

Mental Health Status of the Indebted Farmers in Sarguja Division, Chhattisgarh: An Empirical and Socio-Anthropological Analysis

Dr. Anurag Mali¹; Dr. Sunil Kumar Mehta²

¹Alumnus, School of Studies in Anthropology, Pt. Ravishankar Shukla University, Raipur, Chhattisgarh.

²Assistant Professor (Guest), Department of Anthropology, Govt. V.Y.T. PG Autonomous College, Durg (C.G.), ORCID: <https://orcid.org/0000-0001-7578-0484>.

Abstract:

The present research paper is an attempt to throw light on the health condition of indebted farmers from Sarguja division of the Chhattisgarh state. The indebted farmers lead a very challenging life due to pressure from many fronts, namely, loan lenders, increasing inflation, rising price of petrol/diesel, changing climates and above all from poverty and illiteracy. Agriculture no more remains a profit making occupation especially for marginal and small farmers. As governmental financial institutes do not meet their entire needs, they depend upon private money lenders at very high interest rates, many a times; they are unable to repay their loans. In such situations, their life become miserable and they find it hard to make both ends meet. This unfavorable and stressful life has serious repercussion on their health. Lack of adequate medical facilities, unawareness and poor economic conditions make their health a serious issue.

Keywords: Farmer, Indebtedness, Blood Pressure, Mental Health.

A. INTRODUCTION

Agrarian distress in contemporary India represents a complex crisis intersecting socioeconomic vulnerability, structural economic barriers, and deteriorating public health outcomes (Chand, 2019). In the state of Chhattisgarh, the northern highlands of the Sarguja Division comprising the Korias, Surajpur, Balrampur, Sarguja, and Jashpur districts serve as a critical geographic area for examining these compounding vulnerabilities. Characterized by an extensive tribal population (n = 21,35,286) and a low overall literacy rate of 63.73%, this macro-region depends heavily on a subsistence driven agrarian economy. However, escalating input costs, climate volatility, and structural inflation have structurally diminished profit margins, particularly for small and marginal landholders (Chand, 2019). Because state-administered banking institutions fail to meet localized credit demands, resource-poor farmers are frequently driven toward informal private moneylenders who charge usurious interest rates, trapping households in chronic cycles of debt.

Most government reports only look at the total amount of money farmers owe, but they ignore how this constant debt destroys a person's life and health. When a farming family is trapped in debt for years, the endless worry deeply damages their mental peace and leads to long term physical illnesses (Yazd et al.,

2019). Mentally, indebted farmers exhibit significant clinical vulnerabilities, highlighted by an 84.00% prevalence of generalized anxiety, along with high rates of social isolation (52.00%), insomnia (24.20%), and severe cognitive concentration deficits (Padhy, 2020; Bomble & Lhungdim, 2020).

Physiologically, this chronic stress leads to advanced cardiovascular deterioration (Parry et al., 2005). Empirical data shows that an alarming 68.60% of indebted farmers in the division suffer from high blood pressure, with the highest concentration appearing among marginal and small holders (71.34%). This hypertensive profile is further accompanied by physical complications like chronic headaches (42.20%), chest pain (35.60%), and blurred vision (34.80%) (Mishra et al., 2019). Compounding this crisis, a heavily burdened frontline healthcare infrastructure, low health literacy, and widespread poverty cause these severe disorders to go largely unaddressed during routine labor (Sathyanarayana Rao et al., 2017).

This research paper provides an empirical analysis of the structural relationships between stratified credit liabilities, socioeconomic backgrounds, and objective clinical health outcomes among 500 sampled farmers in the Sarguja Division. By mapping these intersecting vulnerabilities, this study provides data-driven evidence intended to assist policymakers in developing integrated interventions that connect agrarian financial relief with accessible public healthcare delivery.

B. RESEARCH AREA & DEMOGRAPHIC PROFILE

We conducted this field study in the northern area of Chhattisgarh, focusing on the administrative region of the Sarguja Division. Geographically, our study area lies between the latitudes of 23° 37' 25'' N to 24° 06' 17'' N, and longitudes of 81° 34' 40'' E to 84° 04' 40'' E. In terms of local administration, this division covers five main districts: Korja, Surajpur, Balrampur, Sarguja, and Jashpur. The landscape here is diverse, dominated by the northern highlands, which heavily influences the social and financial life of the local communities.

According to official census records, the total population of this division is 38,70,472 which includes 19,52,619 males and 19,17,859 females. This gives the region a sex ratio of 982 females for every 1,000 males. Most of the people live in rural settings, with a rural-to-urban population split of 85.97% to 14.03%. Looking at the community composition, Scheduled Tribes (ST) form the largest group with 21,35,286 people. The remaining population includes 2,19,270 Scheduled Caste (SC) members, 10,48,959 from Other Backward Classes (OBC), and 4,66,957 in the unreserved category. Lastly, the region has a population density of 138 people per square kilometer, and the general literacy rate stands at 63.73%.

❖ **Institutional healthcare infrastructure:** The government healthcare setup in the Sarguja Division operates through a multi-layered network designed to reach families living in far-off and financially backward villages. In total, the region has 6,040 public healthcare centers. We have categorized these facilities by their service levels and listed them along with the average population they serve in Table-1.

Table No.-1 Institutional Inventory and Population-Served Ratios of Public Healthcare Facilities			
Healthcare Tier	Facility Type	Institutional Count	Mean Population Coverage Ratio
Secondary / Tertiary Referral	District Hospitals (DH)	(05)	(approx 1:774,094)
	Civil Hospitals (CH)	(02)	-
Secondary (Intermediate Care)	Community Health Centers (CHC)	(35)	(approx 1:110,585)
Primary (Frontline Rural Care)	Primary Health Centers (PHC)	(792)	(approx 1:4,887)
	Sub-Health Centers (SHC)	(5,206)	(approx 1:743)
Total Structural Infrastructure	All Facilities	(6,040)	(approx 1:641)

At the top level of this medical network, there are five District Hospitals (DH) and two Civil Hospitals (CH) that handle serious medical cases and specialized treatments. For intermediate issues, emergency deliveries, and block-level treatments, the region relies on 35 Community Health Centers (CHCs). This means there is roughly one CHC available for every 110,585 local residents.

To overcome the challenges of the difficult hilly terrain in North Chhattisgarh, the ground-level healthcare system is highly spread out. This essential primary care depends on 792 Primary Health Centers (PHCs) and a large network of 5,206 Sub-Health Centers (SHCs). On average, there is one PHC for every 4,887 people and one SHC for every 743 individuals. This dense network shows a clear government focus on making basic medical help available inside rural and tribal neighborhoods.

C. MATERIAL AND METHODOLOGY

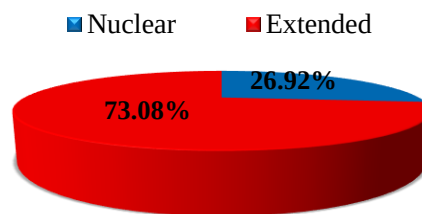
To achieve high statistical adequacy and structural representation across the topographically diverse Sarguja Division, a rigorous multi-stage stratified random sampling design was implemented. The sampling architecture was deployed across four distinct administrative tiers: The research comprehensively encompassed all five constituent districts of the division (N=5). From each district, four administrative blocks were selected via simple random sampling, totaling 20 development blocks. Within each block, five agrarian villages were systematically sampled, establishing a localized footprint of 100 target villages. From local revenue registries, five indebted adult farmers (n=5) were randomly selected per village. This robust stratification pipeline culminated in an aggregate sample size of (N = 500) indebted adult farmers, minimizing standard errors and validating regional generalizations.

Primary empirical data acquisition relied on a convergent parallel mixed methods framework to triangulate quantitative and qualitative dimensions of financial vulnerability. Information was elicited utilizing standard field instruments structured interview cum schedules for household asset and debt profiling, group interviews and focus groups to map community level socio-economic stressors, and

longitudinal case studies to contextualize individual psychosocial costs. Fieldwork was enriched through direct observations and formal revenue documentation.

Prior to the commencement of data collection, formal verbal and written informed consent was individually obtained from all 500 participating farmers after explaining the research objectives in their local vernacular language. The study protocols strictly adhered to the ethical standards for human research, ensuring complete anonymity, confidentiality, and voluntary participation throughout the fieldwork. For quantitative data processing, all raw field data, socioeconomic matrices, and blood pressure records were systematically coded and cross-tabulated. The final statistical calculations, frequency distributions, and percentage analyses presented in the tables were performed using the Statistical Package for the Social Sciences (SPSS) software, version 26.0.

Fig.1. Distribution of Family Types



D. RESULTS AND DISCUSSION

D.1. Socio-economic Background of the Farmers

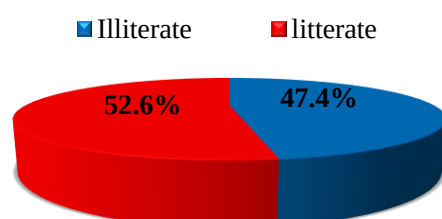
D.1.1. Houses Features: Majority of the farmers (81.40%) live in temporary and semi-permanent houses. More than half of them (52.00%) live in small sized houses (1-roomed)

D.1.2. Family Details:

- (i) **Family Type:** Majority (73.08%) of the families are represented by Joint families. [Fig.1]
- (ii) **Family Size:** Number of member per family range from 1 to 21. Medium sized families (5-8members) is the dominant family type (59.20%), followed by 27.20% large sized families (>8members). [Fig.2]

D.1.3. Literacy Level: 52.60%, with lowest and highest literacy is shown by Marginal Farmers (49.00%) and Large Farmers (100.00%), respectively. [Fig.3]

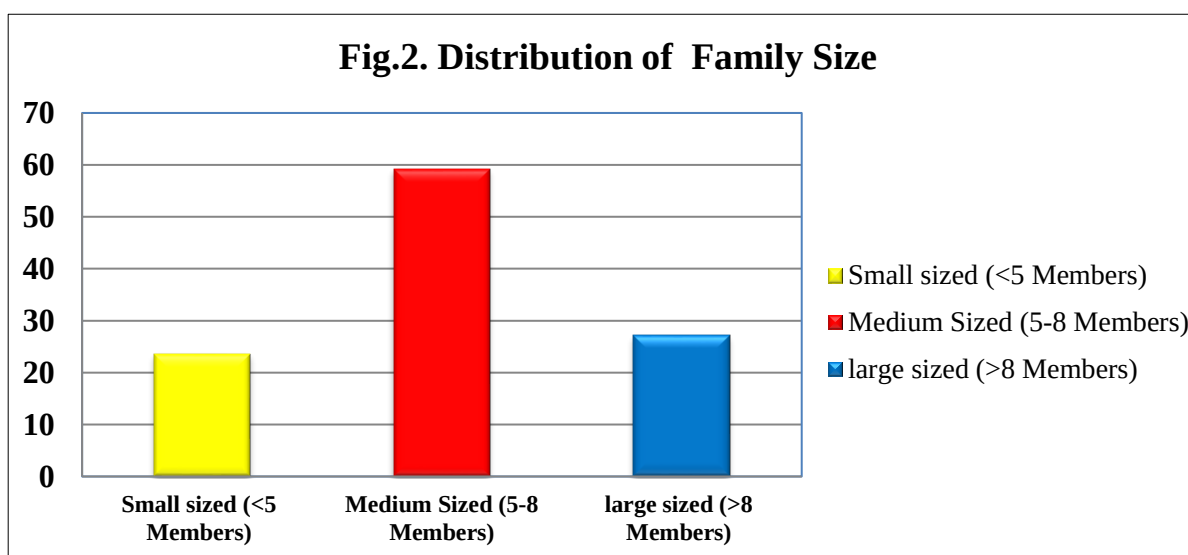
Fig.3. Distribution of Literacy Rate



D.1.4. Income from various Source: Our field data shows

that families in the Sarguja division cannot survive on farming alone, so they do multiple types of work. Surprisingly, everyday casual labor in the villages is their biggest source of income (39.34%), while actual farming has dropped to the second place (33.01%). This secondary ranking highlights that standalone farming is insufficient to meet baseline household expenditures, necessitating off-farm diversification.

Formal salaried employment and micro-business activities provide minor but stable cash flows, contributing 9.73% and 6.97%, respectively. Reflecting the region's distinct forest ecology and tribal demographics, the collection of Minor Forest Produce (MFP) yields 5.64% of total revenue. Finally, livestock domestication acts as a crucial financial buffer, contributing a residual 5.32%. This structural dependency on casual labor underscores the systemic economic vulnerability of the indebted population. During our personal interviews in villages of Balrampur and Jashpur, many tribal farmers mentioned that due to lack of local bank branches, they are forced to take credit from local weekly markets (Haat-Bazaars) at extreme interest rates.



D.1.5. Average Loan Liability of the Farmers:

Table No.-2 Blood Pressure						
Systolic	Diastolic	Category	Marginal and Small % (N)	Medium % (N)	Large % (N)	Total % (N)
< 80	<70	Low	09.17 (32)	08.28 (12)	16.67 (01)	09.00 (45)
80-120	70-90	Normal	19.48 (68)	28.28 (41)	50.00 (03)	22.40 (112)
>120	>90	High	71.34 (249)	63.44 (92)	33.33 (02)	68.60 (343)
Total			100.00 (349)	100.00 (145)	100.00 (06)	100.00 (500)

The financial vulnerability of the agrarian population across the Sarguja Division is distinctly stratified by landholding capacity. Empirical evaluation reveals a steep, direct correlation between farm size and the volume of outstanding credit liabilities. Marginal and small farmers bear an average debt burden of

12,431.54 rupees, reflecting baseline operational dependencies. This liabilities profile scales significantly to 45,675.27 rupees for medium-scale farmers. Conversely, large farmers exhibit the highest systemic debt exposure, accumulating an average liability of 3,55,000 rupees. This stark variance emphasizes that while absolute debt scale peaks among larger holders, the relative economic impact heavily compromises smaller, resource-poor agrarian households.

Table No.-3

Health Complications

S. No.	Health Indicators	Marginal and small Farmers	Medium Farmers	Large Farmers	Total
		% (N)	% (N)	% (N)	% (N)
1	Breathlessness	74.45 (102)	25.55 (35)	00.00 (0)	27.40(137)
2	Chest pain	69.10 (123)	29.21 (52)	1.68 (03)	35.60 (178)
3	Head ache	73.45 (155)	25.59 (54)	0.94 (02)	42.20(211)
4	Blurred Vision	71.84 (125)	26.44 (46)	1.72 (03)	34.80(174)

E. Health Status of Farmers

E.1.Blood Pressure: High proportion (68.60%) of studied farmers is found suffering from high blood pressure. Low blood pressure, on other hand, is observed among 09.00% studied farmers. Remaining 22.40% farmers have been found normal. High blood pressure is found in both Marginal and Small farmers (71.34%) as well as in Medium farmers (63.44%). On the other hand, incidence of low blood pressure is relatively higher among Large farmers. (Table No.-2)

E.2. Health Complications:

E.2.1. Breathlessness: Little more than one-fourth (27.40%) of the farmers have been found suffering with breathlessness. It has very high occurrence among marginal and small farmers (74.45%), followed by 25.55% prevalence among medium farmers.

E.2.2. Chest Pain: Almost one third of the farmers (35.60%) have complains of chest pain. Marginal and small farmers exhibit its highest prevalence (69.10%), followed by 29.21% occurrence among Medium farmers.

E.2.3. Head Ache: Considerable proportion (42.20%) of the farmers has complains of headaches, with highest occurrence among Marginal and Small farmers to the magnitude of 73.45%. One-fourth (25.59%) of Medium Farmers are also found suffering from this ailment.

E.2.4. Blurred Vision: It is reported among 34.80% studied farmers. Its highest prevalence is observed among Marginal and small farmers (71.84%), followed by 26.44% occurrence among Medium Farmers. [Table No.-3]

E.3. Mental Health Indicators:

E.3.1. Lack of Concentration: It is observed among 29.60% of studied farmers. Its highest incidence (73.65%) is seen among Marginal and Small farmers, followed by 25.68% prevalence among Medium farmers. In contrast, it is almost absent (0.68%) among Large farmers.

Table No.-4

Mental Health Indicators

S. No.	Mental Health Indicators	Marginal and small Farmers	Medium Farmers	Large Farmers	Total
		% (N)	% (N)	% (N)	% (N)
1	Lack of concentration	73.65 (109)	25.68 (38)	0.68 (01)	29.60(148)
2	Lack of Socialization	71.15 (185)	27.69 (72)	01.15 (03)	52.00 (260)
3	Outburst	51.92 (27)	40.38 (21)	07.69 (04)	10.40 (52)
4	Social withdrawal	72.58 (45)	25.81 (16)	1.61 (01)	12.40 (62)
5	Stress	73.53 (25)	26.47 (09)	00.00 (00)	6.80 (34)
6	Irritable Nature	74.24 (49)	25.76 (17)	00.00 (00)	13.20(66)
7	Anxiety	66.90 (281)	31.67 (133)	1.43 (06)	84.00(420)
8	Insomnia	76.03 (92)	23.14 (28)	0.83 (01)	24.20 (121)

E.3.2. Lack of Socialization: More than half (52.00%) of the studied farmers reported lack of socialization among themselves. Its highest (71.15%) prevalence is observed among the Marginal and Small farmers. Almost one-fourth (27.69%) farmers belonging to Medium Farmers also experience this trait. Large Farmers, on the other hand show very low incidence (1.15%) of this trait.

E.3.3. Outbursts: It is a condition when one loses self-control in the state of anger. It is observed among 10.40% of the studied farmers. It is observed among more than half (51.92%) of the farmers belonging to Marginal and Small farmers, closely followed by 40.38% among Medium farmers. In contrast, only 7.69% farmers belonging to large farmers have this trait.

E.3.4. Social Withdrawal: It is a situation when one withdraws from social activities and remains aloof inside the room. The occurrence of this indicator is found among 12.40% indebted farmers, with highest presence among Marginal and Small farmers (72.58%). One fourth (25.81%) of Medium farmers also possess this mental health indicator. The trait is almost absent (1.61%) among Large farmers.

E.3.5. Stress: It is observed among 6.80% of the indebted farmers. Very high incidence (73.53%) of this trait is observed among the Marginal and Small farmers, followed by 26.47% occurrence among Medium Farmers. The trait is completely absent among the Large farmers.

E.3.6. Irritable Nature: It is a tendency of getting irritated over everything because of a stressful life. This trait is encountered among 13.20% farmers, considered in the study. Marginal and Small farmers has this trait in high proportion (74.24%). Medium farmers, on the other hand, show incidence of this trait among almost one fourth cases (25.76%). No incidence of this trait is observed large farmers.

E.3.7. Anxiety: This mental health indicator has relatively higher prevalence (84.00%) in comparison to other the mental indicators. Two-third (66.90%) of Marginal and Small farmers and one-third of Medium Farmers (31.67%) are found experiencing this trait. In contrast, it has very low occurrence among Large Farmers.

E.3.8. Insomnia: It is a state when one does not get proper sleep. The trait is observed among almost one-fourth (24.20%) of the surveyed indebted farmers. Very high occurrence of the trait is observed among marginal and Small Farmers (76.03%), followed by 23.14% occurrence among Medium Farmers. In contrast, the trait is almost absent among Large farmers (0.83%). [Table No.-4]

F. Conclusions

F.1 The Connection between Farm Debt and Public Health: The final results of this study clearly show that the rising debt among farmers in the Sarguja Division of Chhattisgarh is no longer just a financial problem. It has now turned into a major public health crisis. The heavy stress of unpaid loans and the high interest charged by local private moneylenders do not just hurt the farmers' pockets; they directly break down both the mental and physical health of the rural workforce (Yazd et al., 2019). These economic pressures work together to systematically destroy the well-being of farming families across the region.

F.2 Who is Suffering the Most?: A closer look at our field data reveals that while larger farmers might owe bigger amounts of money in absolute terms, the actual life-shattering trauma is felt most by marginal and small farmers. Because these resource-poor households have very small plots of land, they cannot earn enough from farming alone. They are forced to rely heavily on everyday casual labor just to buy basic food and supplies (Chand, 2019). Having no savings or backup funds makes these small-scale farmers the most helpless victims when it comes to facing long-term mental anxiety and serious physical illnesses (Bomble & Lhungdim, 2020).

F.3 High Rates of Mental Stress and Worry: The mental health data collected in this study points to a severe psychological crisis among the surveyed farmers, closely tied to how much money they owe (Padhy, 2019). Generalized anxiety is the most widespread issue, affecting a shocking 84.00% of the aggregate sample. This deep mental pain shows up as a complete lack of socialization (52.00% of farmers stop mixing with neighbors), severe trouble focusing on daily work (29.60%), constant sleeplessness or insomnia (24.20%), and sudden mood changes or emotional stress (Padhy, 2020; Ramadas & Kuttichira, 2017). The fact that these issues are worst among smallholders proves that when a family loses its financial buffers, they are left completely unprotected against chronic anxiety.

F.4 Heart Conditions and Physical Complications: Living under endless financial pressure for years takes a massive physical toll on the human body (Parry et al., 2005). Our medical checkups show that 68.60% of the farmers suffer from high blood pressure (hypertension), a number that climbs even higher to 71.34% specifically among marginal and small farmers. This widespread heart condition is accompanied by frequent physical pain, including chronic headaches (42.20%), clear chest pain (35.60%), blurry vision (34.80%), and severe breathlessness (27.40%), reflecting how much physical damage the body takes due to constant debt worry (Mishra et al., 2019).

F.5 Lack of Health Awareness and Weak Medical Infrastructure: A very critical takeaway from this study is the deep lack of basic health awareness and diagnostic screening among rural farmers. Driven by severe economic pressure, these individuals continue to do grueling physical labor in the fields every day without ever getting a medical checkup, which greatly increases their risk of sudden heart failure (Sathyanarayana Rao et al., 2017). Furthermore, while the government has set up a wide network of primary health centers in rural areas, these local clinics are unfortunately under-equipped. They lack the

necessary tools and trained staff to handle specific mental health counseling and cardiovascular care that this rural crisis urgently demands (Younker & Radunovich, 2022).

❖ **Policy recommendations for agrarian health integration:** Based on our field data and the high number of health risks found among small holders across the Sarguja Division, we suggest the following practical steps to help debt-ridden farmers with both their financial and health issues:

- **Stress Counseling at Loan Centers:** Since 84.00% of the farmers suffer from heavy mental anxiety due to high interest rates from local private moneylenders, government banks and local cooperatives should set up basic counseling desks. Telling farmers about safe bank loans and helping them manage mental stress during weekly local markets can help reduce debt worry and protect them from cheating by money lenders.

- **Mobile Health Vans for Blood Pressure:** Given that a shocking 68.60% of farmers have high blood pressure which jumps to 71.34% among small and marginal farmers the health department should send mobile medical vans to far off villages in Balrampur, Jashpur, and Surajpur. These vans must check farmers' hearts for free every month and give them regular blood pressure medicines right at their doorsteps.

- **Better Training for Village Health Workers:** Even though the area has a large network of 5,206 Sub-Health Centers, these local clinics lack the tools to handle long-term stress illnesses. Village health workers like ASHA and ANM should be trained to catch early physical signs like regular headaches (42.20%) and chest pain (35.60%), so they can quickly send sick farmers to bigger block hospitals (CHCs) before it is too late.

- **Village Support Groups to Fight Shame:** To help the 52.00% of farmers who stop talking to neighbors out of shame, villages should start small support groups through existing farmer clubs. This will give poor farmers a safe space to share their daily life worries and reduce the public shame that comes with loan recovery processes.

- **More Help for Extra Income Sources:** Our field data shows that farming alone brings in only 33.01% of household income, forcing families to depend mostly on everyday casual labor (39.34%). The local government must help families earn from other sources. Buying forest goods (Minor Forest Produce) from tribal's at better prices and giving those cows or goats through government schemes will help the poorest farming families survive bad crop seasons.

G. LIMITATIONS AND FUTURE SCOPE

Our field study shares important proof about how debt harms the health of farmers, but we must keep a few practical limits in mind. First, our visits were completely limited to the five highland districts of the Sarguja Division in northern Chhattisgarh. Because this specific area has a unique tribal lifestyle and its own local farming style, these field insights might not fully match or represent the situation of farmers across the rest of Chhattisgarh or India.

Second, to check physical health, we only measured resting blood pressure and noted down the body pains that farmers told us about. We did not do advanced laboratory blood tests or hormone checks, which could offer deeper medical proof of long-term stress. Also, our mental health notes came from standard village interviews rather than long-term checkups by specialized doctors. In the future, researchers should track farmers' health over a longer period across different farming zones to help the government build better systems that link easy agricultural loans with medical care in villages.

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