percent respondents reported upto three critical events in their lives. Correlation tests indicate that the psychological distress while showing a significantly negative relation with social support, has a significantly positive relation with social networks and critical life events. The study thereafter explored the interface between various socio demographic characteristics (broadly categorized into individual, household, village and district characteristics) and psychosocial well-being, by cross tabulating these variables with the scores on psychological distress. The trends and patterns that emerged from the analyses of identified variables combined with literature on protective and risk factors impacting psychological outcomes, evolved into the formulation of a theoretical framework of psychosocial well-being through the study. The theoretical framework that was tested using a Structural Equation Model (SEM), has four main domains namely *stressors, protective factors, demographic variables* and *outcome of psychological well-being*. The analyses of the components and the theoretical framework created thus helped in a meaningful discussion on the most pressing stressors to be addressed, the weak protective factors to be enhanced and a rudimentary examination of the suicide deaths with suggestions for future research.

1 *Psychological well being* (even though in essence the Self Reporting Questionnaire (SRQ 20) captures distress, since the study is not solely looking at distress, it was decided to coin the outcome as captured by SRQ as psychological well-being and not distress), *social support, social networks* and presence of *critical life events*.

SECTION I

1. VIDARBHA BASELINE SURVEY OF PSYCHOSOCIAL WELL-BEING

1.1. Introduction and background

Vidarbha in Maharashtra state is one of the most distressed regions of the country and in recent years there have been reports of numerous agrarian crises induced suicides in this region (Behere and Behere, 2008). The literature in the Indian context identifies factors such as negative growth of agrarian economy, liberalisation/ neocolonialism or imperialist globalisation. The McKinsey World Bank Model of development, states neglect, flood and drought, intense use of hybrid seeds and chemical fertilizers, poor soil fertility, increasing crop-susceptibility to pests and diseases, manipulation of prices by traders, decline in agricultural produce and increase in the cost of agricultural inputs among others as contributing to distress suicides (Behere and Behere, 2008; Gajalakshmi and Peto, 2007; Mishra, 2008; Shiva, 2004; Vijaykumar, 2007; Vijayakumar, 2010). Though various measures such as the Prime Minister's package, NABARD watershed program and loan waiver schemes have been initiated by the central and state governments towards reducing the farmers' distress in this region the farmers in the region continue to commit suicides in large numbers.

The Vidarbha region consists of 11 north-eastern districts of Maharashtra state (**Figure 1.1.1**) namely Akola, Amravati, Buldana, Washim and Yavatmal in Amravati division and Bhandara, Chandrapur, Gadchiroli, Gondia, Nagpur, and Wardha in Nagpur division. As per the 2001 Census, the Vidarbha region had a total rural population of 14 million, or 25 percent of the state's total rural population living in 13,700 villages. Within the 11 districts of the Vidarbha region, the six western districts namely Akola, Amravati, Buldana, Washim, Wardha and Yavatmal are said to be highly distressed. As per the 2001 census, the total rural population of these 6 districts combined, was 8.2 million - living in 7,400 villages and it accounted for nearly 60 percent of the total rural population of the Vidarbha region. 13 percent of the rural population of these 6 districts, was scheduled castes and another 14 percent was scheduled tribes.

FIGURE 1.1.1:
Map of Maharashtra Highlighting the Vidarbha Region



1.2. Psychosocial Well-being Survey: Need and Aim

The incidence of farmers' suicides in the Vidarbha region had hit an epidemic - proportion in the last decade and the crisis still continues (Behere & Behere, 2008). In response to the growing issue of farmers' distress in the Vidarbha region, Sir Ratan Tata Trust (SRTT) and Sir Dorabji Tata Trust (SDTT) initiated pilot studies during 2007-08 to study the issue.. In the subsequent year, they recognized the need to synergize their efforts in the region and jointly launched a project the "Sukhi Baliraja Initiative" (SBI). The SBI is a holistic livelihood promotion strategy with the key objective of reducing distress among the members of the farming community and enhancing their livelihoods. The focus was on the six high distress districts namely Akola, Amravati, Buldana, Washim, Wardha and Yavatmal, where the distress induced suicides are the maximum. The thematic areas of interventions included: (a) agriculture promotion and crop diversification; (b) dairy development; (c) non-timber forest produce (NTFP) promotion; (d) irrigation infra-structure promotion and integrated watershed development; (e) microfinance; (f) development of market linkages; and (g) social strengthening.

In order to assess the situation in the SBI project area with regards to the socio-economic, demographic and livelihood conditions of the people, the Trusts assigned the Tata Institute of Social Sciences (TISS) the task to conduct a baseline survey in the project area (full report available elsewhere) so that the data elicited through it would not only form an information repository for the Trusts to monitor the programs supported by it but would also serve as a guide for the program implementing agencies (the NGOs supported by the Trusts) and for the state and central governments for planning and fine tuning their intervention strategies.

Further, since the main stress of the SBI project was on reduction of distress among the farmers, one of the thematic interventions explicitly included was 'social strengthening'. As such, a **psychosocial well-being** component was added to the baseline survey undertaken by TISS. Specific tools were employed in order to undertake a holistic psycho-social profiling and subsequent understanding of the phenomena of farmers' suicides that were directly linked to distress. The psychosocial well-being baseline survey was undertaken with the aim of expanding the comprehension of the phenomenon of suicide within the specific context of a distressed region, such as Vidarbha and avoiding a simplistic causal attribution to one specific factor/issue towards it.

In their exposition on farmers' suicides in the Vidarbha region, Behere & Behere (2008) suggested that suicide rate among farmers should be considered not only as a mental health problem, but also as a social and economic problem. This lends credence to the fact that though studies on suicides, in general, have identified physiological differences (Lester, 1987; Lester & Kondrichin, 2004; Menozzi et al., 1978) between the members of different social/cultural groups as a contributing factor the more plausible explanations involve differences in psychological, economic, cultural and social factors. Moksony (1990) and Taylor (1990), in their seminal work on suicides, elaborated the relationship between specific social variables, the broad social characteristics and the social suicide rate. The social variables could be seen as directly related to suicide behaviour or could be viewed as measures of more basic, abstract and broad social characteristics of a region/culture/social group that determine the social suicide rate.

Moreover, it was also realized that theories of suicide often differ in non western and indigenous cultures from those proposed by the classic European and American social scientists (Lester 2009). Thus the predictors (and therefore the causes) of suicide rates in underdeveloped or developing nations may

be quite different from those for European nations and have to be contextually explored to arrive at appropriate policies and programmes for the prevention of suicides .

In the Indian context, studies on suicides in general have been largely restricted to hospital based data or secondary data from the crime bureau records (Vijayakumar, 2010). Thus most of the studies have focused on individual suicidal behaviour or trends and patterns in suicide rates (Behere & Behere, 2008; Mishra, 2008). Explorations among general population to understand the factors influencing societal/social suicide rates have been almost non-existent. Primary data collection from the field has been limited to psychological autopsy studies, limited to households with reported suicides and a few control households (Chavan et al., 2008; Khan et al., 2005). These studies also have limitations with regard to the dimensions explored. The focus of studies attempting to identify factors related to suicides have been limited to eliciting risk factors, and no emphasis is placed on identifying the resources and protective factors that could shield individuals and communities (Chowdhary et al, 2009; Jain et al., 1999; Latha & Bhat, 2005; Srivastava & Kumar, 2005).

Within the specific context of Vidarbha, studies have primarily focused on the trends and patterns in farmers suicide (Behere & Behere, 2008; Mishra, 2008), the risk factors (Behere & Behere, 2008), the crisis in agriculture sector (the agrarian crisis, the agricultural developmental crisis) (Mishra, 2008) and vulnerabilities and uncertainties faced by the farmers (Mishra, 2008), among other things. Therefore, the agrarian crisis precipitated by the Liberalisation-Privatisation-Globalisation (LPG) processes, among other causes, have been largely debated as the major reason for the current state of farmers. Though the incidence of farmers' suicides is a complex and multifaceted phenomenon, the existing studies have not comprehensively covered all its dimensions. The interface between various dimensions especially the social, economic and psychological - have not been given adequate attention in understanding the phenomenon.

It is in this context that the present study on psychosocial well-being was conceived in order to identify the predictors of psychological distress that lead to extreme events like suicides among farmers in the Vidharba region within the scenario of Indian agrarian crisis. The aim of the psychosocial well-being survey was to understand the psychosocial and economic factors that cumulatively contribute to distress among farmers and to go beyond the simplistic explanation of the distress being linked to mere crop/irrigation failure and high indebtedness. The study attempts to arrive at the basic social characteristics that determine psychological distress, from the multiple social variables representing the economic, social, cultural, environmental, demographic and developmental dimensions. Further it also aimed at identifying the necessary resources and protective factors that could shield individuals and the community as a whole in the face of the continuing distress. Such an attempt, it was hoped, would help formulate preventive instead of curative measures to reduce distress and promote well-being.

1.3 Psychosocial Well-being Survey: Objectives

The overall objective of the TISS baseline survey was to understand the condition of livelihoods of the house-holds in the SBI project villages of Vidarbha region. In addition to this objective, the psychosocial well-being component within the baseline survey sought to understand the current psychosocial well being status of individuals in the SBI project villages of Vidarbha region. The specific objectives were:

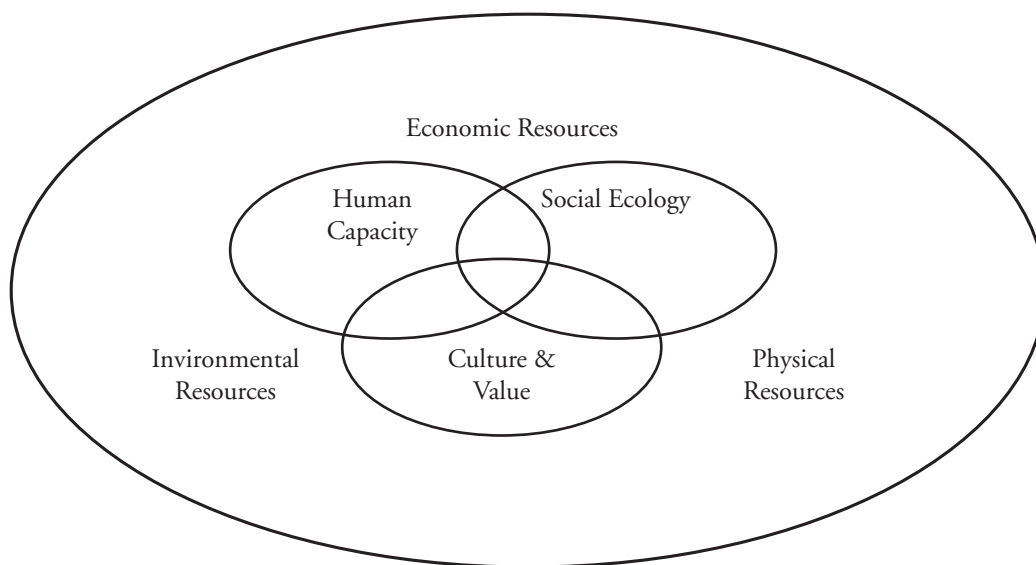
- To identify the factors contributing to psychosocial well-being in the Vidarbha context
- To identify psychosocial well-being baseline indicators to measure changes following the interventions

- To identify areas for psychosocial well-being research and intervention in the Vidarbha region

1.4. The Psychosocial Well-being Framework

The study adapted the framework (Figure 1.4.1) evolved by the psychosocial working group (PWG), represented by both humanitarian and academic institutions, to map the psychosocial field. The term ‘psychosocial’ is used to emphasize the close connection between psychological aspects of our experiences (our thoughts, emotions and behavior) and our wider social experiences (our relationships, tradition and culture).

FIGURE 1.4.1:
The Conceptual Framework of Psychosocial Intervention in Complex Emergencies
(The Psychosocial Working Group, 2003)



The framework defines psychosocial well-being of an individual with respect to three core domains: human capacity, social ecology, and culture and values. These domains map the human, social and cultural capital available to people responding to the challenges of prevailing events and conditions. The domain of Human Capacity constitutes resources such as the health and well-being (both mental and physical) of community members, the skills and knowledge of people, and their household livelihoods. Social Ecology refers to the social connections and support that people share. The various aspects of this domain are social relations within families, peer groups, religious and cultural institutions, links with civic and political authorities etc. Culture and Values point to the specific context and culture of communities that influence how people experience, understand and respond to events. These may consist of beliefs, customary practices, traditions, cultural values, human rights, dignity, local knowledge, and perceptions about other political, religious or ethnic groups. The cultural beliefs and practices are known to help construct the significance and meaning of all other domains and their components. These domains are not the only factors that have an impact on psychosocial well-being. The material, and economic resources of households, the infrastructure on communal and regional levels, and the environmental resources also have an important impact on psychosocial well-being. These resources form a part of the broader context within which individuals, families and communities begin to engage with the events that affect their lives (Psychosocial Working Group, 2003).

The psychosocial well-being framework has been applied for multiple purposes; identification of psychosocial issues, identification of resources to address these issues, programme planning, research on

psychosocial well-being monitoring and evaluation are a few among them. In the current study the framework is used to assess the psychosocial well-being of individuals and to identify the factors impacting it in the context of Vidarbha region. Based on the conceptual framework, indicators were identified for each of the components, from among the quantitative measures generated in the TISS baseline survey of livelihood. Those indicators, specifically pertaining to psychosocial well-being, not present in the baseline survey were incorporated in the psychosocial well-being survey questionnaire.

The variables identified as indicators of Psychosocial Well-being include various components of human capacity, social ecology, culture and values, physical resources, economic resources, and environmental resources. The **Human Capacity** domain was explored using quantitative measures covering the household details such as type of family and household size; not having an adult literate member; households with widows under age 50; female headed and widow headed households; literacy and educational level of adult male and female household members; vocational training received and skills possessed by household members; young and old dependency ratios; prevalence of major illness among household members; psychological well being; alcohol problem in self or other members of the family; physical violence; marital problems; birth, death and infant/child mortality rates; desired family size and contraceptive use by couples; breastfeeding and supplementary feeding practices; nutritional status of children, adolescents and married women; and children's failure in examination.

The indicators for **Social Ecology** comprised of religion and caste affiliation of households; existence of social/community organisations (SHGs, Farmers groups, Producers co-operatives, Water users association, Youth clubs, Workers associations, etc) in the village, or around the village in which the villagers are members; membership of household persons in social/community organisations and the extent of participation or involvement in these organisations; income security aspects (employment guarantee scheme, old age pension); food security (PDS, holding Antyodaya/BPL card, enrolment in anganwadi, membership in grain banks, etc); nature and extent of crop insurance, health insurance and life insurance of households; social support as perceived by the individual and household; social network of the individual and the household; perception of community development as characterized by a decrease in school dropout of the children, increase in age at marriage of girls or decrease in dowry deaths; discord or dispute with relatives or friends; marital problems; and physical violence.

The indicators for **Culture and Values** were religion; caste; occupation; membership in organisations; size of the community; historical context of the community; communities experience, understanding and response to changes, programmes and events; beliefs, customary practices, traditions, values; local knowledge; perceptions about political, social, religious or ethnic groups; perception of changes and development in the community over the years; nature of assets owned by households; type of house and amenities available; and source of fuel, grazing land, water and values attached to the same.

The **Physical Resources** consisted of type of house and adequacy of space, ; electrification of house; safe drinking water facility; availability of toilet facility; sources of fuel for household cooking; basic amenities (TV, phone, motor cycle, etc) available in households; access to affordable facilities transport; access to affordable health and education ; access to information and communications facilities; marketing facilities and timing of marketing of agricultural produce; access to storage facilities for produce; and proxy variables to assess access to physical resources such as increase in school attendance and decrease in school drop-out of children, increase in age at marriage of girls and institutional births among recent deliveries.

Economic Resources encompassed access to cooperative societies and banking facilities; credit facilities available from banks, cooperative societies, SHGs and other micro financing institutions; households with and amount of savings (jewellery, cash, bank deposits, etc); households with members living away but remitting amount for household use; households with and amount of outstanding loan from cooperatives, banks, SHGs and money lenders; access to and changes in sources and cost of seeds, fertilizers, pesticides, water, etc; sources, amount, cost and terms of credit availed; direction of investments and savings made by households; extent of outstanding credit by source, and vulnerability to credit; crop yield and fodder yield per acre of crop and price realisation; annual household income from different sources; annual household expenditure on food and non-food items; extent of households need for food, fodder and fuel that are met from own farm sources; extent of households facing shortage of food, fodder and fuel; type of work, and duration of work and wage income of household members.

Environmental Resources included landholding pattern of households (including ownership/tenancy status) and irrigated and non-irrigated land held by households; area under cultivation and cropping pattern; access to resources such as forest land, grazing land and water sources; and sources of fuel for household cooking.

SECTION II

2. STUDY DESIGN

This section explains the study design, sampling procedure, data collection and analysis plan of the main study as well as the psycho-social component.

2.1. Survey Design

The study was quantitative in nature and employed a cross sectional sample survey design. The SBI project funded by the Tata Trust was assigned to 9 NGOs for collecting data from 320 villages distributed in the 6 districts of Vidarbha region namely Amravati, Akola, Buldana, Washim and Yavatmal in Amravati division and Wardha in Nagpur division.

2.2. The Process of Sampling

The sampling frame for the selection of the villages was the list of villages provided by the NGOs. Of these, 71 villages were selected in such a way that there were at least 3 villages from the list provided by each NGO and as the number of villages covered by an NGO increased, the number selected from the list of villages covered by the NGO also increased. Based on the 2001 census, the selected villages were categorized into two groups namely the villages with less than 500 households and those villages with more than 500 households. In the first set of villages a complete listing of all households in each of the villages was made. From among these a systematic sample of 100 households per village was drawn. In the second set of villages, each village was first divided into a number of segments, with each segment having around 100 households. These segments were then numbered in order of their location within the village and a systematic sample of 4 or 5 segments were selected (to identify around 500 households from each village) in such a way that the selected segments represented different localities in the village. In the selected segments a complete listing of households was made and a systematic sample of 100 households was drawn.

2.3. Instruments Used for the Baseline Survey

The survey instruments for the baseline survey consisted of a house-listing form, a household (cum livelihoods) questionnaire, a village questionnaire and the psychosocial well being questionnaire. The house-listing form was used to list all the households in the selected villages or segments of the selected villages and it served as the sampling frame for the selection of households. The household (cum livelihoods) questionnaire was used to elicit information on household and population characteristics, education and school attendance, economic activities, demography, health and nutrition, cultivation and livestock, income and expenditures, social participation and safety nets, and loans and savings. The village questionnaire consisted of information about the village population, landholding, road and transport facilities, education and health facilities, marketing facilities, and so on.

2.4. Instruments Used for the Baseline Survey of Psychosocial Well-being

The component on psychosocial well-being was assessed through 3 different questionnaires covering critical life events, social support and networks and the self reporting questionnaire to assess the psychological distress (the detailed questionnaire has been provided in Section 3).

The critical life events questionnaire (8 items) prepared for the purpose of the study explores the critical stressors impacting the lives of the respondents in the last one year. The questionnaire lists the

seven commonly occurring stressors and also has a provision to capture other stressors using the last item - other critical life events'. The response pattern is yes/no/not applicable. The social support and network questionnaire (14 items) is adapted from the Close Persons Questionnaire (CPQ) devised by Stansfeld and Marmot (1992). The CPQ was used in a longitudinal study to study the impact of psycho-social factors on the health of British civil servants. It is a detailed comprehensive measure of social support suitable for population surveys. The CPQ is designed to include both social network questions and social support questions representing different types of social support. The CPQ items combine the different aspects of support in one instrument, including emotional/confiding, practical and negative aspects of support. The instrument allows one to measure support from upto four sources of support in a structured questionnaire format as well as measuring social networks. The CPQ has been tested in a large epidemiological survey and validated by interview within the selected sample. The instrument is sufficiently flexible to allow respondents to nominate the persons close to them rather than being restricted to those playing particular roles (eg. husband, colleague). This means that in general, respondents choose to include those who provide most support within the close persons (Stansfeld & Marmot, 1992). Due to the low literacy level of the sample population, the instrument although devised as a self-completion instrument, was administered to the respondents in an interview form. Further the Hindi and Marathi, two person's version (i.e. the original questionnaire elicits responses to various items keeping two persons as reference points) of the CPQ validated and adapted by Jaswal (1995) for India was used for the current study. For the descriptive analysis all 14 items were considered, but for further analysis only 12 items were incorporated owing to poor response rates for two items. The scoring for each item ranged from 0 to 1 to enable easy interpretation and comparison of computed coefficients.

The *Self Reporting Questionnaire* 20 items (SRQ 20) used to assess psychological distress, is derived from four psychiatric morbidity instruments from a wide variety of cultural backgrounds. It was developed by Harding et al. (1980) for a WHO collaborative study to screen for common mental disorders in primary health care. The WHO formally recommended the SRQ 20 in its 1994 manual which also reviewed a number of SRQ 20 studies and reported the validity and reliability of the instrument (WHO 1994). It can be self administered or (in countries with low literacy levels and in population based studies in low-income countries) can also be administered by the interviewer. It has been used as both a mental health screening instrument at an individual level and as a way in which to establish the mental ill health prevalence in a community. Harpham et al. (2003) report that the SRQ 20 has been used by different researchers to give added depth and dimension to their studies of broader social health issues, including social exclusion (Hamid, 2001); social capital (Thomas, 2003), reproductive health (Jaswal 1995; Reichenheim & Harpham, 1991) socio economic status (Ludermir & Lewis 2001) and the social construction of mental health (Aidoo, 1998). To administer the SRQ 20, two steps are required, cross cultural application and decision about the cut-off score used to determine the probable cases/ non-cases. As the SRQ 20 has been previously translated and validated in Hindi and Marathi and the cut-off score arrived at in the general population for caseness (Jaswal 1995) was 7/8 (7 'yes's a non case, 8 'yes's' a case), it was decided to use the same for the current study. Harpham et al. (2003) also report that a cut-off of 7/8 is common to measure distress.

The psychosocial well-being questionnaire was administered by a team of field investigators to the head of the household and one more responsible member in the household. Researchers sought to interview at least one male and one female responsible household member preferably head of the household and spouse separately to facilitate expression of very personal issues and to reassure confidentiality.

2.5. Data Collection

The psychosocial well-being questionnaire was separately filled in for both the individuals interviewed from each household. A total of 11, 970 respondents were administered the psychosocial well being questionnaire, from which 10,402 (86.9 percent) fully completed questionnaires were used for further analysis (Table 2.5.1). Seven interns from the Tata Institute of Social Sciences, joined the survey teams to collect data on the psychosocial well-being questionnaire for the initial 10 villages, where in the main (baseline) survey had been completed before the incorporation and training of the investigators for the psychosocial well being component. Both the teams – the interns and the main survey teams – were trained to administer the psychosocial well being component by the project directors (psychosocial well being). The data collected by the two teams was compared to look for disparity if any. The patterns on the whole were similar and no disparity was found between the two groups.

TABLE 2.5.1: Psychosocial Well-being Questionnaire’s Coverage Classified by Sex of the Respondents

Coverage	Total (%)	Male (%)	Female (%)
Total Questionnaires filled	11970 (100.0)	5841 (48.8)	6129 (51.2)
All Questions Responded	10402 (86.9)	5116 (49.2)	5286 (50.8)
Not All Questions Responded	1568 (13.1)	725 (46.2)	843 (53.8)

2.6. Data Entry and Analysis

As and when the field work was completed in a village, the filled-in questionnaires were brought to Wardha and entered into the computer with the help of Acharya Sriman Polytechnic, Wardha. For data entry, a special software called “Census and Survey Processing System” (CSPro) was used. This software is useful for entering, editing, tabulating and disseminating data from censuses and surveys and is used worldwide in large scale surveys. For further data analysis Statistical Package for Social Sciences SPSS version 15 was used.

SECTION III

3. PSYCHOSOCIAL WELL-BEING: KEY COMPONENTS AND OUTCOME

Psychosocial well-being is not a simplistic concept. Although there is a negative relation between psychological distress and well-being, a mere absence of distress does not necessarily mean that a person would possess significant psychological well-being and vice versa. For example, even an individual presenting severe mental health disorders i.e. a schizophrenic (psychological distress in this case) with adequate medication can show good “mental health” (psychological well-being), *if* her/his life conditions and social life (access to an occupation a social support network, adequate living conditions, etc.) are adequate (Massé et al., 1998). Therefore well-being is the cumulative effect of various components, referred to as psychosocial well-being in this report.

The components of psychosocial well-being being explored in this study include *psychological well-being* [even though in essence the Self Reporting Questionnaire (SRQ 20) captures distress, since the study is not solely looking at distress, it was decided to coin the outcome as captured by SRQ as *psychological well-being* and not distress], *social support*, *social networks* and presence of *critical life events*. The study, therefore, does not limit itself to the final outcome being Psychological Well-being measured using the Self Reporting Questionnaire (SRQ 20) that indicates the presence of psychological distress, but also explores the resources (social supports and network) available to cope with the stressors. The major stressors are captured through the Critical Life Events questionnaire. The findings have to be understood within the broader context explored through the baseline survey questionnaire used to understand the rural livelihoods. The resources and critical life events along with the background data would help to understand /build the context in which the Psychological Well-being is expressed.

3.1. Psychological Well-being

Psychological Well-being was measured using the Self Reporting Questionnaire (20 items). A cut-off of 7/8 was adopted for this study, especially for the descriptive analysis carried out in this section. More than 8 positive responses were considered to be reporting current mental/ psychological distress. The SRQ 20 reflects the multi dimensional nature of mental distress. Factor analyses have shown that one group of the questions taps into somatic symptoms (headache, appetite, digestion, and sleep); another into depressive/anxiety symptoms (frightened, unhappy, cry, and feelings of worthlessness); while a third captures a more cognitive/ decreased energy factor (can't think or make decisions, work is suffering, can't enjoy daily activities) (Sen et al. 1987; Iacoponi & Mari 1989; Tafari et al. 1991).

Out of the total 10,402 respondents 4347 (41.8 percent) gave positive responses to more than 8 items in the SRQ questionnaire indicating significant psychological distress (**Table 3.1.1**). From among these 4347 respondents, 84 percent felt nervous, tense or worried in the past month and 76 percent got easily tired and felt tired all the time. The pattern of distress revealed by the results supports the studies that highlight the understanding of psychological distress as affecting various affective, cognitive and also possibly somatic dimensions of well-being. It also supports the observation that anxiety is probably the core component of psychological distress (Massé, et al., 1998).

TABLE 3.1.1:
Responses to SRQ questions for the Group Expressing
Significant Distress (SRQ 8+) Classified by Sex

SRQ questions	Number (%) who responded yes		
	All	Male	Female
Total	4347(100)	1810(41.6)	2537(58.4)
Do you often have headache	2728 (62.8)	1003 (55.4)	1725 (68)
Is your appetite poor	2629 (60.5)	1147 (63.4)	1482 (58.4)
Do you sleep badly	2781 (64)	1236 (68.3)	1545 (60.9)
Are you easily frightened	2728 (62.8)	935 (51.7)	1793 (70.7)
Do your hands shake	2403 (55.3)	941 (52)	1462 (57.6)
Do you feel nervous tense or worried	3691 (84.9)	1507 (83.3)	2184 (86.1)
Is your digestion poor	2006 (46.1)	912 (50.4)	1094 (43.1)
Do you have trouble thinking clearly	2599 (59.8)	1152 (63.6)	1447 (57)
Do you feel unhappy	2736 (62.9)	1133 (62.6)	1603 (63.2)
Do you cry more than usual	1397 (32.1)	429 (23.7)	968 (38.2)
Do you find it difficult to enjoy your daily activities	2261 (52)	1037 (57.3)	1224 (48.2)
Do you find it difficult to make decisions	2680 (61.7)	1153 (63.7)	1527 (60.2)
Is your daily work suffering	2242 (51.6)	949 (52.4)	1293 (51)
Are you unable to play a useful part in life	1873 (43.1)	884 (48.8)	989 (39)
Have you lost interest in things	2516 (57.9)	1133 (62.6)	1383 (54.5)
Do you feel that you are a worthless person	1245 (28.6)	616 (34)	629 (24.8)
Has the thought of ending your life been on your mind	895 (20.6)	433 (23.9)	462 (18.2)
Do you feel tired all the time	3303 (76)	1389 (76.7)	1914 (75.4)
Do you have uncomfortable feelings in your stomach	2937 (67.6)	1221 (67.5)	1716 (67.6)
Are you easily tired	3318 (76.3)	1300 (71.8)	2018 (79.5)

3.2. Social Support

The Social Support and Network Questionnaire (SSNQ) had 6 items that explored the extent to which the respondents receive informational, instrumental and emotional support (**Table 3.2.1**). Almost three fourth of the respondents scored ≤ 2 out of 6 indicating poor social support. More than 50 percent of the respondents reported only minimal support (not at all or very little) in the form of information and guidance, presence of a person to confide or share feelings with, presence of a person to help with major issues and minor day to day problems. Contact with friends and acquaintances over phone or letters is absent among 40.6 percent of the respondents. Around 81 percent of the respondents are involved in voluntary work of varying intensity.

The cross tabulation between different kinds of social support and SRQ scores shows highest percentage of psychological distress among those who do not receive the different kinds of support. A trend of decrease in distress with the increase in help with day to day problems and with the increase in involvement in voluntary activities is evident from the data. However, the contact with friends and acquaintances over telephone and letters does not appear to be shielding the respondents from psychological distress. A majority (72 percent) of the respondents who reported a great deal of contact with friends and acquaintances through phone or letters, also reported significant psychological distress. This could be due to the fact that individuals in distress seek out support from friends and acquaintances over phone or through letters more than those who are not distressed and the same needs to be explored further. Also as suggested by earlier researchers, the negative side of social relations and the corresponding negative interactions could have had a possible negative impact on psychological well-being (Lincoln, 2000). The data under consideration reveals a significant negative correlation between psychological distress and social support [Table 3.5.1]. As social support increases, psychological distress decreases. This finding supports a long tradition of research and theory that has shown that people with high social support – instrumental, emotional and tangible (informational) – have better mental and physical health (Lincoln, 2000; Song, 2011; Turner, 1981).

**TABLE 3.2.1:
Distribution of Respondents by Kind of Social Support
Received and Its Interface with SRQ Scores**

Social Support	Cases (% of the total)	SRQ 8+ (% of respondents who gave the particular response on SSNQ)
Total	10402 (100)	4347 (41.8)
Persons to provide info and guidance		
No one	2175 (20.9)	1211 (55.7)
Very few	6754 (64.9)	2503 (37.1)
Many	1254 (12.1)	540 (43.1)
So many	219 (2.1)	93 (42.5)
Persons to confide or share feelings with		
No one	1557 (15)	816 (52.4)
Very few	7172 (68.9)	2811 (39.2)
Many	1359 (13.1)	587 (43.2)
A great deal	314 (3)	133 (42.4)
Persons to help with major things		
No one	1930 (18.6)	1093 (56.6)
Very few	7042 (67.7)	2723 (38.7)
Many	1266 (12.8)	455 (35.9)
So many	164 (1.6)	76 (46.3)
Persons to help doing daily chores		
No one	3000 (28.8)	1626 (54.2)
Very few	6106 (58.7)	2299 (37.7)
Many	1052 (10.1)	355 (33.7)

Social Support	Cases (% of the total)	SRQ 8+ (% of respondents who gave the particular response on SSNQ)
So many	244 (2.3)	67 (27.5)
Do you do any voluntary work		
Not at all	1945 (18.7)	962 (49.5)
A little	6826 (65.6)	2793 (40.9)
Quite a lot	1266 (12.2)	484 (38.2)
A great deal	365 (3.5)	108 (29.6)
Any friends or acquaintances in contact		
No one	4222 (40.6)	1742 (41.3)
Very few	4747 (45.6)	1864 (39.3)
Many	968 (9.3)	403 (41.6)
So many	465 (4.5)	338 (72.7)

3.3. Social Network

The Social Support and Network Questionnaire (SSNQ) comprised of 8 items on social network and explored the extent and frequency of the respondent's contacts with relatives, friends and acquaintances (**Table 3.3.1**). Majority of the respondents visit their relatives (77 %) and attend religious services (66%) only once every few months. Also 44.2 percent of the respondents meet just one or two of their relatives every month. A considerable number of the respondents (19.2 percent) never or almost never see someone from work socially and 17.8 percent respondents reported that they were hardly or almost never visited by any friend or acquaintance. Only 12.3 percent of the respondents belong to any club or organisation and the rest, a huge majority, does not belong to larger networks outside their immediate family and friends. These data have implications for the nature of instrumental support available to the individual. Of the 1233 respondents who responded for the item exploring the frequency of attendance to these organisations, 59 percent attended about once in a month and 29 percent attended once every few months. While cumulatively considering the social network score, 57 percent of the respondents got a score of ≤ 2 out of 8 indicating weak social networks.

More than three-fourth of the respondents meet their relatives once every few months. Respondents who meet their relatives once a week or once a month too have expressed higher distress than those who meet once every few months. Respondents who visit their relatives only once every few months expressed lesser distress (SRQ) than who visit relatives very frequently, and attend religious services almost daily. As mentioned earlier this could have two meanings – one, that people with high psychological distress tend to increase their social networks or second, that the quality of some social networks (involving negative interactions) even if their quantity is high, might indeed create more psychological distress (Lincoln, 2000). With respect to religiosity and well-being studies show that as stress increases, individuals are motivated to engage in religious pursuits more frequently (Ellison, 1991), and also those that show increased religious participation experience reduced psychological anxiety and distress (Petersen & Roy, 1985; Ross, 1990). The findings of the present study - indicating high distress in those who do not attend religious services at all (53.2) and those who attend them daily (46.8) corroborate with the findings of these previous studies.

Data indicate a significant positive correlation between psychological distress and social network [given in **Table 3.5.1**]. As psychological distress increases, social network increases.

**TABLE 3.3.1:
Distribution of Respondents by Kind of Social Networks and
Its Interface with SRQ Scores**

Social Networks	Cases (% of the total)	SRQ 8+ (% of respondents who gave the particular response on SSNQ)
Total	10402 (100)	4347 (41.8)
Frequency of visits to relatives		
Almost daily	83 (0.8)	35 (42.2)
About once a week	363 (3.5)	181 (49.9)
About once a month	1566 (15.1)	796 (50.8)
Once every few months	8010 (77.0)	3136 (39.2)
Never or almost never	380 (3.6)	199 (52.4)
Frequency of seeing someone from work socially		
Almost daily	2163 (20.7)	952 (44)
About once a week	2245 (21.5)	1046 (46.6)
About once a month	1245 (11.9)	550 (44.2)
Once every few months	2676 (25.7)	864 (32.3)
Never or almost never	2073 (19.2)	935 (45.1)
Frequency of visits by any friends or acquaintances		
Almost daily	2321 (22.3)	982 (42.3)
About once a week	2020 (19.4)	911 (45.1)
About once a month	1184 (11.4)	546 (46.1)
Once every few months	3030 (29.1)	1058 (34.9)
Never or almost never	1847 (17.8)	850 (46)
How many relatives do you see once a month		
None	3032 (29.1)	1366 (45.1)
01-02	4593 (44.2)	1881 (41)
03-05	2028 (19.5)	782 (38.6)
06-10	666 (6.4)	273 (41)
More than 10	83 (0.8)	45 (54.2)
Frequency of attendance to religious services		
Almost daily	203 (1.9)	95 (46.8)
About once a week	769 (7.4)	394 (51.2)

Social Networks	Cases (% of the total)	SRQ 8+ (% of respondents who gave the particular response on SSNQ)
About once a month	1640 (15.8)	709 (43.2)
Once every few months	6845 (65.8)	2646 (38.7)
Never or almost never	945 (9.1)	503 (53.2)
Belonging to any clubs or organisations		
Total	10402	4347
Yes	1283 (12.3)	606 (13.9)
No	9119 (87.7)	3741(86.1)
All the above together, how often do you attend		
Total	1233 (100)	580 (47.0)
Almost daily	20 (1.6))	8 (40)
About once a week	89 (7.2))	46 (51)
About once a month	736 (59.7))	367 (49)
Once every few months	359 (29.1))	144 (40)
Never or almost never	29 (2.4))	15 (51)
Frequency of inviting people over for meals		
Total	1672(100)	793 (100)
Almost daily	17 (1.0)	8(1.0)
About once a week	112 (6.7)	60 (7.6)
About once a month	1068 (63.9)	505(63.7)
Once every few months	473 (28.3)	220 (27.7)
Never or almost never	1 (0.1))	0 (0.0)

3.4. Critical Life Events

A majority (66%) of the respondents reported either one or no critical life events and the cumulative percentage of the respondents reporting up to three critical life events is 93% (**Figure 3.4.1**). Failure in crop or business was the most reported critical life event (49%) and therefore the biggest stressor (**Table 3.4.1**). Also major illness in self or a family member, failure of children in examination, alcohol problem in self or family, discord or dispute with relatives or friends, marital problems, physical violence and other reasons were reported as critical life events and hence stressors (presented in decreasing order). The other critical life events reported by the respondents included separation in the family, and isolation and death. While a majority (88.5%) of the respondents reported that they did not have any major illness in the last one year, 11.1% of the respondents reported one episode of major illness in the past year and 0.4% reported two episodes.

The cross tabulation between the critical life events and SRQ scores revealed significant psychological distress among a higher proportion of respondents with two or more episodes of illness in the last one

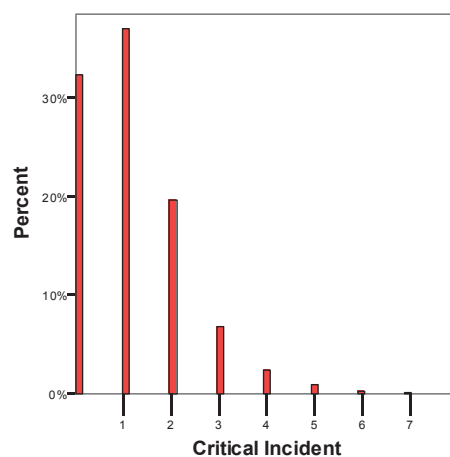
year . This is followed by those with one episode and none. A large proportion (81.2%) of respondents reporting physical violence have expressed significant psychological distress, followed by those who have reported other critical life events like-discord or dispute with relatives or friends, marital problems, failure of children in examinations, major illness in self or family member, alcohol problems in self or family and failure in crop or business. Compared to other critical stressor, lesser proportion of respondents (51.6%) have significant psychological distress from among those who have reported failure of crop or business.

Data indicate a significant positive correlation between psychological distress and critical life events i.e. as critical life events increase, psychological distress also increases. [Table 3.5.1]. This finding that the positive relation between psychological distress and critical life events subsequently lead to chronic stress was consistent with previous studies (Serido et al., 2004).

Table 3.4.1: Distribution of Respondents by Number of Episodes of Major Illness in Self and Critical Life Events in the Last One Year and Its Interface with SRQ Scores

Respondent Characteristics	Cases (% of the total) SRQ 8+ (% of respondents who gave the particular response)	
	Total	10402 (100)
Episodes of Major illness in self		
None	9208 (88.5)	3689 (40.1)
One	1151 (11.1)	630 (54.7)
Two+	43 (0.4)	28 (65.1)
Critical life events		
Major Illness in Self or Family Member	2762 (26.6)	1666 (60.3)
Failure in Crop or Business	5198 (49.9)	2683 (51.6)
Discord or Dispute with Relatives or Friends	729 (7.0)	535 (73.4)
Marital Problems	559 (5.4)	404 (72.3)
Alcohol problems in Self or Family Members	942 (9.1)	566 (60.1)
Failure of Children in Examinations	1417 (13.6)	947 (66.8)
Physical Violence	255 (2.5)	207 (81.2)

**FIGURE 3.4.1:
Distribution of Critical Life Events**



3.5. Interface between the Components of Psychosocial Well-being

As mentioned in each specific sub-section, a significant correlation is revealed between psychosocial well-being on one hand and the, social support, social network , on the other. As a high SRQ score (i.e. SRQ 8+) would mean increased psychological distress, it would indicate a decreased level of overall psychological well-being. **Table 3.5.1** shows the correlation between various components and Psychosocial Well -being.

The positive correlation between SRQ and critical incidents shows that psychological well-being decreases with critical life events. Similarly a negative correlation between SRQ and social support indicates that psychological well-being increases with the increase in social support. With the decrease in psychological well being (or an increase of psychological distress), a tendency to engage in social networks is also seen to increase.

Moreover, the table also indicates the correlation between the various components. As critical incidents increase, social support is seen to decrease whereas social networks seem to increase. However, there is a significant positive correlation between social support and social networks

TABLE 3.5.1:
Correlations Between Components of Psychosocial Well-being

	Critical Incident	Social Support	Social Network
SRQ	0.416**	- 0.087**	0.109**
Critical Incident		- 0.039**	0.151**

** **Correlation is significant** at 0.01 level (2-tailed).

SECTION IV

4. PSYCHOLOGICAL WELL-BEING AND ITS INTERFACE WITH SOCIO DEMOGRAPHIC CHARACTERISTICS

This section explores the Interface between the socio demographic characteristics identified as components of the psychosocial well-being framework and the psychological well-being assessed using SRQ. Though all variables identified to operationalize the psychosocial well-being framework were analyzed, this section presents only those socio demographic indicators that could be meaningfully quantified² and utilized from the baseline survey questionnaire to understand psychosocial well being. The socio demographic variables are broadly categorized into individual, household, village and district characteristics.

4.1 Individual Characteristics

The individuals characteristics explored in relation to psychological distress are as follows: Gender differences, Age, Religion, Caste Class, Relationship to Head, Marital Status, Education, Occupation and NREGA benefits. The Table 4.1.1. presents the basic descriptive and inferential statistics pertaining to the individual characteristics listed above.

4.1.1. Gender differences

Of the respondents who reported psychological distress majority were women compared to men. The difference in psychological well-being between the women and men was statistically significant. Even the earlier studies have confirmed, although with caution, that women were more likely than men to develop psychological distress. They have used the ‘cumulative disadvantage theory’ which emphasizes that people who face disadvantages early in life, raising the risk of additional disadvantage later on, accumulate risk factors over their life course, thereby increasing vulnerability (Ferraro & Nuriddin, 2006; Bird, 1997). These increased risk factors in the case of women were attributed to greater structural strain due to gender inequalities, differential cultural norms guiding expression of distress for men and women, differences in the nature of stressors, differential socialisation patterns and the position of women in the social structure.

4.1.2. Age

When one looks at the distress expressed by different age groups one finds a trend of increasing distress with increasing age. While more than 50 percent of the elderly (60+) who participated in the study expressed significant psychological distress, in the age group of 20 – 29, only 33 percent of the respondents expressed such significant psychological distress. The respondents in the age group of 10- 19 years showed higher proportion of distress than those in the age group of 20 – 29 years and this needs further exploration. The correlation analysis between age and psychological distress shows statistically significant positive relationship.. This result is congruent with the findings of other studies, although set in a very different context, that show a link between psychological distress and old age mainly attributing it to the feelings of loneliness, increased depression, more illness and disability (Paul et al., 2006).

² Only those contextual variables that could be quantified; demonstrated a pattern in the cross tab with psychological distress; and had adequate data points (less missing values) are presented in this section.

4.1.3. Religion

The respondents from the Muslim religion showed higher proportion of significant psychological distress followed by Hindu/other (as the number of people from other religions was very small, they were clubbed with the Hindu category) and Buddhist. Statistically there was a significant difference between respondents from the Muslim category and that of Hindu/other and Buddhist category of respondents. This result adds to the debate on the relationship between minority status/ethnic cultural differences and psychological distress. There have been varying studies with varying conclusions. Some of these studies have concluded that minority status in itself is distressing due to prejudice and discrimination which leads to lack of control and lowered self esteem; while others feel it is not the minority status per se that is distressing but it is their concentration in lower social class associated with lack of opportunities. Other studies completely negate a relation between minority status and distress while highlighting that psychological well-being differs with different cultural and ethnic arrangements due to differences in values, kinship ties, cultural activities and networks (Mirowsky & Ross, 1980).

TABLE 4.1.1:
Individual Characteristics

Respondent Characteristics	Total respondents	SRQ Score 8+	Total respondents	Total respondents
	All Number (%)	Number (%)	SRQ Mean/correlation	SRQ Test of significant difference/correlation (p-value)
Total	10402 (100)	4347 (41.8)	6.842	
Gender difference				
Male (A)	5116 (49.2)	1810 (35.4)	6.230	
Female (B)	5286 (50.8)	2537 (48.0)	7.435	(>) A**
Relation to head				
Head (A)	5284 (50.8)	2012 (38.1)	6.563	
Spouse of head (B)	4533 (43.6)	2082 (45.9)	7.194	(>) A , C**
Son/Daughter	293 (2.8)	114 (38.9)	6.636	
Other relatives (C)	292 (2.8)	139 (47.6)		
Age of the respondents				
10-19	47 (0.5)	21 (44.7)	+0.149	0.000**
20-29	1406 (13.5)	456 (33.1)		
30-39	2710 (26.1)	1047 (38.6)		
40-49	2702 (26)	1120 (41.5)		
50-59	1691 (16.3)	718 (42.5)		
60-69	1328 (12.8)	680 (51.2)		
70+	518 (5)	296 (57.1)		
Marital Status				
Married (A)	9626 (92.5)	3894 (40.5)	6.695	

Respondent Characteristics	Total re- spondents	SRQ Score 8+	Total re- spondents	Total re- spondents
	All Number (%)	Number (%)	SRQ Mean/ correlation	SRQ Test of significant difference/ correlation (p-value)
Unmarried	140 (1.3)	56 (40)	8.662	(>) A**
Widowed	540 (5.2)	341 (63.1)		
Divorced (B)	27 (0.3)	15 (55.6)		
Separated/Deserted	69 (0.7)	41 (59.4)		
Education level				
Illiterate (A)	2707 (26)	1335 (49.3)	7.580	(>) B, C, D**
Below Primary (1-4) (B)	2138 (20.6)	966 (45.2)	7.184	(>) C, D**
Primary Complete (5-7)	1718 (16.5)	728 (42.4)		
Middle Complete (8-9) (C)	1606 (15.4)	588 (36.6)	6.450	(>) D**
High/High Secondary (10-12)	1811 (17.4)	621 (34.3)	5.548	
Higher Education (13-59) (D)	422 (4.1)	109 (25.8)		
Occupation based on landholding				
No work (A)	837(8.0)	402(48.0)	7.404	(>)C,D,E,F**
Labour work (B)	3116(30.0)	1403 (45.0)	7.079	(>) D,E, F**
Marginal Farmer < 2 acre land (C)	1295(12.4)	541 (41.8)	6.927	(>) E, F**
Farmers 2 – 10 acre land (D)	3574(34.4)	1461 (40.9)	6.845	(>) E, F**
Farmers > 10 acre land (E)	716(6.9)	247(34.5)	6.014	
Salaried / Own business / Trade (F)	864(8.3)	293 (33.9)	5.987	
Religion				
indu/Others (A)	8091(77.8)	3383 (41.8)	6.858	(>) C**
Muslim (B)	750 (7.2)	370 (49.3)	7.307	(>) A, C**
Buddhist (C)	1561 (15.0)	594 (38.1)	6.538	
Caste Class				
SC (A)	1938 (18.6)	770 (39.7)	6.673	
ST (B)	1603 (15.4)	677 (42.2)	6.827	
NT/DNT (C)	1420 (13.7)	644 (45.4)	7.112	(>) A, D**
OBC/SBC (D)	4534 (43.6)	1855 (40.9)	6.822	
General (E)	907 (8.7)	401 (44.2)	6.907	
NREGA Status				
Applied & obtained job card (A)	3568 (34.3)	1509 (42.3)	6.827	
Applied & not obtained job card (B)	1434 (13.8)	606 (42.3)	7.147	(>) A, C**
Not applied & not sought work (C)	5400 (51.9)	2232 (41.3)	6.771	
Results are based on two-sided tests assuming equal variances with significance level 0.05. For each significant pair, the key of the smaller category appears under the category with larger mean.				

4.1.4. Caste Class

The analysis comparing caste class and SRQ scores shows higher proportion of respondents from the notified tribes (NT) and denotified tribes (DNT) categories reporting significant psychological distress, followed by the general, scheduled tribes (ST), other backward caste (OBC)/special backward caste (SBC) and scheduled caste (SC) categories. However the statistical test reveals that higher distress in NT/DNT is significantly different only in comparison to the SC and General category. The difference between means of the other categories (SC, ST, OBC/SBC and General) is not statistically significant.

4.1.5. Relationship to Head

Of the 4347 respondents who reported significant psychological distress, the proportion of the heads of the households expressing distress was lesser than that of the spouse or other relatives. The proportion of sons /daughters expressing distress was same as that of the head and lesser than the other categories of respondents. The spouse reported statistically significant higher distress than the head and others. Considering that most of the heads of households were men this finding further supports the discussion under gender category which highlighted the relation between greater structural disadvantages as well as familial burdens on the females and greater psychological distress (Bird, 1997).

4.1.6. Marital status

Being within a marital relation is seen to have a protective function with regard to mental health. A similar trend is visible in the analysis. The widowed, followed by separated/deserted and divorced - have shown higher proportion of psychological distress in comparison to the unmarried and married individuals. The test of difference shows significantly higher distress among the group that is unmarried, divorced, separated and widowed, when compared with that of the married respondents. This is supported by the findings of studies that claim that possessing multiple identity roles (as associated with marriage) is psychologically protective, despite the greater potential for role conflict or overload (such as seen in gender differences with regards to distress). These studies point out that the lack or loss of role identity is psychologically damaging and might lead to distress. Further these studies also stress that the prevalence of certain role patterns in a particular society may structure the meaning of various roles and their effect on self-conception. Less common/disregarded role configurations may weaken self-conception, and thus render those roles less protective and more distressing (Thoits, 1986). These observations hold special relevance to Indian society.

4.1.7 Education

The data finds a decreasing trend of distress with the increase in education. While around 50 percent of the illiterates have expressed significant psychological distress, only 25 percent of the respondents from the higher education category have expressed the same. The test of difference shows significant difference between different educational groups confirming the above findings. This observation is substantiated by a study that links higher educational levels with higher social capital (in terms of achieved socioeconomic status, access to opportunities and access to information) which in turn leads to higher well-being (Song, 2011).

4.1.8. Occupation

The respondents who are not working expressed maximum distress, followed by landless labourers and marginal farmers with less than 2 acres land. The farmers with >10 acres and the salaried/own business/trade category reported the least distress when compared to all other groups. As per the test of difference the no work category and landless labourers do not differ from each other and show the highest distress. Similarly the landless labourers and marginal farmers do not differ from each other with regard to distress and show the second highest distress among occupational groups. However the no work category significantly differs (and expresses higher distress) from, marginal farmers, farmers with 2-10 acres, > 10 acres and the salaried/own business/trade category. Similarly, the landless labourers, marginal farmers with less than 2 acres of land and farmers with 2-10 acres, differ significantly from farmers with >10 acres and the salaried/own business/trade category in terms of psychological distress. As in the case of education, studies have linked a higher occupational position to higher social capital – with regards to association with higher social class and thereby status as well as tempering of relative deprivation and status anxiety and increased sense of security – which has a positive relation with psychological well-being and a negative effect on distress (Song, 2011). Further, unemployment is considered a unique stress situation since it enhances powerlessness and decreases the feeling of social acceptance, self esteem and life satisfaction (Chakrapani, 1996).

4.1.9. NREGA Benefits

The data from the baseline survey on NREGA was used to create the variable on NREGA benefit status. Its interface with psychological well-being was statistically verified. Respondents in the category “applied not obtained job card” show significantly higher distress than the other two categories - “applied and obtained job card” and “not applied and not sought work”. The earlier observation of unemployment being a unique stressor holds true in this case as well, with a further stress on unemployment being a situation where in the environment is incapable and resource less to meet the work-related demand of the individual (Chakrapani, 1996). Therefore a voluntary demand is a necessary factor in inducing distress related to unemployment.

4.2. Household Characteristics

The household characteristics explored in relation to psychological distress are as follows: Total Land Holding, Annual Household Income, Income over Expenditure, Type of Family, Type of House, Water Facility, Fuel Availability, Toilet Facility, Electrification, Below Poverty Line/ Antyodaya Households, Membership in Organizations and Social Security Benefits, Shortage of Staple Food, Deaths in the family, Illness in the family, Outstanding Loan – Number and Amount, and Bank Balance. Table 4.2.1 presents the descriptive and inferential statistics pertaining to the household characteristics listed above.

Table 4.2.1: Household Characteristics

Respondent Characteristics	Total respondents	SRQ Score 8+	Total respondents	Total respondents
	All Number (%)	Number (%)	SRQ Mean/correlation	SRQ Test of significant difference/correlation
Total	10402 (100)	4347 (41.8)	6.842	
Total landholding (acres)				
Nil	3893 (37.4)	1689 (43.4)	(-)0.055	0.000**
- 2.5	1816 (17.5)	775 (42.7)		
2.6 – 5.0	2472 (23.8)	1050 (42.5)		
5.1 – 10.0	1336 (12.8)	522 (39.1)		
10.1 – 25.0	763 (7.3)	269 (35.3)		
25.1+	122 (1.2)	42 (34.4)		
Total cultivated holding (acres)				
Nil	4480 (43.1)	1985 (44.3)	(-)0.063	0.000**
- 2.5	1706 (16.4)	714 (41.9)		
2.6 – 5.0	2227 (21.4)	922 (41.4)		
5.1 – 10.0	1231 (11.8)	464 (37.7)		
10.1 – 25.0	658 (6.3)	230 (35)		
25.1+	100 (1)	32 (32)		
Annual household income (all sources)				
< 10,000	398 (3.8)	235 (59)	(-)0.080	0.000**
10,000 – 19,999	1179 (11.3)	526 (44.6)		
20,000 – 29,999	1785 (17.2)	717 (40.2)		
30,000 – 39,999	1821 (17.5)	806 (44.3)		
40,000 – 49,999	1213 (11.7)	514 (42.4)		
50,000 – 69,999	1474 (14.2)	639 (43.4)		
70,000 – 99,999	998 (9.6)	405 (40.6)		
100,000 – 149,999	747 (7.2)	272 (36.4)		
150,000 – 199,999	309 (3)	90 (29.1)		
200,000 – 499,999	427 (4.1)	126 (29.5)		
500,000+	51 (0.5)	17 (33.3)		

Respondent Characteristics	Total respondents	SRQ Score 8+	Total respondents	Total respondents
	All Number (%)	Number (%)	SRQ Mean/correlation	SRQ Test of significant difference/correlation
Excess income over expenditure (Income – Expenditure)				
Expenditure > Rs. 1 Lh.	610 (5.9)	242 (39.7)	(-)0.082	0.000**
Expenditure Rs. 50 – 100 Th.	1351 (13)	590 (43.7)		
Expenditure Rs. 25 – 50 Th.	2082 (20)	895 (43)		
Expenditure Rs. 10 – 25 Th.	2006 (19.3)	886 (44.2)		
Expenditure Rs. 1 – 10 Th.	1424 (13.7)	608 (42.7)		
Income Rs. 0 – 10,000	921 (8.9)	390 (42.3)		
Income Rs. 10 – 25 Th.	775 (7.5)	334 (43.1)		
Income Rs. 25 – 50 Th.	503 (4.8)	182 (36.2)		
Income Rs. 50 – 100 Th.	394 (3.8)	139 (35.3)		
Income > Rs. 1 Lh.	337 (3.2)	81 (24)		
Type of family				
Uni-member / Coupleless (A)	635 (6.1)	388 (61.1)	9.036	(>) B, C, D**
Strictly nuclear (B)	6237 (60.0)	2590 (41.5)	6.809	(>) C **
Extended nuclear (C)	1756 (16.9)	676 (38.5)	6.437	
Joint family (D)	1774 (17.7)	693 (39.1)	6.576	
Total household members				
01 – 02	1178 (11.3)	678 (57.6)	(-)0.060	0.000**
03 – 04	4057 (39.0)	1588 (39.1)		
05 – 06	3976 (38.2)	1588 (39.9)		
7+	1191 (11.4)	493 (41.4)		
Distribution of respondents by type of house				
Kuchcha / Hut (A)	4277 (41.2)	1821 (42.6)	6.879	(>) C, D**
Semi Pucca (B)	3489 (33.5)	1606 (46.0)	7.290	(>) A, C, D**
Pucca (C)	1719 (16.5)	646 (37.6)	6.482	(>) D**
RCC roofing (D)	917 (8.8)	274 (29.9)	5.639	
Water availability				
Within House (A)	1017 (9.8)	306 (30.1)	5.669	
Within a Yard (B)	3575 (34.4)	1514 (42.3)	6.982	(>) A, C**
Just outside the Yard (C)	2916 (28.0)	1126 (38.6)	6.593	(>) A**
Within ½ Km (D)	2661 (25.6)	1261 (47.4)	7.240	(>) A, B, C**
More than ½ Km (E)	233 (2.2)	140(60.1)	8.502	(>) A, B, C, D**

Respondent Characteristics	Total respondents	SRQ Score 8+	Total respondents	Total respondents
	All Number (%)	Number (%)	SRQ Mean/correlation	SRQ Test of significant difference/correlation
Fuel availability				
Fuel in-house (A)	1254 (12.1)	395 (31.5)	5.768	
Firewood < 1 Km (B)	523 (5.0)	232 (44.4)	7.375	(>) A, C**
Firewood 1 – 2 Km (C)	5133 (49.3)	2099 (40.9)	6.817	(>) A**
Firewood > 2 Km (D)	3492 (33.6)	1621 (46.4)	7.185	(>) A, C**
Toilet facility				
No toilet facility in the house (A)	6311 (60.7)	2683 (42.5)	6.885	
Toilet facility in the house (B)	4091 (39.3)	1664 (40.7)	6.776	
Electricity				
No electricity (A)	1988 (19.1)	909 (45.7)	7.329	(>) B**
Having electricity (B)	8414 (80.9)	3438 (40.9)	6.727	
BPL				
BPL household	4302 (41.4)	1881 (43.7)		
Non-BPL household	6096 (58.3)	2463 (40.4)		
Don't know	4 (0.0)	3 (75)		
Antyodaya				
In the Antyodaya list	1491 (14.3)	743 (49.8)		
Not in the Antyodaya list	8901 (85.6)	3600 (40.4)		
Don't know	10 (0.1)	4 (40.0)		
Membership in organizations				
Member (A)	3659 (35.2)	1440 (39.4)	6.652	(>) B**
Not a member	6743 (64.8)	2907 (43.1)	6.945	
Benefits from social security net				
Benefited	1748 (16.8)	833 (47.7)		
Not Benefited	8654 (83.2)	3514 (40.6)		
Months of staple food shortage				
Total	1748 (100)	978 (55.9)		
1 month	199 (11.4)	75 (37.7)	+0.138	0.000**
2 months	637 (36.4)	383 (60.1)		
3 months	582 (33.3)	343 (58.9)		
4 – 6 months	330 (18.9)	177 (53.6)		

Respondent Characteristics	Total respondents	SRQ Score 8+	Total respondents	Total respondents
	All Number (%)	Number (%)	SRQ Mean/correlation	SRQ Test of significant difference/correlation
Deaths per family				
0	8499 (81.7)	3517 (41.4)	+0.046#	0.000**
1	1729 (16.6)	755 (43.7)		
2	170 (1.6)	73 (42.9)		
3	4(0.0)	2 (50.0)		
No. of illness per family				
0	6703 (64.4)	2610 (38.9)	+0.128#	0.000**
1	2932 (28.2)	1375 (46.9)		
2	646 (6.2)	307 (47.5)		
3+	121 (1.2)	55 (45.5)		
Loans: Number of outstanding loans				
No loan	3950 (37.9)	1611 (40.8)		
1	3096 (29.7)	1386 (44.8)		
2	1924 (18.6)	812 (42.2)		
3+	1432 (13.8)	538 (37.6)		
Total outstanding amount of all loans				
No loan	4291 (41.3)	1774 (41.3)	-0.011	0.267
< 2000	168 (1.6)	98 (58.3)		
2000 – 4999	404 (3.9)	169 (41.8)		
5000 – 9999	701 (6.7)	331 (47.2)		
10,000 – 19,999	1229 (11.8)	544 (44.3)		
20,000 – 49,999	1947 (18.7)	832 (42.7)		
50,000 – 99,999	1051 (10.1)	378 (36)		
100,000 – 199,999	385 (3.7)	134 (34.8)		
200,000 – 499,999	189 (1.8)	74 (39.2)		
500,000+	37 (0.4)	13 (35.1)		

Respondent Characteristics	Total respondents	SRQ Score 8+	Total respondents	Total respondents
	All Number (%)	Number (%)	SRQ Mean/correlation	SRQ Test of significant difference/correlation
SB: HH SB A/C Current Balance				
No SB	5401 (51.9)	2401 (44.5)	-0.016	0.095*
1 – 999	2769 (26.6)	1173 (42.4)		
1000 – 1999	540 (5.2)	200 (37.0)		
2000 – 4999	462 (4.4)	144 (31.2)		
5000 – 9999	340 (3.3)	117 (34.4)		
10,000 – 19,999	333 (3.2)	114 (34.2)		
20,000 – 49,999	271 (2.6)	90 (33.2)		
50,000 – 99,999	120 (1.2)	36 (30.0)		
100,000+	101 (1.0)	47 (46.5)		
NR/Missing	65 (0.6)	25 (38.5)		
Loan status				
No loan taken (A)	7063 (67.9)	2952 (41.8)	6.836	
Loan waived (B)	1487 (14.3)	607 (40.8)	6.839	
Loan not waived (C)	1852 (17.8)	788 (42.5)	6.868	
Loan to Income Ratio	0.376	0.458	+0.026	0.008*
Results are based on two-sided tests assuming equal variances with significance level 0.05. For each significant pair, the key of the smaller category appears under the category with larger mean.				

4.2.1. Total Land Holding

A comparison between total land holding and SRQ scores reveals a trend of increase in the proportion of respondents reporting distress with a decrease in land holding. The respondents without land holding showed the highest proportion of distress and respondents having more than 25 acres of land have shown the lowest proportion of distress. The test of correlation shows a negative correlation between land holding and distress, i.e. with the increase in land holding there is a decrease in psychological distress. . Therefore, according to the data total landholding seems to play a crucial role in the psychological distress experienced by the respondents. A similar trend is evident with the analysis of total cultivated land holding too.

4.2.2. Annual Household Income

A comparison between annual household income and SRQ scores reveals a general trend of increase in psychological well being with an increase in income. The test of correlation too reveals a significant negative relationship indicating higher distress with decreasing household income.

4.2.3. Income over Expenditure

The descriptive data on expenditure showed a weak trend of increasing distress with increasing expenditure. However since expenditure has to be studied in relation to the household income towards understanding distress, the income over expenditure was calculated.. The test of correlation indicated a negative correlation between psychological distress and increase in excess income. . i.e. with an increase in excess income there is decrease in psychological distress. These observations with regard to the income tie in to the studies that show a direct link with higher income (and savings) with higher social capital and lower distress (Song, 2011).

4.2.4. Type of Family

A higher proportion of respondents from the uni member /couple less group reported significant psychological distress, followed by members from strictly nuclear, joint and extended nuclear families. The number of members in the family too was considered to understand distress. A higher proportion of respondents from smaller units reported distress. Though with an increase in number, the proportion of distressed respondents reduces, with a further increase in the total number of family members i.e. more than seven, the distress seems to increase. Statistical test of difference revealed that the uni-member/coupleless category as expressing significant higher distress than the categories – strictly nuclear, extended nuclear and joint families. Strictly nuclear families too showed significantly higher distress than extended nuclear family. However no difference between extended nuclear and joint family is reported. These findings support the earlier observations that the assumption of multiple roles increases psychological protection/buffering and leads to less distress (Thoits, 1986) but it is possible that too many roles might lead to more conflicts and overload.

4.2.5. Type of House

The study showed that higher proportion of respondents living in semi *pucca* houses reported significant psychological distress followed by those living in *kuchcha*/hut *pucca*, and RCC roofing houses. Respondents with a semi *pucca* house showed statistically significant higher distress than all other categories. Among the later two categories, respondents with a *kutchra* house showed statistically sig-

nificant higher distress than respondents with *pucca* and RCC roofing houses. Respondents in *pucca* houses show significantly higher distress than individuals in RCC roofing houses.

4.2.6. Water Facility

The respondents who have to travel more than ½ km for water expressed higher distress than all other categories. Further respondents from households that had a water source within ½ km showed significantly higher distress than respondents from households that have the water source within the house and just outside the yard indicating that access to water influences the distress level in the respondents.

4.2.7. Fuel Availability

With regard to fuel availability respondents from households that have fuel in the house showed the least psychological distress in comparison to those who have to move out in search of firewood.

4.2.8. Toilet Facility

With regard to toilet facility, respondents from households that have toilet facility within the house showed no difference in psychological distress compared to respondents from households that have no toilet facility within the house.

4.2.9. Electrification

Around 80% of the households have electricity. Respondents from households without electricity showed higher psychological distress than individuals from households with electricity.

4.2.10. Below Poverty Line (BPL)/ *Antyodaya* Households

A slightly higher proportion of respondents from BPL families showed distress in comparison to respondents from non BPL families. Similar trend was seen with regard to the respondents from *Antyodaya* list of households. As income and other variables such as shortage of staple food, fuel availability, water and toilet facility, among others, better captures vulnerability related to poverty and marginalization, these variables were not further considered for statistical analysis.

4.2.11. Membership in an Organisation and Social Security Benefits

The respondents who have a family member as a member in an organisation reported less distress than those without any of their family members with such a membership. Very small proportion of respondents benefitted from social security benefits (disability pension, widow pension, old age pension, other pensions, flood relief, drought relief, other natural calamity relief, pregnancy/delivery benefits and other benefits) and the proportion of respondents reporting significant distress was higher among this group. Since other variables better captured the marginalization and need for social security benefits, this variable was not further analysed.

4.2.12. Shortage of Staple Food

A higher proportion of respondents with a shortage of 'staple food for 2 months' reported significant psychological distress followed by the respondents with food shortage for 3 months and 4- 6 months. The respondents with a month's food shortage reported lesser proportion of respondents with significant psychological distress. Test of relationship showed a significant positive relationship between number of months of staple food shortage and psychological distress i.e. with the increase in the

number of months of food shortage the psychological distress experienced by respondents in those households also increased.

4.2.13. Deaths in the family

Data with regards to the number of deaths in the family since past five years was extracted from the baseline survey questionnaire and its interface with psychological well being was tested. There was a significant positive relationship between deaths per family and psychological distress. As the number of deaths in a family increased, the psychological distress experienced by members too increased. Earlier research has shown the debilitating effects of the chronic stress associated with critical life events on individuals, particularly because of the uncertainty associated with their timing of occurrence. This unpredictability and lack of control over the onset or remission of the stressor causes psychological distress (Serido, Almeida & Wethington, 2004).

4.2.14. Illness in the family

The study reported a significant positive relationship between illness per family and psychological distress. As the number of episodes of illness in a family increased the psychological distress experienced by members also increased. As in the case of deaths in a family, illnesses within the family forms another instance of a critical life event which brings with it chronic stress, and in this case it is particularly so due to the uncertainty in the resolution of the stressor. The compounded effect of not knowing when the effect will end, along with - limited social capital (in terms of resources and information) accessible to most families to deal with the stressor in the most effective manner possible, leads to heightened stress (Serido, Almeida, & Wethington, 2004; Song, 2011).

4.2.15. Outstanding Loan – Number and Amount

The study showed a trend of decreasing distress with the increase in the number of loans and amount of loan. This trend being a paradox ,a new variable was created to incorporate the information on loan waiver along with the loan taken status. However no significant difference was found between the groups - 'no loan taken', 'loan waived' and 'loan not waived'. Hence one more new variable was constructed to capture the impact of the outstanding loan on psychological distress. A loan to income ratio was worked out and it showed a significant positive relationship with psychological distress. As the loan to income ratio increased, the psychological distress also increased.

4.2.16. Bank Balance

According to the data respondents showed a decrease in distress with the increase in savings with an exception of those respondents from the maximum savings i.e. Rs. 1,00,000 and above category, who expressed significant psychological distress. Respondents with no savings bank account also expressed distress in higher proportion. The test of correlation indicates a negative relationship between distress and bank balance, i.e. with the increase in bank balance, distress reduces.

4.3. VILLAGE AND DISTRICT CHARACTERISTICS

The village and district data (Table 4.3.1 and 4.3.2) was also used to understand the differences in psychological well-being. This helped to broaden the context in which distress is understood, beyond the individual characteristics to the level of household, immediate environment, community and larger administrative division. The respondents from Wardha reported statistically significant higher critical life events compared to those from other districts. Among the six districts Washim and Akola reported

the least critical life events. With regard to social support Amravati reported the highest scores and its score was significantly higher than that of Akola, Buldana, Washim and Yavatmal. In the case of social networks, Wardha reported statistically significant higher scores, compared to all other districts. Wardha also reported the highest psychological distress and this is significantly higher than the other four districts - Akola, Amravati, Washim and Yavatmal. However as district wise detailed analysis of the villages showed extreme variations between villages; the district averages should be considered with caution.

TABLE 4.3.1:
Mean of psychosocial well being components at the district level and statistical difference

Mean	District					
	Akola	Amravati	Buldana	Wardha	Washim	Yavatmal
	(A)	(B)	(C)	(D)	(E)	(F)
Critical Incident	1.04	1.12	1.32	2.61	1.11	1.20
Social Support	1.83	1.97	1.87	1.94	1.71	1.76
Social Network	1.90	1.98	1.99	2.41	1.66	1.93
SRQ	6.35	7.30	7.69	7.98	5.39	6.58
Significance test						
Critical Incident		A	A B E	A B C E F		A B
Social Support	E F	A C E F	E F	A E F		
Social Network	E	A E F	A E	A B C E F		E
SRQ	E	A E F	A E F	A B E F		A E
Results are based on two-sided tests assuming equal variances with significance level 0.05. For each significant pair, the key of the smaller category appears under the category with larger mean.						

**TABLE 4.3.2:
Mean of Psychosocial well being components at the village level**

District	Village	SRQ	Critical Incident	Social Support	Social Network
Akola	1	6.63	1.02	1.7	2.1
	2	2.64	0.39	2.21	2.05
	3	8.55	1.08	1.78	1.75
	4	5.38	0.75	1.87	1.94
	5	6.94	1.18	2.04	1.68
	6	7.67	1.19	1.91	2.04
	7	7.25	1.24	2.32	1.88
	8	7.28	1.08	2.08	1.87
	9	7.57	1.26	1.88	1.63
	10	6.29	1.08	1.89	2.28
	11	5.98	0.86	1.99	2.29
	12	5.96	1.1	1.91	2.26
	13	4.46	0.98	1.41	1.59
Akola	14	3.93	0.65	1.99	2.03
	15	6.59	1.16	1.14	1.56
	16	5.63	1.17	1.27	1.53
	17	8.19	1.48	1.77	1.97

Amravati	1	8.17	1.41	2.12	2.09
	2	7.71	1.05	2.25	1.76
	3	8.35	1.08	2.02	1.97
	4	8.02	1.29	2.04	1.7
	5	6.45	1.06	1.43	1.7
	6	8.84	1.31	1.95	2.03
	7	7.55	1.05	1.59	1.71
	8	8.03	1.07	2.29	1.89
	9	5.78	0.94	2.09	2.04
	10	7.84	1.24	2.4	2.24
	11	8.81	1.54	1.96	1.88
	12	6.4	0.82	2.11	2.18
	13	7.83	1.33	2.28	2.36
	14	5.84	0.74	1.88	2.31
	15	7.97	1.28	1.77	1.96
	16	6.21	1.01	1.83	2.13
	17	7.08	1.41	1.79	1.88
	18	5.04	0.86	2.06	2.16
	19	7.27	0.84	1.63	1.45
Buldana	7	7.66	1.48	1.92	1.91
	9	7.73	1.16	1.82	2.07
Wardha	1	7.63	1.17	2.03	2.26
	2	8.1	1.49	2.03	2.72
	3	9.28	1.98	1.95	2.51
	4	6.34	1.55	1.91	1.8
	5	6.55	1.66	2.02	2.37
	6	7.77	1.68	1.88	2.39
	7	7.97	1.83	1.72	1.93
	8	9.53	1.88	1.96	2.85
	9	8.2	1.81	1.92	2.5
	10	7.83	1.61	1.95	2.61

Washim	1	5.5	1.24	1.96	1.7
	2	5.24	0.98	1.24	1.49
	3	4.99	0.9	1.78	1.83
	4	5.81	1.28	1.72	1.51
	5	5.46	1.15	1.88	1.75
Yavatmal	1	5.22	1.02	1.89	2.09
	2	5.51	0.99	1.59	1.77
	3	5.05	0.87	1.51	1.73
	4	8.22	1.25	1.55	2.02
	5	5.92	1.12	1.84	1.84
	6	8.75	1.43	1.74	2.25
	7	4.74	0.97	1.53	1.76
	9	5.49	0.98	1.99	1.81
	10	4.69	1.13	1.49	1.5
	11	8.12	1.24	1.66	2.09
	12	4.87	1.01	1.49	1.82
	13	8.78	1.46	2.02	1.94
	14	6.45	0.84	1.88	2.04
	15	7.36	1.32	1.94	1.78
	16	6.62	0.88	1.93	2.03
	17	5.11	0.85	1.56	1.63
	18	9.37	2.06	1.74	2.43
	19	6.47	1.42	2.08	1.97
	20	7.71	1.39	1.87	2.08

SECTION V

5. THEORETICAL FRAMEWORK OF PSYCHOSOCIAL WELL-BEING

The psychosocial well-being framework, adapted from The Psychosocial Working Group Conceptual Framework of Psychosocial Intervention in Complex Emergencies (October 2003), was used to identify the broad domains and the specific variables to be incorporated and investigated for the study of psychosocial well-being in Vidarbha region. The trends and patterns that emerged from the analysis of identified variables combined with literature on protective and risk factors impacting psychological outcomes (Pearlin L. I., 1999; Pearlin & Schooler, 1978; Brown, Craig, & Harris, 1985; Turner & Roszell, 1994; Kessler, Turner, & House, 2010; Pearlin L. I., 1985; Thoits, 1985; Vijayakumar, 2010; Shiva, 2004; Mishra, 2008; Behere & Behere, 2008; Vijaykumar, 2007; Gajalakshmi & Peto, 2007), evolved into the formulation of a theoretical framework of psychosocial well-being, presented below [Figure 5.1]. The theoretical framework was tested using a Structural Equation Model (SEM). SEM is a more powerful alternative to multiple regression, path analysis, factor analysis, time series analysis, and analysis of covariance. SEM has the following advantages: flexible assumptions, especially with regard to multi collinearity, reduced measurement error, graphical modelling interface, ability to test overall models (rather than individual coefficients) with multiple dependent and mediating variables. SEM is also noted for its ability to model error terms, to handle difficult data (time series with auto correlated error, non-normal data, incomplete data) and the ability to test coefficients across multiple between-subject groups (Rick, 2012).

SEM is usually viewed as a confirmatory rather than exploratory procedure. Interpretations and comparisons in the given analysis are drawn based on standardized coefficients (Table 5.2.1).

The four domains of the framework are **Stressors**, **Protective Factors**, **Demographic variables** and **Outcome of psychological well-being**. In the framework, the psychological well-being experienced by an individual is conceived as the **outcome** of the interface between demographic variables, protective factors and stressors. **Stressors** are factors that have the potential to compromise psychological well-being. **Protective factors** are those which intervene to reduce the impact of stressors on the psychological well-being, experienced by individuals. **Demographic variables** are exogenous in nature and can impact psychological well-being, stressors and protective factors independently.

Psychological well-being is measured using self reporting questionnaire (20 items). Based on the descriptive analysis presented in the previous section and the literature review, the variables classified under the domain of stressors are water and fuel issues faced by the household, number of recent death(s) in the family, experience of food shortage, Loan incurred by the family – debt and critical life events comprising of major illness, failure in income generating activities, discord/dispute with relatives or friends, marital problems, alcohol problems in self or family, failure of children in examinations, physical violence and other critical life events. The variables classified under the domain of protective factors are availability of electricity, education, organizational membership, family type, income, loan waiver, occupation, housing, social support and social network. The exogenous demographic variables considered in the framework are age, gender, and caste. Several other variables like NREGA benefits, relationship to head, etc, though incorporated for the SEM analysis, were automatically rejected from the analysis as they were insignificant in explaining the psychological well being. Couple of other variables like family size, land holding, bank balance, expenditure over income, religion etc was incorporated within other variables like type of family, occupation, income and caste. Table 5.1.1 describes the variables used for SEM analysis.

**TABLE 5.1.1:
Variable Information**

Variables considered	Description/Variable Labels	Measurement Level
SRQ 20	SRQ questionnaire	Interval/Ratio
Critical Incident	Critical incident questionnaire	Interval/Ratio
Social Support	Social supportquestionnaire	Interval/Ratio
Social Network	Social networkquestionnaire	Interval/Ratio
Districts	Akola Amaravati Buldhana Wardha Washim Yavatmal	Nominal
Water Issues/Availability	Within house Within yard Just outside yard Within 1/2 km More than 1/2 km	Ordinal
Fuel Issues/Availability	No firewood(other sources) Firewood <1 km Firewood 1-2 km Firewood >2 km	Ordinal
Deaths	Number deaths in family in past five years	Interval/Ratio
Illness	Number occurrences of major illness in family in past five years	Interval/Ratio
Food Shortage	No: of months of staple food shortage	Interval/Ratio
Indebtedness (Loan)	Ratio of loan amount outstanding in Rs.to annual familyincome in Rs.	Interval/Ratio
Housing	RCC housing Pucca housing Semi-puccahousing Kutchahousing	Ordinal
Electrification	Having power connection at home Having no power connection at home	Ordinal
Loan Waiver	No loan Loan waived Loan not waived	Ordinal
Income	Per capita annual family income in Rs.	Interval/Ratio

Variables considered	Description/Variable Labels	Measurement Level
Employment Guarantee Benefits	Having job card Applied but no job card Not applied	Ordinal
OrganizationMembership	Number of membership in organizations	Interval/Ratio
Gender/Sex	Male Female	Nominal
Age	Age in years completed	Interval/Ratio
Education	Illiterate Class 1-6 Class 7-10 Above 10	Ordinal
Occupation	No work Labor Work Marginal Farmers <2 acre land Farmers 2-10 acre land Farmers >10 acre land Salaried/own business/trade	Ordinal
Caste	Scheduled castes (SC) Scheduled tribes (ST) Notified/de-notified tribes (NT) Other backward communities (OBC) General	Nominal
Type Of Family	Uni-member/couple-less family Nuclear family Extended nuclear family Joint family	Ordinal
Family Size	Number of members	Interval/Ratio
Relationship With Head	Self Spouse Others	Nominal

Within the domain of stressors, the listing of variables in descending order of their importance (factor loadings) is as follows: 1. Physical Violence, 2. Marital Problems, 3. Water issues, 4. Discord or Dispute with Relatives or Friends, 5. Food shortage, 6. Alcohol problems in Self or Family, 7. Fuel issues, 8. Other life events, 9. Failure of Children in Examinations, 10. Major Illness in Self or Family Member, 11. Failure in Crop or Business, 12. Deaths, 13. Loan/debt (statistically insignificant).

In the domain of protective factors the listing of variables in descending order of their importance (factor loadings) is as follows: 1. Housing, 2. Education, 3. Occupation, 4. Electricity, 5. Income, 6. Social Support, 7. Social Network, 8. Loan Waiver, 9. Type of family, 10. Organizational Membership.

The SEM analysis also tests the indirect impact of stressors on psychological well being, by analyzing its interface with protective factors. With the increase in stressors, social support decreases and social network increases. The resultant decrease in the social support decreases protective factors and thus decreases psychological well being. However the effect of stressors on distress, through the social network is the other way. Since the protective factors have a weak protective function, the indirect impact of stressors through protective factors on psychological well being is not very significant.

The impact of the exogenous demographic variables on protective factors, stressors and psychological well being was also analysed. The impact of exogenous demographic variables on protective factors listed in descending order of significance (factor loading) is as follows: 1 SC(-), 2 ST(-), 3 NT/DNT(-), 4 MUSLIM(-), 5 SEX, 6 AGE(-), 7 OBC (-), 8 BUDHIST, 9 HINDU and 9 GENERAL. The (-) sign indicates a negative relationship between the variable and the protective factor. For example belonging to SC caste class reduces the protective factors available to the individual. With increase in age there is a decrease in protective factors and male respondents have higher protective factors than female respondents. The impact of exogenous demographic variables on stressors listed in descending order of significance is as follows: 1 SC, 2 ST, 3 NT/DNT, 4 MUSLIM, 5 OBC, 6 BUDHIST (-), 7 AGE (-), 8 SEX (-), 9 GENERAL and 9 HINDU. The impact of exogenous demographic variables on psychological well being listed in descending order of significance is as follows: 1 AGE, 2 SC (-), 3 ST (-), 4, SEX (-), 5, NT/DNT (-), 6 MUSLIM (-), 7 BUDHIST, 8 OBC, 9 HINDU and 9 GENERAL. The cumulative impact of exogenous demographic variables on psychological well being (taking into consideration the direct and indirect impact via protective factors and stressors) listed in descending order of significance is as follows: 1 AGE, 2 SEX (-), 3 SC, 3 NT/DNT, 5. ST, 6 OBC, 7 MUSLIM, 7 BUDHIST, 9 HINDU and 9 GENERAL (Table 5.1.2).

TABLE 5.1.2 :
Coefficients of SEM Analysis

Variables	Regression Coefficients	Standard Error	Z Statistics	p-value	Standardized Coefficients
Latent Structure – Social Support					
Person to provide info and guidance	1.00				0.64
Person to confide or share feelings with	0.96	0.02	50.99	<0.001	0.63
Person to help with major things	0.99	0.02	53.04	<0.001	0.68
Person to help doing daily chores	0.79	0.02	42.29	<0.001	0.49
Do you do any voluntary work	0.80	0.02	43.00	<0.001	0.50
Any friends or acquaintances in contact	0.56	0.02	27.37	<0.001	0.30
Latent Structure – Social Network					
Any relatives you visit regularly	0.19	0.01	18.88	<0.001	0.23
Frequency of seeing someone from work socially	1.00				0.50
Any friends or acquaintances who visit you regularly	1.53	0.06	24.49	<0.001	0.77
How many relatives you see once a month	-0.19	0.01	-12.96	<0.001	-0.15

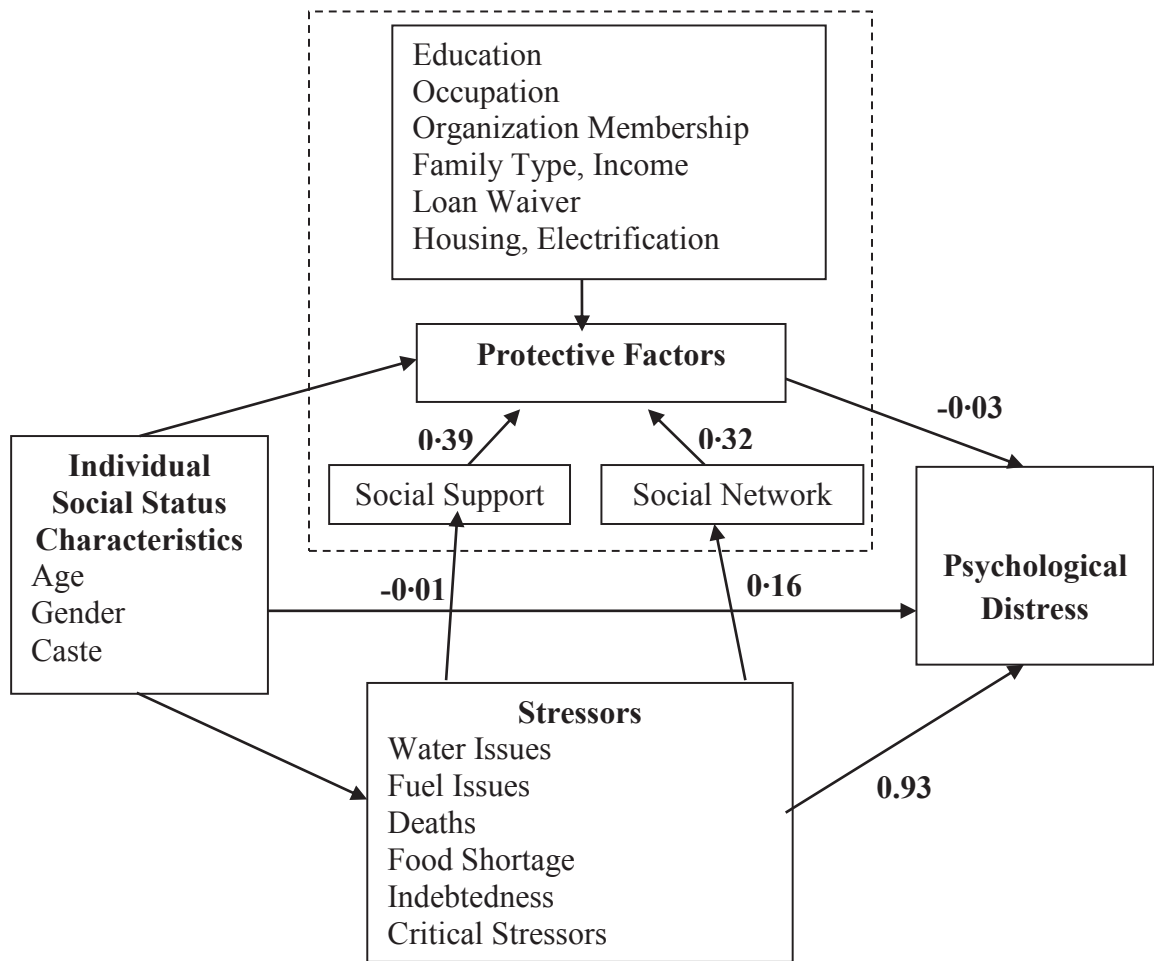
Variables	Regression Coefficients	Standard Error	Z Statistics	p-value	Standardized Coefficients
Frequency of attending religious services	0.23	0.01	17.16	<0.001	0.21
Belonging to any clubs or organizations	0.28	0.02	13.11	<0.001	0.15
Latent Structure – Critical Incidence					
Major Illness in Self or Family Member	1.00				0.24
Failure in Crop or Business	0.92	0.07	13.76	<0.001	0.20
Discord or Dispute with Relatives or Friends	1.09	0.06	19.56	<0.001	0.46
Marital Problems	1.07	0.05	19.95	<0.001	0.51
Alcohol problems in Self or Family	1.11	0.06	19.10	<0.001	0.42
Failure of Children in Examinations	1.05	0.06	17.46	<0.001	0.32
Physical Violence	0.73	0.04	20.00	<0.001	0.52
Other	0.39	0.02	17.59	<0.001	0.33
Latent Structure – Psychological Distress (SRQ)					
Do you often have headache	1.00				0.53
Is your appetite poor	0.14	0.02	7.12	<0.001	0.07
Do you sleep badly	0.58	0.02	28.59	<0.001	0.30
Are you easily frightened	1.12	0.02	48.37	<0.001	0.60
Do your hands shake	1.06	0.02	48.00	<0.001	0.60
Do you feel nervous, tense or worried	1.02	0.02	44.48	<0.001	0.53
Is your digestion poor	0.50	0.02	26.75	<0.001	0.28
Do you have trouble thinking clearly	0.13	0.02	6.89	<0.001	0.07
Do you feel unhappy	1.03	0.02	45.69	<0.001	0.55
Do you cry more than usual	0.71	0.02	42.59	<0.001	0.50
Do you find it difficult to enjoy your daily activities	0.60	0.02	31.04	<0.001	0.33
Do you find it difficult to make decisions	0.97	0.02	44.57	<0.001	0.53
Is your daily work suffering	0.85	0.02	41.37	<0.001	0.48
Are you unable to play a useful part in life	0.68	0.02	37.83	<0.001	0.42
Have you lost interest in things	0.78	0.02	37.67	<0.001	0.42
Do you feel that you are a worthless person	0.65	0.02	41.32	<0.001	0.47
Has the thought of ending your life been on your mind	0.51	0.01	38.47	<0.001	0.43
Do you feel tired all the time	1.24	0.03	50.06	<0.001	0.63
Do you have uncomfortable feelings in your stomach	1.23	0.02	50.90	<0.001	0.65

Variables	Regression Coefficients	Standard Error	Z Statistics	p-value	Standardized Coefficients
Are you easily tired	1.21	0.03	49.19	<0.001	0.62
Latent Structure – Protective Factors					
Education	1.00				0.61
Organization Membership	0.13	0.01	16.64	<0.001	0.17
Type Of Family	0.35	0.01	24.50	<0.001	0.26
Income	0.10	0.00	37.00	<0.001	0.41
Housing	1.00	0.02	51.85	<0.001	0.63
Occupation	0.79	0.02	48.55	<0.001	0.58
Loan Waiver	0.43	0.02	24.94	<0.001	0.27
Electrification	1.02	0.02	45.76	<0.001	0.53
Social Network	0.27	0.02	17.47	<0.001	0.32
Social Support	0.25	0.01	25.87	<0.001	0.39
Latent Structure – Stressors					
Water Issues	1.00				0.30
Fuel Issues	0.83	0.05	16.44	<0.001	0.21
Deaths	0.07	0.02	4.11	<0.001	0.04
Food Shortage	0.66	0.03	19.83	<0.001	0.28
Indebtedness(Loan)	-0.24	0.42	-0.58	0.56	-0.01
Critical Incidence	0.85	0.05	16.72	<0.001	0.60
Regression on Protective Factors					
Age	0.00	0.00	-12.55	<0.001	-0.11
Gender/Sex	0.06	0.00	16.55	<0.001	0.15
General	0.00				0.00
SC	-0.23	0.01	-41.28	<0.001	-0.41
ST	-0.24	0.01	-40.04	<0.001	-0.40
NT	-0.15	0.01	-25.99	<0.001	-0.24
OBC	-0.04	0.00	-10.06	<0.001	-0.09
Regression on Stressors					
Age	0.00	0.00	-4.58	<0.001	-0.07
Gender/Sex	-0.01	0.00	-2.20	0.03	-0.03
General	0.00				0.00
SC	0.07	0.00	19.49	<0.001	0.35
ST	0.07	0.00	18.58	<0.001	0.33

Variables	Regression Coefficients	Standard Error	Z Statistics	p-value	Standardized Coefficients
NT	0.06	0.00	16.16	<0.001	0.27
OBC	0.02	0.00	6.40	<0.001	0.01
Intervention					
Stressors ---> Social Network	0.37	0.04	9.44	<0.001	0.16
Stressors ---> Social Support	-0.18	0.03	-7.05	<0.001	0.01
Regression on Distress					
Age	0.01	0.00	19.54	<0.001	0.28
Gender/Sex	-0.09	0.01	-12.41	<0.001	-0.17
General	0.00				0.00
SC	-0.16	0.02	-10.90	<0.001	-0.25
ST	-0.17	0.02	-10.96	<0.001	-0.24
NT	-0.12	0.01	-8.64	<0.001	-0.16
OBC	-0.02	0.01	-2.16	0.03	-0.03
Protective Factors	-0.04	0.02	-2.21	0.03	-0.03
Stressors	3.11	0.19	16.30	<0.001	0.93

The SEM analysis identifies the domain stressors as a factor that significantly decreases psychological well-being. Even though the role of protective factors is significant in reducing distress, the comparison using standardized coefficients reveals that the reduction of distress is minimal when compared to the stressor's influence on decreasing psychological well being. The SEM analysis also tests the indirect impact of stressors on psychological well being, by analyzing its interface with protective factors. With the increase in stressors, social support decreases and social networks increases. The resultant decrease in the social support negatively impacts protective factors and thus reduces psychological well-being. However, the effect of stressors on distress through the social networks is the other way round. Therefore, it could be said that stressors directly and indirectly impact psychological well being. The indirect effect is by increasing network and reducing social support. This in turn increases or decreases psychological well being. However since protective factors (social support, network etc) have a minimal role in influencing psychological well-being, the indirect effects of stressors through protective factors is not very significant in shaping psychological well being.

FIGURE 5.1:
Theoretical Framework of Psychosocial Well-being



SECTION VI

6. DISCUSSION AND CONCLUSION

This section deals with the key findings within the context of the theoretical framework evolved from the study, to identify and prioritize key areas of intervention for psychosocial well-being in the Vidharba region. The sections below identify the key stressors that are largely related to developmental backwardness, which need to be prioritized in enhancing psychological well-being. It also enumerates the various safety nets that need to be strengthened. The study attempts to understand the reason for the same not being protective enough in the Vidharba context up until now. Though the survey did not attempt to collect in depth data on suicides and the circumstances around the death, an attempt is made to understand the efficacy of the framework in explaining the suicide deaths in the Vidarbha context with the available data.

6.1. The Pressing Stressors to be addressed

The framework on psychosocial well-being in Vidarbha, emphasizes the importance of addressing the pressing stressors to enhance the psychological well-being of individuals. A closer look at the list of stressors highlights the fact that failure in crop or business, are of little significance in explaining the current indebtedness and psychological distress experienced by the respondents. According to the data issues like physical violence, marital problems, water issues, discord or dispute with relatives or friends, food shortage, alcohol problems in self or family members and fuel issues are found to be significant in causing psychological distress. However, these results have to be understood in the current context of loan waiver and a good crop yield in the year 2009. Stressors like physical violence, marital problems, discord or dispute with friends and alcohol problems in self or family, indicate the interpersonal/social disintegration, collective trauma and/or a manifestation of the chronic strains the respondents undergo. The same needs to be explored further through in-depth qualitative studies to have a better understanding of the emergence of these stressors and the pathways through which these stressors determine psychological well-being.

Stressors like water issues, food shortage, fuel issues, failure of children in examination and illness in self or the members of the family are more indicative of psychological distress due to lack of community development and supports the linkages between development, and mental health. A closer look at the perception of the respondents regarding current community development in comparison to 5 to 10 years ago (Table 6.1.1.) reveals that the respondents perceived an increase in educational facilities and drinking water availability. However, this has not been translated into preventing distress due to children's failure in examination and non availability of water within the house for many. Majority of the respondents perceived decrease in fuel availability and grazing area. Fuel availability is one of the significant factors contributing to psychological distress supporting the interface between environmental degradation and mental health. Though health facilities are reported to have improved, a review of illness and treatment details has revealed that majority seek treatment in private hospitals thus increasing the household expenditure and psychological distress.

The respondents perceived that drinking alcohol, dowry deaths, and theft/crime have increased indicating the interpersonal/social disintegration or collective trauma. Alcohol problem in self or family is also one of the significant stressors contributing to psychological distress.

With regards to agriculture, majority of the respondents have reported an increase in the cost of cultivation, crop failure, and a decrease in agricultural production. Though a considerable improvement in transport, road, and communication facilities is reported irrigation facilities, marketing facilities, and loan facilities are not reported to have increased considerably. This is suggestive of misplaced priorities of developmental initiative. A closer look at the various strategies used by respondents to handle food shortage revealed a heavy reliance on borrowing money or grains. A very small proportion of the respondents rely on the PDS system or Food for Work schemes to deal with food shortage. However, a detailed enquiry is required to explore these dimensions further. Thus the most pressing stressors significantly impacting psychological well being continue to remain unaddressed or partially addressed. This highlights the vulnerable state of respondents that could spiral extreme outcomes in the next instance of a crop failure or building up of loan burden.

The risk of crop failure resulting from drought (a cyclical natural phenomenon) is significant and cannot be easily addressed. Moreover with regard to psychological well-being, addressing crop failure would be more of a curative approach than a preventive measure. Even schemes of loan waiver, intervene in similar terms. The alternative means of enhancing psychological well-being would be to reduce the stressors experienced by respondents or reduce the risk related to debt / loan procurement and repayment; thus making them resilient in the instance of a crop failure in a way that protects them from crossing stress thresholds and to take extreme steps. In order to understand the risk of severe distress in future owing to issues of debt and loan repayment, the available data on loan was reviewed carefully (**Table 6.1.2**). In the year 2009, 38% of the households have availed loan amounting to a mean amount of Rs. 31242. Moreover, 56% of the households have outstanding loan availed at any time prior to the survey, amounting to a mean amount of Rs. 44774.

Table 6.1.1: Percent of households perceiving increase or decrease in development indicators

Development indicators	Total	Increased	Decreased	Remained same	Not an issue
Road facilities	100.0	57.8	28.0	13.2	1.0
Transport facilities	100.0	66.9	23.0	8.8	1.3
Communication facilities	100.0	67.6	19.0	12.7	0.7
Irrigation facilities	100.0	33.8	35.2	26.3	4.8
Drinking water supply	100.0	58.2	27.1	14.2	0.5
Loan facilities	100.0	48.8	24.3	21.9	5.0
Marketing facilities	100.0	42.4	23.4	28.3	6.0
Health services	100.0	52.5	23.0	20.4	4.1
Education facilities	100.0	73.6	12.8	12.9	0.7
Availability of firewood	100.0	24.0	63.7	12.0	0.3
Grazing area for cattle	100.0	12.9	67.0	19.5	0.6
Social/civic awareness	100.0	62.6	17.1	18.7	1.6
Political awareness	100.0	65.7	16.5	15.2	2.6
Program awareness	100.0	61.3	19.4	16.4	2.9
Employment within village	100.0	45.7	38.2	15.5	0.6
Employment outside village	100.0	45.8	37.7	16.0	0.4
Salaried employment	100.0	34.8	35.4	28.7	1.1

Development indicators	Total	Increased	Decreased	Remained same	Not an issue
Household saving	100.0	59.0	29.1	10.5	1.5
Girls education	100.0	89.2	7.4	2.8	0.6
Cost of cultivation	100.0	86.6	6.4	4.9	2.1
Agricultural production	100.0	18.0	69.6	10.2	2.2
Crop failure	100.0	75.4	14.7	8.3	1.7
Alcohol drinking habits	100.0	56.7	30.0	12.6	0.7
Child labour	100.0	13.0	74.0	11.8	1.2
Gender discrimination	100.0	5.1	87.2	7.0	0.6
Early marriage (<18 years)	100.0	4.2	89.9	5.4	0.5
Women in decision-making	100.0	81.6	9.8	8.0	0.6
Theft/crime rates	100.0	30.6	50.4	17.4	1.7
Dowry deaths	100.0	72.9	10.7	15.9	0.5

When the risk of loan is considered many dimensions have to be brought in like the amount given, interest rate, need for mortgaging assets, purpose of loan and the person who has availed the loan. An in-depth analysis of the loan details from different sources reveals that banks, relatives/friends, cooperative societies and others are safer sources of loan. Banks, cooperative societies and others make available large amounts (more than Rs. 10,000) in lesser (less than 12 percent) interest rates. The requirement to mortgage assets in one way prevents multiple loans but largely limits the availability of loan to all sections of the community. Relatives/friends make available small amounts at lesser interest rates, without a requirement to mortgage assets. But the general state of impoverishment among relatives and friends doesn't enable many such transactions.

Table 6.1.2: Percent of households availed loan and mean and median amounts of loan availed during 2009, percent of households with outstanding loan at the time of survey, mean number of loans outstanding per household, and mean and median amounts of loan outstanding.

Households availed loan during 2009 percent	Loans availed during 2009* (in Rs)		Loans (taken any time) outstanding at the time of survey		Amount of loan outstanding at the time of survey In Rs.	
	Mean	Median	Percent	Mean	Mean	Median
37.8	31242	19342	55.9	1.68	44774	23718

*From January 2009 to the conduct of survey in August-November 2009.

Sources like Self Help Groups (SHGs), money lenders, traders and NGOs conceal a great deal of risk as they give away majority of the loans, - though without the requirement to mortgage assets, at very high interest. As the requirement to mortgage assets is not present in such cases, the availability and acceptability of such loans is much higher among the most vulnerable sections of the community. For example, 87 percent of the SHG loans and 39 percent of NGO loans are in the name of female members of the household, where as majority of the loans from all other sources are in the name of the male members of the household. While 70 percent of the overall loans are taken from less risky sources, 30 percent are from risky sources. These figures have to be interpreted in the context of the purpose for which the loan is taken. Around one half of the loans from risk laden sources are utilized for non productive activities of the household, thus increasing the risk manifold. Though loan from relatives

/friends is a safe source, when one considers the amount, interest rate and mortgaging requirement, the utilisation of a large majority of it on non productive activities of the household increases the risk component of such loans. Loans from banks and cooperative societies are largely invested on productive activities like farming activity, investment in farm, petty trade/business and to buy animals. But the frequent failure in crops adds risk to such borrowing. In the immediate aftermath of a loan waiver, the respondents do not perceive outstanding loan as a major source of stressor, but when one looks at the borrowing patterns and its utilisation, an increasing risk could be perceived and the same would act as a trigger in the event of a crop failure or emergency situation.

6.2 Weak Protective Factors to be enhanced

Theoretically protective factors play the role of increasing the individual's psychological well-being by enhancing his/her resources and coping capacity. Thus enhancing respondent's protective factors is an alternative to reducing stressors, in order to increase psychological well-being. But in the current framework though protective factors play a role in reducing distress, the magnitude of its impact is very weak and not good enough to cover the damage done by the stressors. The section below attempts to understand the probable reasons for the same, taking into consideration the key - elements listed under protective factors.

Education: The data on the educational background of the respondents reveals that there are only 8 percent of illiterates. As functional literacy is not known to have much protective value, the data on highest educational level attained is reviewed. Only 54.3% of the household have at least one adult member who has completed high school and only 33% have at least one adult female member who has completed high school. Only 26% of the 7 year and above age group have 'high school and above' education and only 6% have 'college and above' education. In the age group of 3-24 years, the percentage of drop outs in the current or previous years is very high at 30 percent and the 'never attended' category comprises of 7 percent. The most frequently mentioned reason for drop out is 'poor in studies/failure'. This has also been one of the significant stressors expressed by respondents. Thus in order to strengthen education as a protective factor, concerted efforts beyond the provision of educational facilities is warranted.

Housing: Good housing is one of the developmental indicators of well being. Respondents from *pucca* and RCC houses reported less psychological distress when compared to those in semi *pucca* and *kuchcha*/hut houses. However, only 24 percent of the households report having the *pucca* and RCC type houses. A large majority of respondents live in semi-*pucca huts*, and *kuchcha* houses.

Occupation: Respondents from the occupational categories of no work, landless labourers, and marginal farmers showed significantly higher psychological distress than medium farmers, large farmers and salaried/trade/own business category of respondents. While occupation was a significant protective factor, the data indicated that a large majority of the respondents were in the category of no work or landless labourers. The perception of community development too reveals that salaried employment has not increased in the past 5 to 10 years, or rather it is perceived to have decreased considerably. The NREGA scheme targeting the most vulnerable has also not been protective enough in this context. Out of the 47% - households that had applied for job card, only 71% - received the same. Of the ones who received job cards, only 4.92 % have got work and the mean human-days worked out per household are 66.5 days and mean wage received per day is Rs. 58.8. The limited coverage of the scheme could be one of the reasons for it not being a significant protective factor. Most of the households are

dependent on a single economic activity and only a little more than one fourth of the households have diversified their economic activity. This also puts these households under greater risk.

Electricity: Individuals from households with electricity showed lesser distress than individuals from households without electricity. This is again a proxy indicator (proxy for developmental backwardness or impoverishment and not due to its direct impact on mental health) of development and vulnerability, which impacts the psychological well being of individuals.

Income: As the variable income, alone is not a very good indicator of well-being, its ratio to expenditure was considered for the theoretical framework. Analysis reveals that with the increase in excess income the psychological well being increases. However, only 28% of the respondents reported excess income; and the remaining 72% - reported as their expenditure exceeding the income.

Social Support and Network: The analysis reveals that psychological well-being increases with the increase in social support and network. Majority of the respondents reported medium to poor social support and network. The review of the data on organisational membership – one of the indicators of social support and network, highlights that only 35% of the respondents come from households that have someone from among the household as a member of an organisation. The membership is largely with savings groups (77%) and only a small percent is with farmer/producer/marketing organisations (12%). Majority of them are ordinary members and the key benefit received is credit. SHGs are known for their very high rates of interest and employment of social pressure tactics to collect outstanding loans. The geographical spread of the networks is also limited. Networks of a wider coverage are known to increase the amount of instrumental and informational support available to an individual. Thus the role of these memberships in enhancing the individual's psychological well being is minimal as they have a limited reach, smaller geographical spread and limited function of providing high interest loans that increase risk.

Loan Waiver: Only 23% of the households benefited under the recent loan waiver scheme and the average loan waiver benefit was nearly Rs. 18,000. The proportion of households benefited and the amount of benefit on loan waiver increases as the size of cultivated holding increases. Thus a large majority (the vulnerable sections namely the landless, marginal and small farmers) are not protected from psychological distress, by the loan waiver schemes.

Type of family: The analysis reveals that uni-member/couple less families and strictly nuclear families have significantly higher distress than extended nuclear and joint families. However, the pattern of change in family relations is more in favour of nuclear families (60 percent), thus negatively impacting the protective networks that were naturally available earlier.

6.3. Examining Suicide Deaths

As mentioned in the introduction, suicide rate among farmers in Vidarbha region should not be considered just as a mental health problem, but as a social and economic problem (Behere and Behere, 2008). Among the deaths recorded in the survey, as many as 43 (3.2% of all deaths) are reported as suicides. It is to be noted that there were no specific questions on suicide in the present study and the investigators were also not asked to probe about suicide deaths. As such, the information on suicide deaths is due to the spontaneous sharing of information by the respondents. Though the background for the initiation of the SBI project is farmers' distress induced suicides in the region, suicide as such is not dealt with as a major aspect in the survey but rather basic socio demographic profiling, livelihoods and psychosocial well-being have been the central focus. However, with the limited data available, an

attempt is made to examine suicide deaths in the Vidarbha region. It is seen that nearly three-fourths of the suicide deaths are of men and the remaining one-fourth are women. Further two-thirds of the suicides have occurred among persons below the age of 45 years including one-third among persons below 30 years. Though the number of suicides in the sample is very low, the data indicate that suicide deaths are more in Wardha and Yavatmal districts, compared to Akola and Washim districts and the other two districts namely Buldana and Amravati are in-between. Suicides are more during the distress months of September to November (the period of drought impact on crops, pest attacks and harvesting) and the incidents are recorded more among landless labourers. Further in-depth qualitative studies are required to understand this trend in suicide deaths.

The household characteristics of the respondents reporting suicide deaths were compared with the characteristics of the households not reporting suicide deaths, to understand the extent to which the framework could be used to understand the phenomenon of farmer's suicide (Table 6.3.1). Analysis of the same reveals that households with suicide deaths report significantly higher number of critical life events and psychological distress. With regard to social support and network, the households with suicide deaths are not different from that of other households. Predominantly those households which have received loan waiver benefits, aren't joint families, belong to Hindu religion, have to travel longer distance for fuel, and are not having electricity have reported a higher proportion of suicides. However, these results cannot be interpreted as supporting the causation theory as the current state of critical life events and psychosocial stressors could be an aftermath of the reported suicide deaths too. As the number of suicides reported in the study is only a few, conclusive analysis cannot be carried out and further studies are required.

Table 6.3.1: Test of difference in psychosocial well being components among respondents from households with and without suicide deaths.

	Suicide	
	No Suicide	Suicide
	Mean (A)	Mean (B)
Critical Incident	1.29	1.72
Social Support	1.86	1.89
Social Network	1.97	2.04
SRQ	6.82	7.23
Critical Incident		A
Social Support		
Social Network		
SRQ		A
Results are based on two-sided tests assuming equal variances with significance level 0.05. For each significant pair, the key of the smaller category appears under the category with larger mean.		

6.4. Conclusion

The psychosocial well-being framework identifies key social variables under each domain that indicates to more basic, abstract and broad social characteristics of the region that determine distress. Issues like physical violence, marital problems, water issues, discord or dispute with relatives or friends, food shortage, alcohol problems in self or family and fuel issues are among the key stressors causing psychological distress. The stressors identified are indicative of the broad social characteristics like dep-

rivation, interpersonal/social disintegration, and environmental degradation. The study results have to be interpreted in the context of loan waiver, and a good crop yield in the year 2009, thus emphasizing the need to address significant residual distress emanating from the chronic strains of the ongoing agrarian crisis. The weak and scanty presence of protective factors among the population studied too is indicative of deprivation and developmental neglect. Further, the interactions between individual social status characteristics, and distress, adds the dimension of marginalisation as one of the key factors influencing distress and identifies vulnerable groups in the given context.

The measures currently taken to address distress, like loan waiver, and other emergency support are limited, as they do not address the multiple underlying stressors and their potential to generate secondary stressors. Therefore, interventions are also required to address secondary stressors experienced by communities as a short term strategy and increase the protective safety nets through long term developmental programmes, for addressing the underlying social characteristics that determine distress. This would make the communities more resilient and protect them from crossing stress thresholds in the wake of extreme events like crop failure which may lead to aberrant individual responses like suicides. The study thus provides a roadmap for future research to establish specific social characteristics of the region that determine distress and enable informed policy formulation, and practice.

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