SOCIO-ECONOMIC, PSYCHOLOGICAL AND SITUATIONAL CAUSES OF FARMERS SUICIDES IN HINGOLI DISTRICT

BY

MR. KOLHE SACHIN PANJABRAO
B.Sc. (Agri.)

DEPARTMENT OF EXTENSION EDUCATION
COLLEGE OF AGRICULTURE, PARBHANI
VASANTRAO NAIK MARATHWADA KRISHI VIDYAPEETH
PARBHANI-431402 (M.S.). INDIA.

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DISSERTATION

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VASANTRAO NAIK MARATHWADA KRISHI VIDYAPEETH,
PARBHANI-431 402 (M.S.). INDIA.

2018

Affectionately Dedicated to

Mom and Dad

Who Unfailingly

Brings A

Smile on

My Face !!

CANDIDATE'S DECLARATION

I hereby declare that this dissertation

Or part thereof, has not been

Previously submitted by

Me for a degree of

Any other

Institution

Or

University.

Place :PARBHANI

Date:/ / 2018 **(KOLHE S.P.)**

Dr. R.D.AHIRE
M.Sc. (Agri.), Ph.D.
Head of Department,
Department of Extension Education,
Vasantrao Naik Marathwada Krishi Vidyapeeth,
Parbhani- 431 402 (M.S.), India.

C E R T I F I C A T E – I

This is to certify that **Mr. KOLHE SACHIN PANJABRAO** has satisfactorily prosecuted his course of research for a period not less than four semesters and that the dissertation entitled**"SOCIO-ECONOMIC, PSYCHOLOGICAL AND SITUATIONAL CAUSES OF FARMERS SUICIDES IN HINGOLI DISTRICT"**submitted by him is the result of original research work and is of sufficiently high standard to warrant its presentation to the examination for the degree of **MASTER OF SCIENCE (Agriculture)** in **EXTENSION EDUCATION**.

I also certify that the dissertation or part thereof has not been previously submitted by him for a degree of any university.

Place: PARBHANI
Date:/ /2018

(R. D. Ahire)
Research Guide and
Chairman Advisory Committee

C E R T I F I C A T E – I I

This is to certify that the dissertation entitled **"SOCIO-ECONOMIC, PSYCHOLOGICAL AND SITUATIONAL CAUSES OF FARMERS SUICIDES IN HINGOLI DISTRICT"** submitted by **Mr. KOLHE SACHIN PANJABRAO**to the Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani in partial fulfillment of the requirement for the degree of **MASTER OF SCIENCE (Agriculture)** in the subject of **EXTENSION EDUCATION** has been approved by the student's advisory committee after oral examination in collaboration with the external examiner.

( )
External Examiner

(Dr.R.D.Ahire)
Research Guide and
Chairman Advisory Committee

Members of Advisory Committee:

(Dr.P. R. Deshmukh)

(Dr.P.S. Kapse)

(Dr. K.V.Deshmukh)

Associate Dean (P.G.)
College of Agriculture,
Vasantrao Naik Marathwada Krishi Vidyapeeth,
Parbhani-431 402 (M.S)

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"Alone we can do so little but together we can do much"

- Hellen Keller

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*PLACE:****PARBHANI*** ***(KOLHE S.P.)***
DATE:/ / 2018

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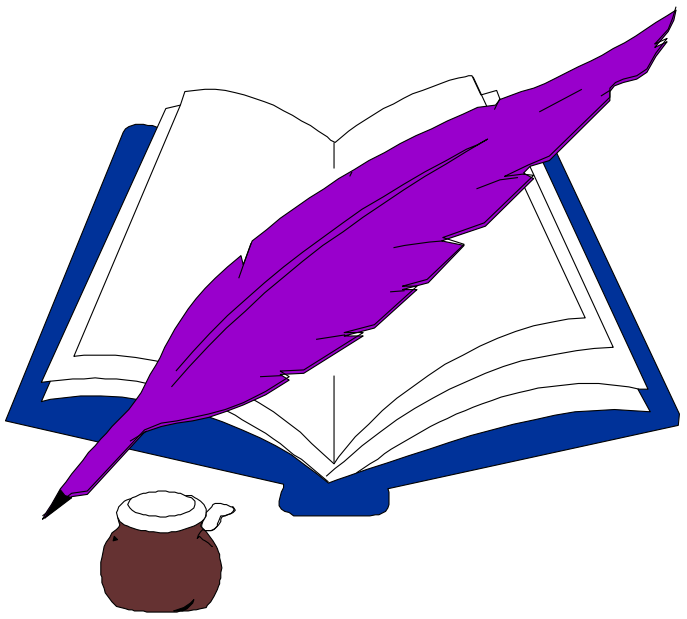


INTRODUCTION

CHAPTER I

INTRODUCTION

The problem cannot be solved through economic packages alone. What are needed are social and spiritual interventions so that the farmers realize that suicide is not the way out they should understand that they need to develop self confidence. The future generation should have the mental strength to face life's challenges. (Amma, March 2007)

Farmer suicide has turned out to be a major socio-economic concern in India that has resulted in profound implications on the quality life of farmers. According to the United Nations Commission on Sustainable Development (UNCSD), one farmer committed suicide for every 32 minutes between 1997 and 2005 in India. India's farmer suicide rate 11 persons per lakh people is roughly in global average. The highest rates are in Greenland (83 per lakh), Lithuania (38 per lakh) and South Korea (28.5 per lakh). China's rate (22.2 per lakh) is double India's. The Indian rate is lower than in rich countries with big welfare systems and very few farmers: Belgium (19), France (14.7), US (12.6), Japan (12.3), Germany (12.5). (www.uncsd.org)

In india 319026 suicides were noted since 1995 to 2016. Suicide incidence were reported from Maharashtra, Telangana, Andhra Pradesh, Panjab, Kerala, Chhattisgarh, Madhya Pradesh, West Bengal. Out of above states Maharastra is leading state according to National Crime Record Bureau report as per suicides are concern. The highest suicide cases was noted (18241) in year 2004, lowest suicide cases was noted (8295) in year 1995. Brief profile of farmers' suicides in India is given in table 1;

Table 1: No of farmers' suicides in India between1995-2016.

Year	Male	Female	Total	Year	Male	Female	Total
1995	8295	2425	10720	2006	14664	2396	17060
1996	NA	NA	NA	2007	14509	2123	16632
1997	11229	2393	13622	2008	14145	2051	16196
1998	12986	3029	16015	2009	14951	2417	17368
1999	13278	2804	16082	2010	13592	2372	15964
2000	13501	3102	16603	2011	12071	1956	14027
2001	13708	2576	16284	2012	11951	1803	13754
2002	15308	2663	17971	2013	10489	1283	11772
2003	14701	2463	17164	2014	10889	1471	12360
2004	15929	2312	18241	2015	11028	1574	12602
2005	14972	2158	17131	2016	10026	1432	11458
				Total	272223	46803	319026

Source: ncrb.nic.in (2017)

The number of farmers who committed suicide in various regions is not same in Maharashtra. Despite of Konkan region, all other regions of Maharashtra are facing issue of farmer's suicide. According to NCRB in Maharashtra state during last twenty one year period the incidences of suicides of farmers are increased tremendously.

Since from January 1995 to December 2016 total 69053 farmers committed suicide. It is also observed that total number of suicides figure reached to higher side and remain stable up to 2016.

Farmers suicide of Maharashtra shows an increasing trend in Table 2.The highest suicide cases was noted (4453) in year 2006, lowest suicide cases was noted (1083) in year 1995.

Table 2: Number of farmer's suicide in Maharastra 1995-2016.

Year	Male	Female	Total	Year	Male	Female	Total
1995	978	105	1083	2006	4111	342	4453
1996	1767	214	1981	2007	3968	270	4238
1997	1600	317	1917	2008	3573	229	3802
1998	1938	471	2409	2009	2692	180	2872
1999	2050	373	2423	2010	2947	194	3141
2000	2492	530	3022	2011	3093	244	3337
2001	2945	591	3536	2012	3483	303	3786
2002	3155	540	3695	2013	3020	126	3146
2003	3381	455	3836	2014	3726	278	4004
2004	3799	348	4147	2015	2492	392	3228
2005	3638	288	3926	2016	2050	1002	3052

Source: ncrb.nic.in (2017)

Farmer suicide in Marathwada region have gone exponentially in the last eight year. Total of 4516 farmers committed suicide in Marathwada since 2010 to 2017. The highest suicide cases was noted (1133) in year 2015, lowest suicide cases noted (169) in year 2011. Brief profile of farmer's suicide in Marathwada is given Table 3;

Table 3:District wise number of farmers' suicides in Marathwada during 2010-2017.

Year / Dist.	2010	2011	2012	2013	2014	2015	2016	2017	Total
Beed	79	73	91	98	152	301	222	207	**1223**
Jalana	04	06	06	08	32	83	76	91	**306**
Nanded	55	33	39	46	118	190	180	153	**814**
Latur	04	04	00	03	44	106	116	94	**371**
Aurangabad	02	00	02	04	56	144	151	139	**498**
Parbhani	22	23	35	17	70	104	98	125	**494**
Hingoli	02	05	03	02	31	41	49	56	**189**
Osmanabad	23	25	22	29	71	164	161	126	**621**
Total	191	169	198	207	574	1133	1053	991	**4516**

Source : Divisional Commissionerate Office, Auragabad.

The highest suicide cases was noted (56) in year 2017, lowest suicide cases was noted (02) in year 2010 And 2013. Maximum suicide incidence were reported from Vasmat, Shengaon, Hingoli, and Aundha talukas. Brief profile of farmer suicide in Hingoli district given in Table 4.

Table 4: Year wise number of farmers' suicides in Hingoli district during 2010-2017.

Year	Eligible cases	Ineligible cases	Total
2010	01	01	02
2011	00	05	05
2012	02	01	03
2013	02	00	02
2014	25	06	31
2015	34	07	41
2016	41	08	49
2017	27	07	34
Total	**132**	**35**	**167**

Source: Divisional Commissionerate Office, Aurangabad.

1.1 Reviewing the issue of Agrarian Crisis

Dominic Merriott (2017) revealed that the socioeconomic factors are an important cause to suicides rather than mental health problems. He found increased indebtedness playing the predominant role among the causative factors. The vulnerability of the farmer amid financial situation has become the major leading factor to get distressed through the manifestation of lacking investment and irrigation improvement, use of cash crops and non-institutional credit sources.

Kumar (2017) revealed that the discourse of farmer suicides advances with three mutually interconnected arguments. First, it implicitly contends that the phenomenon constitutes an unprecedented category of suicides that relates exclusively, or at least primarily, to a set of farming related antecedents. Second, the distinct etiological category of suicide is statistically significant. The cumulative number of such deaths is remarkably large for any of the concerned states in any single year since 1998. Third, it has been conceived in the modal terms of an agrarian economic crisis.

Anneshi and Gowda (2015) concluded that both small and large farmers borrowed relatively higher proportion of the non-institutional sources as compared to institutional sources. Accessibility to institutional borrowing is relatively higher for large farmers. Similarly, both small and large farmers owed more outstanding debt to non-institutional sources as compared to institutional sources.

Macharia (2015) investigated that a majority of marginal and small farmers depend on non-institutional credit facilities (i.e. money lenders, micro financiers and traders). He also reported farmer suicide incidents among the scheduled castes and scheduled tribe families who had cultivated commercial crops. Low yields, extremely reduced profits and mounting debts, made their life extremely difficult.

Singh *et al.* (2014) based on the research in Punjab found that the level of education, non-farm income, farm size and non-institutional credit were the main factors which affect the level of farmers' indebtedness. The study also revealed that the farmers face multiple problems in availing institutional credit, which drives them into the debt trap of the crafty and exploitative non-institutional sources of credit.

Chikkara and Kodan (2014) opined that the informal mechanism of credit delivery played an important role for marginal and small farmers in meeting their credit requirements in Haryana. In addition, maximum indebtedness was found to be in the monthly per capita consumption expenditure (MPCE) class farm households of Rs.615 to Rs.775.

Sarah Hebous and Stefan Klonner (2014) empirically analysed the various sources of extreme economic distress in rural India by using district-level data on farmer suicides to estimate the effects of transitory economic shocks and structural change in agriculture on the incidence of suicides in farm households. Rainfall conditions are used as an instrumental variable and it was found that transitory spikes in poverty caused by lack of rainfall increase suicides among male and decrease suicides among female members of farm households. However, they concluded that the combined

causal effect of a poverty shock on suicides in farm households has been positive. Also, a shift from subsistence crops to cash crops, especially cotton, was found to be associated with a decrease in male suicides.

Mohanty (2013) in a study conducted in Amravati and Yavatmal district argued that crop loss and egoistic factors led to suicidal tendency among small farmers. On the contrary, suicides of large and medium farmers who belong to higher castes were attributed mainly to the anomic forces generated by failure in business, trade and politics. The socio-cultural factors such as old age, illness, family tension, etc., further added their urge to commit suicides. They concluded that the suicides of farmers are neither properly anomic nor egoistic rather they are ego-anomic in nature.

Mohanty (2013) views farmer suicides as having resulted from a combination of ecological, economic and social crisis. He goes to say that it points to the modern agricultural practice, which has become an independent, household or family enterprise, without requiring any link and interaction among the cultivators themselves.

1.2 History of suicides

In India suicide have occurred from the earliest period of recorded history. During the Vedic period certain forms of suicides were approved and recommended on religious ground, as well as the ordinary suicides were prevalent. The Hindu epics Ramayana and Mahabharata contain several instances of suicide. On the other hand, the Bhagavad-Gita has condemned the act of self-killing itself as immoral and this indicates that apart from certain approved suicides such a Sati, the ordinary suicides were also practiced during the period of the epics.

Instance of sati are found in the Mahabharata, Madri the second wife of pandu immolate herself she believe she is responsible for his death or he had been cursed with death if he ever had intercourse.

Sati or suttee is an absolute funeral custom where a widow immolates herself on her husband pyre or takes her own life in another fashion

shortly after her death. mention of that practice can be dated back to the 3rd century BC while of practice by widow of king appears beginning between 5th and 9th century CE the practice is consider to have originated within the warrior aristocracy in India gradually gaining in popularity from the 10th century AD and spreading to other group from the 12th through 18th century CE. The practice was particularly prevalent among some Hindu communities observed in aristocratic Sikh families and has been attested to outside South Asia number of localities in South East Asia such as Indonesia and Vietnam.

Jauhar sometime spelled jowhar or juhar was the Hindu custom of mass self-immolation by women in part of India continent for avoid capture enslavement and rape by any foreign invader when facing certain defeat during war some report of jouhar mention women committing self immolation along with their children, this practice was historically observed in North West region of India with most famous jauhar in recorded history occurring during wars between Hindu Rajput Kingdoms in Rajasthan and the Muslim armies.

National Crime Record Beauro (NCRB) an office of the Ministry of Home Affaire Government of India has been collecting and publishing suicide stabbing for India since 1950s an annual suicide in Indian reports. It started seperatly collecting and publishing farmer suicide statistics from 1995. The first suicide were reported was in Maharastra with particular reference to Chilgavan village of Yavatmal district of Vidharbha region.

1.3 Meaning and Definition of suicide

The word "suicide" was first coined by Thomas Brown (1642) and Walter Charlton (1657). The term suicide in English is derived from the Latin words 'sui' meaning 'one self' and 'cideo' meaning to 'to kill'. Thus, etymologically suicide means to kill oneself. According to the Oxford English dictionary suicide means, 'the act of taking one's life' or 'the act of killing oneself '. But suicide is not just a blind act of killing oneself. It is a motivated act of self-distraction. As the noted British Psychiatrist, Elwin Stengel, points

out, ‘suicide is the fatal act of self-injury undertaken with conscious self-destructive intent, however, vague and ambiguous’ (Phal, 2000)

Enerstvedt (1988), Suicide is an activity which involves acts with the aim and result of one’s own biological death on basis of social specific historical motives.

According to Durkheim (2002) suicides is the term applied to all cases of death resulting directly or indirectly from a positive or negative act of the victim himself, which he knows will produce this results. Suicide represents an extreme form of personal disorganization in an ordinary situation.

Jacob *et.al* (2010) has given practice guideline for the assessment of patients with suicidal behaviors, stated that recent lack of social support (including living alone), unemployment, drop in socio economic status, poor relationship with family, domestic partner violence, recent stressful life event etc. are the psycho-social features associated with an increased a patients’ relative risk for suicide. He also revealed that hopelessness, psychic pain, severe or unremitting anxiety, panic attacks, shame or humiliation, psychological turmoil, decreased self-esteem, extreme narcissistic vulnerability, behavioral features, impulsiveness, aggression (including violence against others) and agitation are the psychological features either alone or in combination, associated with an increased a patient’s relative risk for suicide. He revealed that in individuals with a history of suicide among relatives, the risk of suicidal behaviors is increased, apparently through genetic as well as environmental effects. The risk of suicidal behaviors among family members of suicidal individuals was about 4.5 times that observed in relatives of non-suicidal subject.

Orderly least square regressions was employed to estimate the effect of proxy for heavy drinking on overall and sex specific age adjusted suicide rate.

The greater frequency of suicidal behavior and severity of suicidal ideation in major depression with co-morbid alcoholism appear related

to associated aggressive traits. Alcoholism aggression smoking and suicide may have common biological casual substrate.

1.4 Reasons of farmer suicides

Manjunatha and Ramappa (2017) reported that Drug/Alcoholic addiction 26.00 per cent, Illness 18.00 per cent, fall in Social reputation 17.00 per cent, family quarrel 16.00 per cent, daughter's marriage 11.00 per cent and extra-marital affair 8.00 per cent are the major social causes opined by victims house hold across 13 sample states. Drug/Alcoholic addiction and Illness was common major cause reported by victims house hold in all the sample states. Fall in social reputation was reported as one of the main cause for suicide by all the sample states except UP.

They further revealed that members of the victim's household attributed causes of suicides to institutional loan 44.00 per cent, non-institutional loan 37.00 per cent, pressure from money lenders 36.00 per cent, non-agricultural loan 28.00 per cent, pressure from institutional sources 28.00 per cent and farm equipment loan 10.00 per cent were major indebted related causes of suicides.

Sonawane (2016) reported that India is a agricultural country, where 65.00 per cent of farming depends on rain. The probability of farmers committing suicide is more during mansoon. Deficit years less productivity of crops is also one of the basic cause of farmer's suicide

Choudhary *et.al.* (2016) reported that causes of farmer suicide due to crop failure, poverty, indebtedness, family problem, personal problem like family quarrels, health issue and education of their children as a reason of farmer suicide.

Kale (2008) reported that indebtedness 94.00 per cent, drop in economic position 84.50 per cent, crop failure 78.50 per cent, alcohol disorder 42.00 per cent, family member suffered from ill health 25.00 per cent, dispute / quarrel 62.60 per cent are the major causes opined by victims house hold across Vidharbha region.

1.5 Need and importance of study

Agriculture is the backbone of Indian economy as accounting for approximately 30.00 per cent of the national GDP. Farmers are the real cultivators of agricultural land. But recently the farmers have been committing suicide. Why does this happen? Why do farmers take this extreme step? Is income from cultivation not enough to meet consumption and other expenditure? Are farmers heavily indebted due to lower income from cultivation? Are their livelihood is not sustainable? Is their socio-economic status weakening? Are their any social and psychological problems? For finding the answers of these questions including other probable causes of suicides and taking suggestions from victim's households, for avoiding these tragic phenomenon, the current exercise was felt needful, so that in future we can overcome important root causes by applying various planning and developmental measures in agriculture and with the families of suicide farmers.

Hence the present study for identification of real causes and setting aside the rhetoric's, has been undertaken in the Hingoli district with following objectives;

Objectives of the study

1. To study the personal, socio-economic, psychological and situational characteristics of the farmers families who committed suicides.
2. To study the socio-economic, psychological and situational causes which compelled the farmers to committed suicide.
3. To study the credit sources and indebtedness of the suicide farmers.
4. To study the relationship between selected characteristics of suicide farmers' with their identified risk factors of suicide.
5. To study the post suicide consequences faced by farmers families.
6. To document the suggestions for avoiding suicides of farmers.

1.6 Scope of the study

The study "socio-economic, psychological and situational causes of suicides' of farmers in "Hingoli district" tries to find the various stressors/ causes, which leads to aggregation of different risks factors with an individual victim. It will help to reach to some rigid conclusion about the causes and factors of suicides in farming community of Hingoli district. The information about the relationship of different personal, socio-economic, situational and socio-psychological characteristics of the victims and families of the farmers who committed suicides with identified risk factors of suicide will definitely useful to the central and state government administrators and planners, social workers, researchers to formulate long term and short term strategies for avoiding tragic phenomenon of farmer suicide.

1.8 Limitations of the study

Being a student's research project, the study has been carried out with the following limitations;

1. At the time of data collection, it was observed that due to the death of closest family member, almost in every house there was sad environment. Hence the finding of this study was based on the opinion expressed by the household of the victims. Therefore, the objectivity of data would be limited to the readiness, honesty and opinions expressed by the victims' family members.
2. Due to absence of the deceased cultivator (Victim), the collected information about some aspects may some time less consistent, because these information was based on the perception of the family members.
3. The present study is the student research project. Time, money, travelling and other facilities did not permit a larger sample than that taken for the purpose of the study.
4. Getting information from the bereaved families was not easy. Details regarding loans and interest rates were difficult to get from a farmer's family, as taking loans is a private affair.

5. The suicide is the fatal act of self-injury undertaken with conscious self-destructive intent, however, it is strictly personal, confidential, vague and ambiguous. Hence it is very difficult to find the exact causes, with an individual due to which suicide incidence happened.

1.7 Organization of thesis:

The report of the present study has been presented in five major chapters. In the first chapter, Introduced. The objective of study, need and importance, scope and limitation of the study has been has been described.

The second chapter the theoretical framework is given. It comprises related review of literature and finding of various research studied conducted at different location and in varied type of situation.

The methodology of study has been discussed in third chapter. It include study location, research design, population and sample of study, variables, their empirical measurement and categorization and statistical methods used for analysis of data.

The fourth chapter is Results and Discussion. It is devoted to the findings of study along with the discussion thereon.

Fifth chapter deals “Summary and Conclusions” which included not only the study result but also other details summarized in brief and suitable conclusion drown based on the obtained findings.

The seventh chapter Implications emanated from the present finding have been presented in to two parts i.e. Action implications and Research implications. The action implication are connected with the guidelines and suggestion for extension personnel, policy maker and other related individuals. Lastly the literature cited followed by vita, Appendix (Research questionnaire, list of selected villages and list of name of victims with their village and talukas) at the end.

CHAPTER-II

REVIEW OF LITERATURE

CHAPTER II

REVIEW OF LITERATURE

A comprehensive review of literature is an essential part of any scientific investigation which helps the researcher to get more acquired with the project matter and direct his effort toward desire goal. In this chapter the reference pertaining to the subject matter reviewed.

2.1 Independent variables

2.1.1 Personal characteristics

The personal characteristics of the victim's namely, age, education, caste, family size, family type and farming experience were considered for the study.

2.1.1.1 Age

Deshmukh, *et al*. (2007) shown that in Vidarbha, the 51.71 per cent suicide farmers were ranging between age group of 40 to 59 years, while the 35.12 per cent suicide farmers were ranging between age group of 20 to 39 years. The per cent of the age group upto 20 years was 1.46 and the per cent of the age group above 60 years was 11.71. The per cent age of age group revealed that the maximum farmers were belonging to the age group when the person usually has responsibility of the family.

Kamthe (2007) studied the 74 deceased farmers in Amravati district of Vidarbha region observed that about 62.20 per cent of the victims were in middle age group of 30 to 55 years, while 18.90 per cent appeared in young (below 30 years) and old age (above 55 years) group each.

Khan (2007) stated that the fate of the farmers in Bhandara district is still under darkness due to the apathy of the Government. Due to consistent crop failure and increasing debt, 79 farmers from the district

committed suicide in last year i.e. from March 2006 to March 2007. From these total deceased, 58 farmers fall between the age group of 24 to 45 years. The study indicates that the majority of the farmers who committed suicides were middle age group, when the person usually holds the family responsibility.

Kale (2008) stated that nearly equal percentage of the victims were under young 36.50 per cent and middle 37.50 per cent age category. Whereas remaining 26.00 per cent victims were found under old age category. It is inferred that young and middle age group seems to be more prone to suicides as compare to old. Probably this is the age where major decisions of family responsibilities have to be shoulder by the family head.

Anonymous (2016) stated that majority of victims belong to 30 years and above. Below 60 years of age group accounting for 71.60 per cent of total farmers/cultivators suicides during 2015.

Choudhary *et.al*. (2016) revealed that most of the farmers 37.00 per cent who committed suicide were in the age group of 46-60 years. Normally, this is the age group during which the farmers have many other obligations like education of their children, marriages of sons and daughters and also health issues in the family.

Manjunatha and Ramappa (2017) stated that seventy per cent of the victims were in the age group of 31 to 60 years, 17 per cent in less than 30 years and 13.00 per cent in above 60 years. Higher number of farmer suicides in the age group of 31 to 60 years has been reported in Andhra Pradesh 90.00 per cent, followed by Karnataka 83 per cent, Madhya Pradesh 82.00 per cent, Haryana 79.00 per cent, Punjab 73.00 per cent, Chhattisgarh 70.00 per cent, Gujarat 70.00 per cent, Maharashtra 62.00 per cent, Telangana 60.00 per cent and West Bengal 60.00 per cent. The results show that the highest number of suicides is in the middle age group who are fully involved in agricultural activities.

2.1.1.2 Education

Kale (2008) revealed that out of the total sample 16.50 per cent were illiterate and remaining 83.50 per cent were literates. Within the literates 24.00 per cent victims were having education up to primary level, where as 19.00 per cent and 27.00 per cent having middle school and high school level education respectively. While 9.50 per cent victims were having higher secondary school level education and only 4.00 per cent possessed college level education.

Anonymous (2015) stated that illiteracy and traditional education system is largely responsible for increasing economic distress in Maharashtra. An uneducated people do not get knowledge of global changes and educated person is apathy to play role as a farmer in farm business due to absence of skill and educational fatigue. Any single suicide victim and respondents were not found taken formal education of agriculture science during field visit.

Sonavane (2016) stated that due to illiteracy and inadequate knowledge, farmers do not believe in importance of education. Lack of education skills their decision making skills. Lack of money and perception capacity, They are cultivating land in traditional method if farmers fail to perform all these tradition and cultural activities they become frustrate and turn towards suicide.

Choudhary *et.al*. (2016) revealed that only 20.00 per cent of the farmers had education above matriculation. The maximum number of farmers 57.00 per cent belonged in the under matric group. Primary pass farmers were 10.00 per cent; whereas 13.00 per cent of the farmers, family members and friends could not give details about the farmer's educational qualifications.

Manjunatha and Ramappa (2017) stated that nearly 56.00 per cent of the victims were educated up to matriculation, 33.00 per cent were illiterates and 11.00 per cent were educated more than matriculation at

aggregate level. The results support inverse relation between level of education and suicide.

2.1.1.3 Caste

Mishra (2006) stated the caste of the deceased farmers of Vidarbha, that the most number of cases are Kunbi's (31.00 %) spread across the Wardha, Washim and Yavatmal districts), Banjara's (16 %, mostly in Yavatmal) and Boudha (9 %, mostly in Washim). Kunbi's are the predominant peasant community in the selected districts and Banjara's have a substantial presence in Yavatmal and Karanja sub-division of Washim. It is also concluded that more or less in all caste group's incidence of suicides was observed. Meager cases were observed in Upper caste.

Kale (2008) stated that majority (57.00 %) suicide cases were belonged to OBC category and mostly the Kunbi's from all selected six districts, followed by SC category (12.00 %). The victims belonging to Vimukta Jati (VJ-A) category were (7.50 %), next to this Nomadic Tribe (NT-B) group (5.50 %). While (5.00 %) comes under Schedule Tribe (ST) group and (4.00 %) victim's were observed from Special Backward Class (SBC) group, followed by (2.50 %) belonging to open caste category. Where as 1.50 % victim's were belonging from Nomadic Tribe-D group.

Choudhary *et.al. (*2016) revealed that the majority (50.00 %) of farmers who committed suicide belonged to the Other Backward Classes (OBCs). (40.00 %) belonged to the Scheduled Tribes (STs) category, (7.00 %) of the farmers belonged to the General category (GEN). Only (3.00 %) belonged to Scheduled Castes (SCs).

Manjunatha and Ramappa (2017) revealed that one fourth of the total victims of 13 states were SC (16.00 %) and ST (9.00 %) and remaining three-fourth were either backward (46.00 %) or general (29.00 %) category. (70.00 %) of the sample victims of Chhattisgarh were STs 56.00 per cent and

SCs 14.00 per cent which was followed by 50.00 per cent in West Bengal, 47.00 per cent in Uttar Pradesh and 40.00 per cent in Tamil Nadu. The per cent of SCs and STs ranged between three per cent in Punjab to 70.00 per cent in Chhattisgarh.

2.1.1.4 Family type

Suri (2006) pointed out that according to economists, social activists and advocacy groups who have studied farmers' suicides, break up of joint families is also one of the social factors were responsible for the present agrarian crisis.

Kamthe (2007) observed that 68.90 per cent of the deceased farmers were from nuclear family, while one third 31.10 per cent of the deceased farmers were from the joint family.

Kale (2008) reported that maximum 63.00 per cent victims were from nuclear type of families and 37.00 per cent victim's belonged to joint family.

2.1.1.5 Family size

Deshmukh *et al*. (2007) revealed that the percentage of the families between 1 to 5 members size group was highest in Vidharbha 71.7 per cent, followed by 6 to 10 member's family size group 25.85 per cent. Among the districts, in Buldana it was highest 79.17 per cent families were categorized under 1 to 5 members and in Wardha district it was 35 per cent families comes under 6 to 10 member's family size.

Kamthe (2007) reported that 52.70 per cent of the deceased farmers had medium size (4 to 6 members) of family while 40.50 per cent and 6.80 per cent of deceased farmers had small (up to 3 members) and big (above 6 members) sized families respectively. Thus majority of the deceased farmers were from medium to large size families.

Kale (2008) reported that majority 61.00 per cent suicides were concentrated in medium size family having 4 to 6 family members. While one fourth 25.00 per cent victims having large family size (7 to 9 members), followed by 10.00 per cent victims having small family size (up to 3 members). Whereas only 4.00 per cent victims were from very large family group having 10 or more than ten family members. Thus, it is inferred that majority of the suicides were concentrated between medium and large family size group of farmers.

Choudhary *et.al*. (2016) revealed that the average size of the families of the deceased farmers (including the deceased) was 5.46 per cent; 34.00 per cent of the famers had 4/5 persons in the family and 33.00 per cent had 6/7 members in the family; 17.00 per cent had 3 members in the family. Only 13.00 per cent farmers had large families having 8-10 persons.

2.1.1.6 Farming experience

Mishra (2006) revealed that the 24.00 per cent victims had less than five years, 18.00 per cent had about 6-10 years and the remains 58.00 per cent had more than 10 years of farming experience was observed in Vidharbha region.

Kale (2008) observed that many of the victims 38.00 per cent had farming experience upto 10 years, followed by 25.50 per cent of the victims had farming experience between 11 to 20 years. While 20.50 per cent victims had farming experience between 21 to 30 years. Only 16.00 per cent victims were having more than 30 years experience in farming business.

2.1.2. Socio-economic characteristics

Under socio-economic characteristics land holding, subsidiary occupation, annual income and socio-economic status of the victim's households were considered.

2.1.2.1 Land holding

Kale (2008) reported that majority 43.50 per cent of the victim's were small farmers having land holding between 1.01 to 2.00 hectares, followed by 23.50 per cent victims were marginal farmers possessing land upto 1.00 hectare. While (20.50 per cent) and 12.50 per cent of the victims had semi medium 2.01 to 4.00 ha and medium 4.01 to 10.00 ha land holding, respectively. The average size of holding in marginal, small, semi-medium and medium groups were 0.76 ha., 1.59 ha., 3.11 ha. and 5.50 ha. respectively. The overall size of holding was worked out to 2.20 hectares. Thus it is concluded that more than two third 67.00 per cent of the victims belonged to small and marginal land holdings categories. These groups are more vulnerable to risk and uncertainty that prevail in agricultural production.

Anonymous (2015) stated that large number of selected suicide victims was reported small and marginal in Maharashtra. It is found that 69.00 per cent selected suicide victim households were marginal and small land holders and only 23.60 per cent were medium and large. An average size of farm of these selected households suicide victim had 4.7 acre.

Anonymous (2016) stated that land holding status of farmers/cultivators who committed suicide during 2015 revealed that 45.20 per cent and 27.40 per cent of total such victims were 'small farmers/ cultivators'(3,618) and 'Marginal Farmers/Cultivators' (2,195) respectively, these together accounted for 72.60 per cent of total farmers/cultivators' suicides.

Choudhary *et.al.* (2016) reported that among the deceased farmers, 23.00 per cent were landless and 40.00 per cent were marginal farmers. Combined together, the landless and marginal farmers constituted 63.00 per cent of the farmers who committed suicide or attempted it. Where as, 23.00 per cent were small farmers and 14.00 per cent were medium farmers. Together they constituted 37.00 per cent of the sample, implying that more than

one-third of the deceased farmers decided to kill themselves despite having above average land holdings.

Macharia (2015) revealed that a majority of marginal and small farmers depend on noninstitutional credit facilities (i.e. money lenders, micro financiers and traders). He also reported farmer suicide incidents among the scheduled castes and scheduled tribe families who had cultivated commercial crops. Low yields, extremely reduced profits and mounting debts, made their life extremely difficult.

Manjunatha and Ramappa (2017) stated that nearly 50.00 per cent of the marginal farmers have operated 28.00 per cent of land and 26.00 per cent of small farmers operated 28.00 per cent of land, 8.00 per cent of large farmers operated 17.00 per cent of land and 16.00 per cent of medium farmers operated 27.00 per cent of land. The above results indicate inequity in distribution of land which was relatively higher in Telangana, A.P., Chhattisgarh, Karnataka, T.N., U.P., Gujarat, Punjab and Haryana.

2.1.2.2 Subsidiary occupations

Anonymous (2007) stated that small farmers couldn't sustain on agriculture alone. There was a need to inculcate amongst the small farmers a streak of entrepreneurship so that it is easier for them to sustain their families by diversifying, which is not possible if they continue to solely depend on agriculture.

Kamthe (2007) shown that nearly two third 62.16 per cent of the deceased farmers had farming as their main occupation, while one third (33.78 per cent) respondents had labour as a supportive endeavor to farming and only 4.06 per cent of the victims had other business as supportive occupation. Thus it is clear from these review that majority of the farmers those who committed suicide does not had any allied occupations/business etc. as a additional source

of income other than farming. Most of the victims having labour / wage income as a supportive endeavor to farming.

Kale (2008) reported that majority of victims 70.50 per cent were engaged in farm labour on other big farmers' farm for wages earning, as a supportive endeavor to farming and majority of them were marginal and small farmers. While 20.00 per cent victims had only farming as their main occupation and they did not have a any backup system, mostly they were medium (4.01-10.00 ha.) land holders. While 6.50 per cent deceased farmers were doing either caste related or other non-professional business with farming. Monthly income from salary/pension was noted in 2.00 per cent victims; out of these three were holding class IV service and one have a pension of his father. Only two deceased farmer 1.00 per cent were possessed dairy as an allied occupation through buffalo rearing in addition to farming.

Anonymous (2015) stated that agro supporting business has an important role in economic development of nation, which is known as insurance against disasters. Despite of agriculture labour, most of the suicide victim households dont have any agro supporting business. Therefore, there is need to increase awareness among the farmers about agro supporting business in distressed areas and government should take initiative for expansion. Moreover, decreasing interest of the new generation in farming, social stigma, court cases, permanent illness, higher dependency ratio are also found responsible factors for committing suicide by farmers in Maharashtra.

2.1.2.3 Annual income

Joshi (2007) revealed that Indian agriculture was in deep crisis. There was a widespread unrest among farmers due to slowing down or stagnating income.

Kamthe (2007) observed that 66.20 per cent of the victims had low annual income, followed by 31.10 per cent and 2.70 per cent had medium and big level of annual income respectively.

Kale (2008) reported that majority of victims were having annual income up to Rs.25, 000 (62.00 %) and between Rs. 25,001 to Rs. 50,000 (29.00 %). It is clearly revealed that as the income level decline the suicide rate is increased and hence the low income of the farmers is proved as important specified cause of farmers' suicide in Vidarbha Region of Maharashtra. This is fact that everything can be adjusted but not the money. Low income creates very difficulty for an individual to manage affairs of the family. Such people become discouraged and cannot perform their functions properly.

Choudhary *et.al.* (2016) revealed that cultivation was the main source of family income for all the farmers, daily labour was the source of income for 21 (70.00 %) farmers; (37.00 %) of the farmers had collection of minor forest produce as a supplementary source of income. In the case of five farmers 16.70 per cent, either they or other members of the family were migrating out to earn more for the family. In 16.70 per cent of the cases, family incomes were supplemented with a family member doing the job of a driver or doing some petty business. Apart from this, one member each among the 30 had a government job, private job or worked for an enterprise.

2.1.2.4 Socio-economic status

Kale (2008) reported that most of the deceased farmers were found in very low 67.50 per cent and low level 29.00 per cent of socio-economic status. While remaining only 3.50 per cent victims were in medium level of socio-economic status. Not a single victim was found from medium high and high socio-economic status level groups. Thus study indicated that the nearly cent per cent 96.50 per cent suicide were concentrated between very low and low level of socio-economic status group. Hence low socio-economic status is the one of the cause of farmers' suicides in Vidarbha Region.

Mohanty (2013) views farmer suicides as having resulted from a combination of ecological, economic and social crisis.

Choudhary *et.al* (2016) stated that out of the 30 cases, 73.00 per cent farmers belonged to BPL (Below Poverty Line) categories while the others had no BPL cards. Most of those who did not have BPL cards were qualified to have at least one as per the information provided by them.

Dominic Merriott (2017) revealed that the socio-economic factors are an important cause to suicides rather than mental health problems. He found increased indebtedness playing the predominant role among the causative factors. The vulnerability of the farmer amid financial situation has become the major leading factor to get distressed through the manifestation of lacking investment and irrigation improvement, use of cash crops and non-institutional credit sources.

2.1.2 Situational characteristics

In present study, under situational characteristics of the victims, type of land, irrigation facilities, agriculture infrastructure, productivity, indebtedness, livelihood pattern and extent of family responsibility fulfilled were considered for the study.

2.1.3.1 Type of land

Deshmukh *et al.* (2007) revealed that 68.29 per cent suicide farmers in Vidarbha have medium type of soils of their farms. Whereas 20.00 per cent farms have heavy type of soils and 11.70 per cent farms of victims' has light type of soils. It reference showed that majority of suicides farmers has medium type of soil in Vidarbha region.

Kale (2008) reported that over half of the deceased farmers 54.50 per cent were having very shallow type of land, followed by 24.00 per cent respondents having moderately deep type of land. While 14.00 per cent

possess shallow type of land. Similarly 6.50 per cent and only 1.00 per cent victims having deep and very deep type of land respectively. Thus, it is concluded that over half of the deceased farmers holds very shallow type of land.

2.1.3.2 Irrigation facilities

Talati (2007) reported that India's 75.00 per cent of net irrigated area were served by groundwater wells.

Anonymous (2007) pointed out that, the lack of irrigation facilities was the prime reason for crop failures, which has resulted in farmers committing suicides. Only 40 per cent area in the country has assured irrigation, while 60 per cent has to depend on the vagaries of rains. This is the primary reason why farmers are pushed into debt of moneylenders and financial institutions.

Kamthe (2007) observed that 79.70 per cent of the deceased families have low irrigation potential, while 8.10 per cent and 12.16 per cent households had medium and high level of irrigation potential respectively in Amravati district of Vidarbha.

Kale (2008) reported that nearly three fourth 69.00 per cent of victims had no any source to access the irrigation. They solely depend on monsoon rains and 24.00 per cent deceased farmers had only open well as the irrigation source. While remaining 7.00 per cent victims have canal 3.00 per cent, tube well 1.50 per cent, river 1.00 per cent and both canal with well 1.50 per cent as the source to access irrigation. It is concluded that majority 69.00 per cent suicide cases were not having any source to access the irrigation. They were mostly depending on monsoon rains only.

Anonymous (2015) stated that an area under irrigation was almost (18.00 per cent) during 2001 in Maharashtra. Besides this, there is huge variation in gross irrigated area among different regions. The intensity and

frequency of crop failure among rainfed farmers have been more in Maharashtra. During field visit, 165 (25.00 per cent) respondents were reported having irrigation facilities, half of them spent pocket money for digging of wells and bore well. A large number of suicide victim households had irrigation facilities were from district Bhandara, Nasik, Satara, Solapur and Jalgaon.Therefore, extension of irrigation in suicide prone district is essential for giving assurance of income to the farmers‟ in Maharashtra.

Choudhary *et.al.* (2016) revealed that seventy-seven per cent of the farmers in the study had their own land. but most of the land was not irrigated, and was instead rain-fed. The land leased out to this group of farmers was un-irrigated land. Only 13.20 per cent of the farmers' own land was irrigated. About 90 per cent of the leased land was rain-fed.

Manjunatha and Ramappa (2017) stated that irrigation plays a crucial role for sustaining farm incomes. Around 56.00 per cent of the net operated area (1.9 acres per house hold) at aggregate level was irrigated. Ground water accounted for 70.00 per cent of the total irrigated area. Groundwater was the only source of irrigation among victim households of Uttar Pradesh and Haryana. Majority of the area of victim households of Punjab 68.00 per cent and Tamil Nadu 64.00 per cent were dependent on surface water. In Andhra Pradesh and Madhya Pradesh, the area irrigated by ground water and surface water was more or less the same. The victim households mentioned that the recharge capacity of tube well was too low and the surface water source goes dry in the mid of the crop season, resulting in crop failure as they could not get water at crucial stages of the crop growth.

2.1.3.3 Agricultural infrastructure

Kale (2008) reported that the overall scenario regarding availability of infrastructure indicates that, total infrastructure of five components when considered; majority victims' households (96.50 per cent) were come in medium availability infrastructure. While considering individual

components very shocking finding were noted regarding post harvest infrastructure. That the majority 80.50 per cent of the households had low post harvest infrastructure availability. While majority of the households i.e. 84.00 per cent and 74.00 per cent were having medium availability of information and input infrastructure respectively. Over half of the households 55.50 per cent had medium transport infrastructure availability and high credit sources availability was observed in 66.00 per cent households. It indicates that availability of credit sources for obtaining the credit is not the problem to majority of the victims.

Anonymous (2015) stated that roads, electricity, market, warehouses, communication means and processing industries are weak in Maharashtra. Most of the high value crops are perishable and damaged during the travelling. Therefore, wastage of agriculture produces is found more and damaged produce could not get higher prices in market. In the words of national commission of farmers, about 77 per cent of marketing costs are estimated to be avoidable losses during handling, storage and transport. 33 Similarly, absence of competition in the market enables to exploit particularly in Vidarbha and Marathwada.

Manjunatha and Ramappa (2017) stated that victime households complained about non-availability of quality inputs like seeds, fertilizers and plant protection chemicals at right time and at reasonable prices. These are conspicuously visible reasons. Ignorance about periodic soil testing among the farming community, incorrect dosage and method of application of pesticides and fertilizers, unorganized marketing structures, dearth of storage houses are important problems in crop cultivation. In many states, farmers tried to manage crop production with the limited funds available with them, which ultimately results in low returns.

2.1.3.4. Cropping pattern

Hebous and klonner (2014) concluded that the combined causal effect of a poverty shock on suicides in farm households has been positive. Also, a shift from subsistence crops to cash crops, especially cotton, was found to be associated with a decrease in male suicides.

Dandekar and Bhattacharya (2017). conducted study in Yavatmal (major crop being Cotton) in Maharashtra and Sangrur (major crop being Paddy) in Punjab, which have recorded relatively higher farmer suicides reported inappropriate cropping patterns, rising resource costs, aspirational consumption, and the absence of non-farm income in addition to indebtedness as major reasons for farmer suicides.

Manjunatha and Ramappa (2017) revealed that the victim households were cultivating paddy, wheat, maize, jowar and bajra among cereal crops. Important pulse crops were red gram, black gram and green gram. Tobacco, sugarcane, coffee and ginger were the major commercial crops grown by victim house hold. Paddy was also grown during summer in West Bengal. In addition to these crops, there were instances of victim house hold cultivating fruits and vegetables. Cereals constituted 57.00 per cent of the total cropped area, followed by commercial crops 22.00 per cent and oil seeds 10.00 per cent. Remaining area of 11.00 per cent was under pulses, fruits, vegetables and fodder crops.

2.1.3.5 Productivity

Mehta Sanat (2007) reported that the cotton producers of India in 2005-2006 achieved productivity up to 728 kg/ha and achieved export at 47 lakh bales which is four times more than in the previous years.

Mehta, Vinod (2007) stated that agricultural land can not be increased on the contrary there is a pressure on the agricultural land to be diverted to industrial use and in such a scenario we have no option but to

increase production and productivity of agricultural products and this is possible when we provide high quality seed to the farmers, timely credit, better irrigation facilities, better extension services to the farmers, better prices for their produce.

Satish (2007) revealed that adequate infrastructure raises productivity and lowers production costs.

Talati (2007) stated that the state agriculture department recommends the farmers to irrigate wheat at 20 to 22 days interval in heavy textured soil to maximize the wheat productivity. But the increasing power supply cut increases irrigation interval, which lead to lower crop productivity.

From the above review it may thus concluded that the Indian agriculture suffers from low yields per hectare, volatility in production and wide disparities in productivity over regions and crops, the data also suggests that cultivators of all crops had affected. The important reason behind this may that many farmers has low literacy rate and inadequate physical infrastructure, face difficulties in understanding new technologies and therefore, fails to fully exploit technical opportunities. Wild animals add in this problem by damaging the crops frequently those farms had located near forest. Secondly it was also noticed that heavy losses due to crop failure is one of the major reason for taking fateful decision of suicide by the farmers.

Kale (2008) concluded that over 70.00 per cent area were cultivated by taking only rainfed cotton and soybean crops in kharif season, by selected deceased farmers. While due to lack of irrigation facilities very negligible area was observed under Rabi and horticultural crops.

2.1.3.6 Indebtedness

Kale (2008) out of 200 victims 98.50 per cent had found indebted, that mean majority of the victims have an obligation to pay debt to

borrowed agencies / source where as only 3 victims 1.50 per cent were not found indebted.

Anneshi and Gowda (2015) concluded that both small and large farmers borrowed relatively higher proportion of the non-institutional sources as compared to institutional sources. Accessibility to institutional borrowing is relatively higher for large farmers. Similarly, both small and large farmers owed more outstanding debt to non-institutional sources as compared to institutional sources.

Anonymous (2015) stated that more than 90 per cent selected suicide victim farmer's households under the pressure of return either institutional or non institutional loan prior committing suicide. On the other hand, 81 per cent selected suicide victims had indebted during 2010-11. The number of indebted suicide victim households has declined after suicide of head family member because of female head of suicide victim household cannot applied for institutional loan and money lenders are taken precaution when providing loans to these households.

Sonawane (2016) observed that some time existing social structure added by agricultural distress make the situation much worse. Rural farmers often become burdened with over debt. The farmers are indebted because of low income the farmers have to face many social and financial problems. Sometimes farmers have to work as tenant which is not sufficient to lead their life and aggrieved when they become unable to arrange dowry for daughter and sisters marriage much expenditure than income daily dispute in family inability to fulfill requirement of family members lead to farmer's suicide.

Choudhary *et.al. (*2016) revealed that 33.00 per cent of the farmers depended on local moneylenders for finance. Banks 13.00 per cent and co-operatives 17.00 per cent accounted for 30.00 per cent of the farmers' loan requirements. Only 11.00 per cent of the sample farmers did not borrow. Self

help group provided loans to 8.00 per cent of the farmers; 6.00 per cent of the farmers had also borrowed from micro-finance institutions. Advance against the crop to or the assurance to migrate accounted for 4.00 per cent of farmers' funding credit requirements. Relatives and the neighbours accounted for 4.00 per cent of the loans and they did not charge any interest for this. Many of the farmers had borrowed from multiple sources.

Manjunatha and Ramappa (2017) revealed that a fair majority of farming community consists of marginal and small farmers who starve for funds to take up cultivation activities. Under such situations, they approach credit institutions to avail loan. But during the events of crop failure or price crash, repaying the amount borrowed will not be possible. Recurrence of rain failure, occurrence of pest and diseases, high cost of inputs, unavailability of agricultural inputs at right time and low price drives farmers to debttrap situation. Indebtedness has been identified as a major reason for farmer suicides.

2.1.3.7 Livelihood pattern

Khan (2007) reported that 60.00 per cent of the country's population depending on agriculture for their breed and butter.

Mehta Sanat (2007) stated that in India 23 crore peoples whose livelihood is agriculture.

Mehta (2007) stated that 65.00 per cent of the population in India is still dependent on agriculture for livelihood.

Swaminathan (2007) stated that 70.00 per cent of our population still rural with farming as the principal source of livelihood. From the review it is concluded that the agricultural sector still continued to remain an important sector for rural employment. Nearly 60.00 per cent of the workforce still engaged in agriculture either as cultivators or agricultural labourers. This had been mainly due to limited alternative job opportunities outside agriculture.

These review also clearly concluded that in Maharashtra, farmers are in economic distress as the income that they get from all sources is not even enough to meet the consumption expenditure of the households that means their livelihood is not sustainable hence they largely depend on loans.

Kale (2008) observed that overall agriculture is the main livelihood source of all the selected victims and contributing two third 66.29 per cent share in their total annual income. Followed by 70.50 per cent deceased farmers and his households were depended on wages earning in addition to cultivation of his own farms and having more than one fourth 25.02 per cent contribution in total income.

Manjunatha and Ramappa (2017) stated that the average income realized per house hold was Rs.73,142.00 of which, 72.00 per cent was derived from agriculture and allied activities. The average expenditure incurred was Rs.59,868.00 of which, 50.00 per cent was spent on food and remaining on non-food items. Overall, Rs.13,274.00 was the surplus amount realized after accounting for expenditure which is just above poverty line income.

2.1.3.8 Extent of family responsibility fulfilled

Mishra (2006) reported that 34.20 per cent victims have the responsibility of marriage of his daughter/sister and 3.60 per cent have the responsibility of taking care of sick family members.

Kale (2008) observed that extent of family responsibilities fulfilled by the victims and their ability to fulfill the hold the selected six major type of family responsibilities namely children's education, daughters/sister marriages, health treatment of family members, rituals after death in family, male children’s marriages and to perform the responsibility of widow / divorced / disputed daughter or sister in family has been studied and the results of the distributional analysis related to extent of fulfillment and ability to perform the hold responsibilities leads to summarized that sizeable group of the

victims has hold the responsibilities of children's education, daughter / sister marriages and health treatment of family members. It also indicated that out of the 77 (38.50 per cent) victims those who hold the responsibility of daughter/ sister marriages in family, majority of them 60 (77.92 %) was found unable to perform the responsibility of daughter/ sister marriages in family, even though 33 (42.86 %) victims had fulfilled this responsibility to a very great extent (completely). That means they have definitely done the arrangement of some financial adjustment from others for fulfilling the obligation of marriages in family. Whereas 50 (25.00 %) victims hold the responsibility of health treatment of family members, out of them only negligible 3 (6.00 %) victims had fulfilled it to a very great extent because majority of them was found partially able 60.00 % and unable 34.00 % to fulfill the responsibility of health treatment of family members.

2.2.4 Socio-psychological characteristics

In socio-psychological characteristics victim's habits, victim's health, family health and family disputes were considered for the present study.

2.1.4.1 Victims Habits

Joshi (2007) reported that tobacco used in any form like cigarettes, beedies or chewing tobacco is dangerous but is very common in Indians. Cigarette smoke contains about 4000 poisions (like nicotine tar, carbon monoxide) which lead to heart attacks, paralytic strokes, lung diseases and cancers, About 1 in 10 deaths are tobacco related and it is considered to be the most important preventable cause of death. Chewing tobacco is very dangerous and can causes cancers and heart attacks. About 30.00 per cent of men smoke cigarettes or beedis while 55per cent of rural men in India chew tobacco.

Reddy (2007) revealed that the prevalence of tobacco use is 30.00 per cent for India, which increases to 44.00 per cent for above 65 years. One out of every 10 males consumed alcohol for more than two days in the previous

week, while 78.00 per cent of the respondent reported insufficient intake of fruits and vegetables. Review concluded that 20.00 to 28.00 per cent cases various in habits like alcohol, gambling, spendthrift had found the one of the reason of suicides. The review also shows that alcohol and other substances use disorder are the some identified risk factors associated with an increased risk for suicide. While various bad habits can causes different type of diseases. Psychological autopsy studies clear that alcohol abuse or dependence has present in 25.00 per cent to 50.00 per cent cases those who died by suicide.

Kale (2008) reported that more than two third 70.50 per cent deceased farmers were possessed either one or more bad habits with them, like chewing of tobacco, smoking, alcohol addiction or gambling. Whereas 29.50 per cent were free from bad habits. The detailed information about bad habit behaviours of the selected victims revealed that relatively higher proportion 44.50 per cent of the deceased farmers possessed regular tobacco-chewing habit, followed by 42.00 per cent having regular alcohol drinking habit. While 23.00 per cent victims were observed under smoking habits. Out of this majority 21.00 per cent being smoke bidies and meager per cent likely to smoke cigarettes 01.00 per cent and ganja 01.00 per cent. Whereas 4.00 per cent deceased farmers were playing jugar/satta. It was also observed that majority alcohol addicted victims also possessed additional likening of tobacco through chewing or smoking.

Anonymous (2015) stated that addiction of Alcohol, Bidi and Tobacco has found more among suicide victims. Addiction of alcohol is found among almost (28.00 per cent) suicide victims. However, more than (30.00 %) suicide victims had addiction of alcohol in districts Bhandara 14 (35.90 %), Wardha 17 (34.70 %), Thane 1 (33.30 %), Buldhana 19 (31.10 %) and lowest in district Satara (7.10 %). An addiction of alcohol creates dispute among family member, increases unproductive expenses, create health issues on one hand, and absence of productive work on the other hand. It leads to economic distress.

Anonymous (2016) stated that total of 170 out of 330 suicides committed by farmers / cultivators due to 'Drug Abuse/Alcoholic Addiction' were reported in Maharashtra alone, accounting for 51.50 per cent of total such suicides during 2015.

2.1.4.2 Victims' health

Marwah. (2007) reported that the long term complications of diabetes can include blindness, kidney damage, heart disease, stroke, can cause impotency in men and finally distress. From these review it is clear that the physical illness has been an important contributing factor in 10.00 to 51.00 per cent of all suicides cases. The risk for suicide is 3 to 12 times greater in psychiatric illness patients than that of non-patients. Ill-health person unable to use various opportunities in his life and hence this can be contributing / interrelating factor with so many other risk factors of suicide.

Kale (2008) reported that the personal health problem was noted in 19.00 per cent deceased farmers, those who committed suicide in six districts of Vidarbha. While majority 81.00 per cent were free from health problems. It was also observed that illness gets aggravated in majority of the victims due to poor economic condition, because it makes care seeking difficult and leads to again financial adjustment to meet medical expenses.

Anonymous (2016) stated that majority of suicides committed by farmers/cultivators due to 'Illness' were reported in Chhattisgarh (223 suicides), Maharashtra (214 suicides), Telangana (160 suicides) and Madhya Pradesh (150 suicides) during 2015.

Manjunatha and ramappa (2017) stated that illness 18 per cent was major common cause reported by victims house hold in all sample state.

2.1.4.3 Family health

Anonymous (2007) stated that a regular drunker farmers of 30 years old from village Adegaon (Chimur, Vidarbha) committed suicide by hanging. The farmers become a regular drunker after the death of his tow daughters, who died of ailments (an illness) within month. From these review it can be concluded that ill health of other family members had been proved as one of the risk factors of suicide in certain cases.

Kale (2008) reported that 25.00 per cent victims, ill health of their family were noticed as one of the additional risk factor of suicide, ill health of family members may create financial problems for family head to take appropriate care due to poor economic condition. That leads again financial adjustment or to take loan from informal agencies. If family head unable to take appropriate care that leads again frustration. Hence this was also an important additional cause of suicide in Vidarbha Region.

2.1.4.4 Family disputes

Kale (2008) revealed that out of the 32 victims, 20 victims (62.50 %) dispute/ quarrel were noticed with his spouse due to domestic reasons. This was followed by quarrel with daughter in law (son) in 4 victims (12.50 %), with his son in 2 victims (06.25 %), with brother in 1 victim (03.12 %) and quarrel/ dispute with all family members was the evident in 5 victims (15.63 %) due to domestic reasons only. It was also noted that for creation of family disputes/ quarrel alcoholic tendency of the deceased farmers was responsible in (50.00 %) cases**.**

Anonymous (2015) stated that family dispute among the members of family has been also found immediate cause of farmer's suicide among selected suicide victim. This dispute may be caused by addiction of alcohol, economic distress, love affairs and social stigma. The 91 (14.00 %)

respondents reported family dispute was the immediate cause of suicide of family member of selected suicide victim.

2.2 Dependent variable

2.2.1 Socio-psycho Risk Factors of Suicide

Deshmukh *et al*. (2007) identified 25 reasons that were forcing the farmers to commit suicides in Vidarbha region. Out of 25 reasons, the 53.00 to 58.00 % farmers committed suicides due to deterioration of economic condition; continuous crop failure and improper and unstable price for their produce are the prime factors forcing the farmers to commit suicides. It is followed by bank loan, high cost technology, marriage expenditure and family expenditure.

Anonymous (2008) reported that due to no children after fifteen years of marriage, a distress couple had committed suicide in Akola district of Maharashrta. It is clear that suicide is not a blind or pointless act, certain socio-economic, psychological, situational risk factors associated with the individuals those who committed suicide.

Behere and Behere (2008) reported that various factors like chronic indebtedness, inability to pay interest over years, economic decline grain drain, rising costs of agricultural inputs and falling prices of agricultural produce lead to family disputes, depression and alcoholism, etc., were eventually responsible for suicides among the farmers. It was also seen that compensation post-suicide helped the family to repay debt. They also opined that the causes are multifactorial, cumulative, repetitive and progressive, leading an individual to a state of helplessness, worthlessness and hopelessness, obviously influenced by his social strengths and weaknesses along with his mental health status.

Kale (2008) reported that distributional analysis of selected victims according to their identified socio psychological risk factors of suicide

showed that total 22 socio psychological risk factors were associated with the selected deceased farmers, those who committed suicide. A number of risks factors can coexist and one particular individual can come across all or none of the risk factors identified by the researcher. In selected sample, the minimum number of risk factors is one and the maximum is ten. The identified risk factors have been presented in a descending order based on frequency of their occurrence in total sample.

Manjunatha and Ramappa (2017) reported that drug/alcoholic addiction (26.00 %), Illness (18.00 %), fall in Social reputation (17.00 %), family quarrel (16.00 %), daughter's marriage (11.00 %) and extra-marital affair (08.00 %) are the major social causes opined by victim house hold across 13 sample states. Drug/Alcoholic addiction and Illness was common major cause reported by victim house hold in all the sample states. Fall in social reputation was reported as one of the main cause for suicide by all the sample states except U.P.

2.3 Consequences after victims suicide faced by victims families

Kale (2008) reported that in over one fourth 25.50 per cent victims' households poor economic condition compel their children's leave the school and go for wages earning for sharing the consumption expenditure of family. In 09.00 per cent cases after death of husband in younger age, widow spouse of victim had left the victims' home and went to live with support of his father and mother (Parents). Impediments of marriages of family members was reported in 05.50 per cent cases while very less proportions of families 03.50 per cent children's were send to live with relatives either for education or for wages earning.

Manjunatha and Ramappa (2017) reported that insecurity in the family (33.00 per cent) and family members under depression 25.00 per cent were among the major impacts opined by victim house hold across states. Insecurity in the family was opined majorly in Tamil Nadu 87.00 per cent,

West Bengal 77.00 per cent and Telangana 58.00 per cent, whereas family members under depression were opined in Tamil Nadu 90 .00 per cent and West Bengal 80.00 per cent.

2.3 Suggestions for avoiding farmer's suicides

Deshmukh *et al*. (2007) stated the different measures suggested by farmers' families to stop the farmer's suicide in Vidarbha region. The 93.00 per cent families suggested that the farmers should get proper and stable price to their produce, 87.00 per cent families said to exempt the outstanding loan, 68.00 per cent farmers' families said that government should provide loan at low interest rate, 49.00 per cent suggested for creation of irrigation infrastructure, all these were the some important suggestions give by the victims' households.

Anonymous (2007a) reported that low cost and high yielding organic farming holds promise in checking farmers' suicides in Vidarbha said Barnaditya Scherer, a scholar on organic farming from Switzerland.

Anonymous (2007b) reported that mass marriages are a need of the time and it should be made into a social movement. Farmers should be participating in mass marriages and curtailed down the unnecessary expenditure on traditional marriage.

Anonymous (2007c) reported that contract farming can play a pivotal role in economic development of Vidarbha as it has several farmers beneficial features like assured market with remunerative prices, prompt payment, availability of better inputs, high yield, training etc. If farmers could make contracts, under contract farming uncertainties about produce prices can be eliminated.

Kale (2008) reported that sizeable family members of the deceased farmers suggested for complete ban on alcohol and gambling 31.00 per cent, family counseling for increasing self-confidence through local

leaders/ social workers 31.00 per cent, abundant electric supply for farming 30.00 per cent, complete waiving of old loans 29.00 per cent, provision of easy, timely and sufficient credit at low interest rate 27.50 per cent, creation of subsidiary occupations and other income sources 22.50 per cent, crop insurance 16.00 per cent, availability of information about agricultural technology 15.00 per cent, mass marriages system should be encourage in society 14.00 per cent, timely employment by creating non-farm employment opportunities 13.00 per cent, strict vigil on the quality of inputs in the market 10.00 per cent, immediate government helps in natural calamities and in losses by wild animals 10.00 per cent, and compensation of rupees one lakh should have to be stopped 02.00 per cent were the measures suggested by family members of the deceased farmers to solve farmers' distress in Vidarbha region.

Manjunatha and Ramappa (2017) reported that the most prominent suggestions offered by the victim households to prevent farmer suicides across states were: (i) Counseling, (ii) Provision of credit facilities, (iii) Crop Insurance and compensation during crop failure, (iv) Creation of irrigation facilities, (v) Creation of alternative income generating activities, (vi) Extension activities, (vii) Increasing MSP (minimum support price) or extending the MSP to crops for which it is not there and (viii) supply of quality inputs at subsidized rates.

CHAPTER-III

METHODOLOGY

CHAPTER III

METHODOLOGY

Research methodology deals with description of research method and techniques. For sound research, the research has to take support of various research method, technique and tools. The research during course of investigation has to develop different measurement and qualification, so that he can make use of it and put forth the efforts in that direction. The same has been discussed with relevant details under the following section.

3.1 Locale of study

3.2 Research design

3.3 Sample and sampling procedure

3.4 Preparation of interview schedule and data collection

3.5 Variable, their measurement and categorization

3.6 Statistical analysis

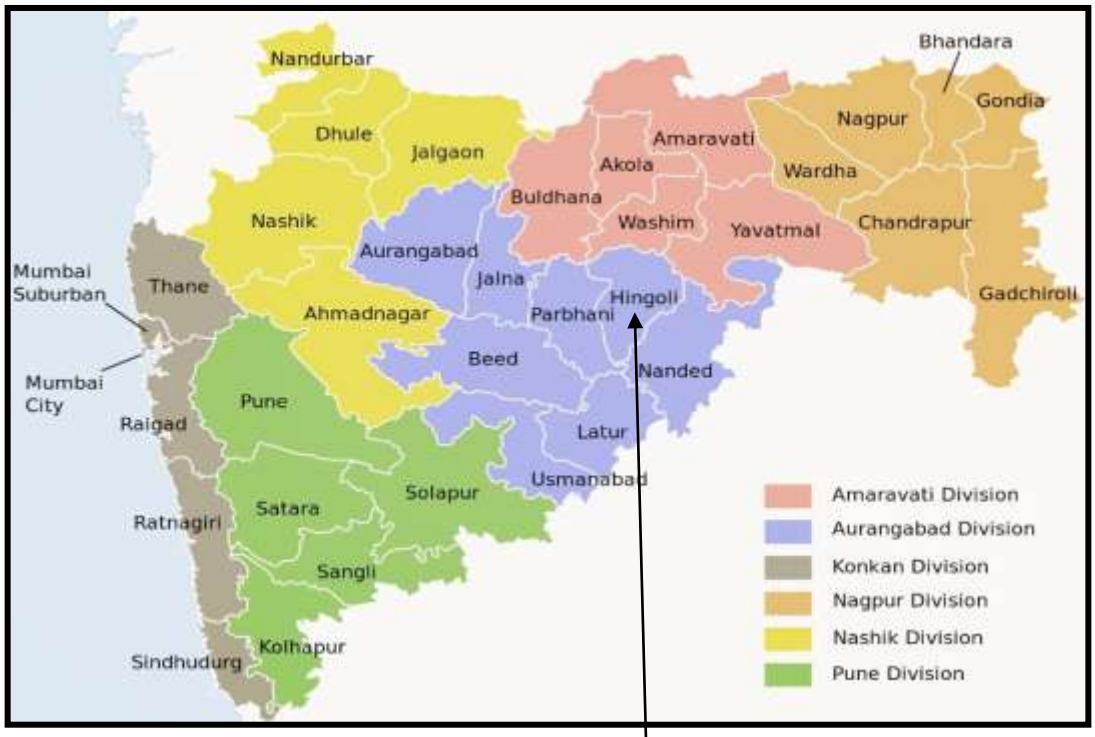
3.1 Locale of the study

This study was conducted Hingoli district of Marathwada region of maharashtra state. It borders the district of Parbhani, Nanded, Yawatmal, Washim, Jalna. The total geographic area of Hingoli is 4,526 sq.kms. It position on world map lies between 19.72° North latitude and 77.15° East longitude.

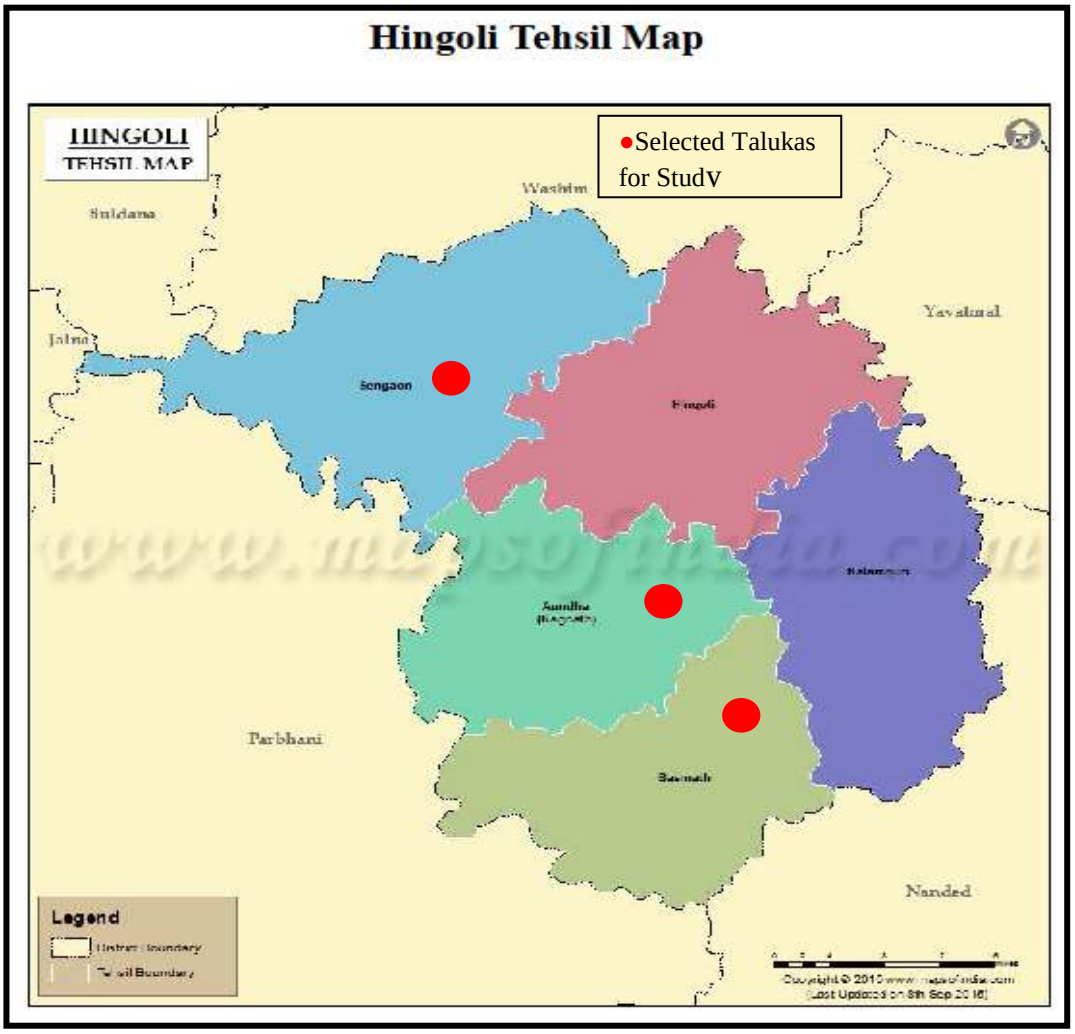
3.2 Research Design

The present study was based on Ex-post facto design of social research. Ex-post facto means “from what is done afterwards” In the context of research it means “after the fact” or “retrospectively” and refers those studies

which investigate possible cause and relationship by observing an existing condition or state of affairs and searching back in time of plausible causal factors. Ex-facto research, this is a method of teasing antecedent of events that have happened and cannot, therefore be manipulated by the investigator.



Hingoli Tehsil Map



3.3 Sample and sampling plan

The sample and sampling procedure to be adopted for this research study was given below;

3.3.1 Selection of district

Out of eight districts from the Marathwada region. The present study was conducted in Hingoli district for the study based on considerable (purposively) suicide cases of the farmers in the district.

3.3.2 Selection of talukas

The present study was conducted in two talukas namely Shengaon, Vasmat and Aundha from Hingoli district of Marathwada region based on considerable (purposively) farmer suicide cases.

3.3.3 Selection of Villages

Twenty six villages were selected randomly from three talukas of Hingoli district based on considerable (purposively) suicide cases of the farmers. The list of villages along with no. of victims is presented in Annexure –II.

3.3.4 Selection of the victims

In this study respondents were the households of selected randomly victim those who committed suicide during 1st January 2015 to 31st December 2017 and had declared as a legal victims by district level committee headed by Collector of the Hingoli district, for allotting compensation of Rs. 1 lakh and had got Rs. 1 lakh compensation. The time period 1st January 2015 to 31st December 2017 was selected purposively as in this period maximum number of suicides were occurred in Hingoli districts of Marathwada.

Before sampling researcher had contacted personally to the Collector Offices of Hingoli district and obtained the complete list of farmers those who committed suicide during 1st January 2015 to 31st December 2017. In all, there were 124 total suicide cases in Hingoli district, out of which 103 cases were declared as legal victims. From the list of 103 legal suicide cases, researcher had selected 40 victims randomly. Name of selected victims along with their village and talukas presented in Annexure III.

3.4.1 Development of interview schedule

Interview schedule was prepared as per the objectives set in for the investigation. Every case regarding construction of statement, purpose, content and sequence was considered while preparing the interview schedule. In first part of the interview schedule questions related to primary information, personal, socio-economic, situational and socio-psychological variables were included and in second part, questions related to socio-psycho risk factors of suicide consequences and suggestion for avoiding suicides were included. (i.e. Causes of suicides)

3.4. Collection of data

As suicide is a sensitive social issue and thus the investigation has to be made with very guarded and careful manner, and without hurting the sentiments of the family. Data were collected by personal interview method with the help of structured interview schedule. Interview was conducted at residence of victims so as to review over all situation of the family by researcher. In addition to personal interview, observations, discussions with family members and key informants of the respective village such as *Police Patil, Sarpanch, local leaders, other farmers* etc and also reviewing victims' actual records of institutional debts etc. were some used for data collection.

Survey Photos

Survey Photos

The data collection from those households who lost their family head or member was a very difficult and challenging task were performed by the researcher during the second week of February 2018. While collecting information /data, researcher first collected all general information and lastly turns toward some specific responses. Total 40 victims households were interviewed from 26 villages of three tahashils in Hingoli district.

3.4.4 Editing of Interview Schedule

Information obtained through the interview, observations, discussions, and actual records of institutional debts was filled in the schedule. Entries were checked for completeness, consistency, uniformity and legibility immediately after the work of the day was over.

3.5 Variables, their empirical measurement and categorization

Sr. No.	Variables	Empirical Measurements
A.	**Independent variables**	
1.	Age	Chronological age of the suicide farmer at the time of committed suicide
2.	Education	Formal education of the victims
3.	Caste	Classification as per Government of Maharashtra.
4.	Family type	Victims belong to nuclear or joint family
5.	Family size	Scale developed by Bawajir (1994)
6.	Farming experience	Numbers of years spent by the victims in actual farming.
7.	Land holding	Classification as per government of Maharashtra
8.	Subsidiary occupation	Scale developed by used Thakare (2004) was used
9.	Annual income	Total annual income of victims in rupees from all sources in a year
10.	Socio-economic status	Scale developed by Thakare (2004)
11.	Type of land (soil)	Quality of land possessed by the respondents
12.	Irrigation facilities	Schedule was developed
13.	Agriculture infrastructure	Schedule was developed
14.	Productivity	Schedule was developed
15.	Cropping pattern	Scale developed by Nirban (2004) was used
16.	Indebtedness	Schedule was developed
17.	Livelihood pattern	Schedule was developed

18.	Extent of family responsibility fulfilled	Schedule was developed
19.	Victims habbits	Schedule was developed
20.	Victim health	Schedule was developed
21.	Family health	Schedule was developed
22.	Family disputes	Schedule was developed
B.	**Dependent variable**	
1.	Socio-psycho risk factor of suicide	Schedule was developed

3.5.1 Independent variables

The important personal, socio-economical, psychological and situational characteristics of victims and his households were considered as the independent variables in the present study. These variables were quantified as below.

3.5.1.1 Personal characteristics

3.5.1.1.1 Age

The 'age' was conceptually defined as the chronological age of an individual in completed years. In current study, age was operationally defined as chronological age of the suicide farmer in completed years at the time when he/she committed suicide.

For relational analysis, actual age in years was considered as score. Categorization of selected victims according to their age was done as follows.

Sr. No.	Category	Age
1	Young	Up to 34
2	Middle	35 to 46
3.	Old	47 and Above
Mean= 46		**S.D.=12**

3.5.1.1.1 Education

Operationally, education was defined as formal schooling standard passed by the victim from primary school to University Degree. Number of classes passed by the suicide farmer was considered as his/her educational score, and was used for relational analysis. Categorization on the basis of educational level of the selected victims was done as follows;

Sr. No.	Educational level	Score
1	Illiterate	0
2	Primary school (1^{st} to 4^{th} std)	1
3	Middle School (5^{th} to 8^{th} std)	2
4	High School (8^{th} to 10^{th} std.)	3
5	Higher secondary School (11^{th} to 12^{th} std.)	4
6	Graduation (level UG)	5
7	Post graduation	6

3.5.1.1.3 Caste

Caste is the hereditary ascribed class of the victims. The victims were grouped into following caste categories as per Government of Maharashtra. For relational analysis one to nine score was assigned as given below, as per the chronological sequence of each caste category for reservations in the state, as mentioned in government resolution;

Sr. No.	Caste category	Score
1	Schedule Caste (SC)	1
2	Schedule Tribe (ST)	2
3	Vimukta Jati (VJ-A)	3
4	Nomadic Tribe (NT-B)	4
5	Nomadic Tribe (NT-C)	5
6	Nomadic Tribe (NT-D)	6
7	Other Backward Classes (OBC)	7
8	Special Backward Class (SBC)	8
9	Open	9

3.5.1.1.4 Family Type

In the present study, it refers to whether the victim was a member of individual/nuclear family or joint family. The following score was given to each category.

Sr. No	Family Type	Score
1	Nuclear	1
2	Joint	2

3.5.1.1.5 Family Size

It refers the actual number of members living in a family. In the present study, family size was decided according to the number of family members in the family including the victim. The scoring procedure and categorization developed by Bawajir (1994) was used.

Sr. No.	Family Size	Family members
1	Small	Up to 3
2	Medium	4 to 6
3	Large	7 to 9
4	Very large	10 and Above

3.5.1.1.6 Farming Experience

The farming experience refers the number of years from which the victim was engaged in farming and was considered as his score. The selected victim was categorized on the basis of Mean ± S.D as below.

Sr. No.	Category	Farming experience in years
1	Low	Up to 17
2	Medium	18 to 29
3	High	30 and Above
Mean = 29		**S.D.= 11**

3.5.1. 2 Socio-economic Characteristics

3.5.1.2.1 Land Holding

Conceptually, land holding is the actual hectare of land possessed by the individual. Total hectare of land possessed by the victim's household was considered. The victims are grouped in five categories according to standard classification made by Government of Maharashtra as follows;

Sr. No.	Land holding	Land in ha.
1	Marginal	Up to 1.00 ha.
2	Small	1.01 to 2.00 ha.
3	Semi-medium	2.01 to 4.00 ha
4	Medium	4.01 to 10.00 ha
5	Large	10.01 and above

3.5.1.2.2 Subsidiary Occupation

It refers the sub occupation of the victim and his households in addition to agriculture for getting additional source of income. The categorization and scoring procedure developed by Thakare (2004) was used for the study.

Sr.No.	Subsidiary Occupation level	Score
1	Agriculture + Labour	2
2	Agriculture (Farming)	3
3	Agriculture + allied occupation(Goat farming)	4
4	Agriculture + Business (Professional/ Non Professional)	5
5	Agriculture + Service (Job with monthly salary/pension)	6

3.5.1.2.3 Annual Income

Conceptually, it refers the gross annual income of the respondents from all available sources. Operationally, in present study gross income in rupees received by the victim and his family members, from all sources during previous year of suicide were considered. For further analysis, the actual income earned by the victim and his family members from all sources was considered as score. The categorization of the selected victims on the basis of their annual income has been done as follows.

Sr.No.	Income per Annum (Rs.)
1	Low (Upto 16,172)
2	Medium (16,173 to 2,13,253)
3	High (2,13,254 and Above)
Mean =1,14,712	**S.D.=98,540**

3.5.1.2.4 Socio-Economic Status

Socio-economic status is the position of an individual occupies with reference to the prevailing average standard or cultural positions, effective income, material position and participation in-group activities of the community.

Scale developed and standardized by Thakare (2004) was used for measurement of socio-economic status. Categorization has been done on the basis of total weighted Socio Economic Status score obtained as follows.

Sr. No.	Socio-economic status	Score range
2	Low	Up to 8.37
3	Medim	8.38 to 14.67
5	High	14.68 and Above
Mean = 9		**S.D.= 4**

3.5.1.3 Situational Characteristics

3.5.1.3.1 Type of Land (soil)

Conceptually, it refers to the quality of land (soil) possessed by the respondent. Operationally type of land defined as soil status of an individual victims' farm and classified as light, medium and heavy soil. Categorization and scoring was done on the basis of type of land (soil) has given below.

Sr. No.	Status of soil	Score
1	Light	1
2	Medium	2
3	Heavy	3

3.5.1.3.2 Irrigation Facilities

It refers to the sources of irrigation available such as well, tube well, canal, river *etc*. were available to victim. The categorization and scoring procedure was used as below.

Sr. No.	Sources of irrigation	Score
1.	No source	0
2.	Dam/K.T.Embankment	1
3.	Canal	2
4.	Farm Pond	3
5.	Well /Tube Well	4
6.	Lake	5
7.	River	6

3.5.1.3.3 Agriculture Infrastructure

In present study, five important basic indicators of agricultural infrastructure were selected for study. These are input , credit sources, information sources, transport facilities and post harvest infrastructure facilities. Hence operationally agricultural infrastructure refers the various input, credit, information, transport and post harvest amenities available to victim and his household for his farming operations with them and in his village or near by vicinity. For measurement of Agricultural infrastructure, a suitable compact schedule was developed and responses obtained as adequate, inadequate and not available. The scoring was given as 3, 2 and 1, respectively.

In input infrastructure, 14 items were selected related to availability of inputs, sources of credits includes 4 items, information infrastructure includes 12 items, transport facilities included 7 items and under post harvest infrastructure 6 items were selected. Thus for agriculture infrastructure includes total 43 items under 5 indicators. Hence, the minimum score of an individual may be 43 and maximum score will be 129. The sum of score of all items of the agriculture infrastructure administered to the household was computed which indicated the agriculture infrastructure score for particular

selected victim household. The infrastructure raw score such obtained was converted into index for the above 5 indicators separately and also in aggregate form, with the help of following formula.

$$\text{Agriculture Infrastructure Availability Index (AIAI)} = \frac{\text{Obtained infrastructure availability score}}{\text{Obtainable infrastructure availability score}} \times 100$$

On the basis of equal interval of the agriculture infrastructure availability index, the house hold were categorized as follow;

Sr. No.	Agricultural infrastructure	Index range
1.	Low	Up to 33.33
2.	Medium	33.34 to 66.66
3.	High	66.67 and Above

3.5.1.3.4 Productivity

Conceptually, productivity is per hectare yield of crops. Productivity is one of the important variable in this study because it contribute directly to gross income of the farmer and it was assume that the most of victims having low productivity or crop failure during previous subsequent year due to vagarious of nature hence it is taken for study.

In this study operationally productivity was defined as per hectare yield of major crops, taken by victim and his households during last three

subsequent years. For measurement of productivity, the actual area of land put by households under different *kharif, rabi* and summer crops (including irrigated and rainfed area) and their obtained yield in qts./ha. was considered. The average productivity of the different crops in qts./ha. has been presented. For relational analysis this variable has not considered because not a single crop was found similar towards the cent percent selected respondents.

3.5.1.3.5 Cropping pattern

It refers to the crop grown by respondents in *kharif, rabi* and summer season, as well as annual and perennial crops. The procedure followed by Nirban (2004) was used to measure the cropping pattern. One score was given for growing the crops in each of three seasons, while four score was given for annual crops grown and five score was given for perennial crops grown by the respondents.

3.5.1.3.6 Indebtedness

Operationally, indebtedness was defined as the total outstanding debt amount of institutional and non-institutional credit sources towards the victim and his households at the time when he/she has committed suicide. For further relational analysis, total outstanding debts amount in rupees towards the victim and his households was considered as score of indebtedness. The categorization of the respondent's household on the basis of Mean ± S.D. as below.

Category	**Amount of debts in Rs.**
Low	Up to 2009
Medium	2010 to 3,63,163
High	3,63,164 and above
Mean = 1,80,577	**S.D.= 1,82,586**

In addition to above categorization, the outstanding debt amount across relative share of different sources in total debt and defaulter positions of victims was also been probed out.

3.5.1.3.7. Livelihood Pattern

Conceptually, livelihood defines the means of living or sustenance of an individual. Operationally in this study livelihood pattern of the victim and his household was refers to engagement of the victim and his household in different livelihood source or occupation or employment and income generated through it. The annual income of household from all sources and his annual expenditure on various items has been considered.

Annual income from all sources like crop cultivation, allied occupations, wages earning, non-professional/traditional business, service/pension and other sources, of all victims and his household and their annual expenditure on different items like, food, clothing, housing, education, health, travelling, lighting, religious functions, crop cultivation, taxes and other items have been considered. The distribution of the selected victims and his households has been done on the basis of the actual livelihood sources with their income and expenditure pattern on various items.

3.5.1.3.8 Extent of Family Responsibility Fulfilled

Conceptually, extent of family responsibilities fulfilled was defined as extent to which the individual has fulfilled the family responsibilities he holds. In present study extent of family responsibilities fulfilled was operationally defined as the extent to which the respondent victim had fulfilled various responsibilities of his family members, since from last five years. For measuring extent of family responsibility fulfilled by an individual victim, the six major type of family responsibilities namely, children's/brother’s education, daughters/sisters

marriages, health treatment of family members, rituals after death in family, male children's marriages, to perform the responsibility of widow/divorced/disputed daughter or sister in family were selected. According to the family responsibilities hold, the extent of fulfillment was ascertained on five-point continuum as not at all, to little extent, to some extent, to a great extent and to a very great extent. And the numerical scores one to five was assigned respectively. The score obtained by each victim for all responsibilities were summed up and were considered as extent of family responsibilities fulfillment score of victim. Distribution of the victims has been done according to the respective responsibilities holds and their extent of fulfillment.

In addition to the extent of family responsibilities fulfilled by the victim, his ability of performance in line of fulfilling above-mentioned responsibilities has also been ascertained on three-point continuum as unable, able to fulfill partially and able to fulfill completely. Distribution of the victims has been done according to the respective responsibilities hold and their ability to perform the family responsibilities.

3.5.1.4 Socio-psychological characteristics

3.5.1.4.1 Victim's Habits

Operationally in the present study, existence of any addiction with suicide farmers were noted like chewing of tobacco, smoking, drug addiction (particularly alcoholism), gambling *etc*. For existence of each addiction one score was allotted. Thus according to the total number of addiction with each victim has been considered as, his score of habits and used for further relational analysis. Distribution of selected victims was done according to the presence or absence of addiction.

3.5.1.4.2 Victim's Health

Operationally victim's health indicates the health status of suicide farmer during last five years before incidence. Here any obvious existence of chronic disease with victim has been noted, due to which victim was not functioning normally. The responses about victim's health were collected from family members. For existence of every disease one score was allotted. Thus total number of diseases with victims indicates the total score of victim's health. Total obtained score of an individual victim was used for further relational analysis. Distribution of selected victims was done according to the presence or absence of health problem with them.

3.5.1.4.3 Family Health

Operationally family health indicates the health status of victim's households during last 5 years before incidence. Here any obvious existence of chronic disease/ handicap like handicap by birth / accidents, cancer, leprosy, HIV infection, cardiac disorders, asthma, genetic disorder, liver/ kidney problem, tuberculosis, diabetes, mentally ill *etc*. with victim's households has been noted. For existing of every disease, one score was allotted for each sick family member. According to number of sick family member and number of diseases with them, total score was calculated and used as a family health score of the respective victim. Distribution of selected victims was done according to presence or absence of health problem with their family members.

3.5.1.4.4 Family Disputes

Operationally family dispute indicates the presence of any dispute/ quarrel between victim and their family members due to which family relations were breakdown. The responses regarding any presence of dispute of victim, with their member of households from last 5 years has been listed and for existence of

every dispute with every member one score has been given. Thus according to presence of dispute/ quarrel between victim and their family members, total score was calculated and used as a family dispute score of the respective victim. Distribution of selected victims was done according to the presence or absence of dispute / quarrel with family members.

3.5.2 Dependent variable

The dependent variable of the present study is 'Socio-psycho risk causes of suicide which is measured as follows.

3.5.2.1 Socio-psycho Risk Factors of Suicide

In present study of farmers' suicide it was assumed that those who have committed suicide in Hingoli district, their social and psychological web was not sustainable. They may have many social and psychological problems. These problems may have created an adverse impact on their well being and impair the quality of life.

Operationally, Socio-psycho Risk Factors of Suicide refers the aggregation of different socio-psychological risk factors / circumstances coexisted with an individual victim externally since from during last five years of incidence. For identification of different socio-psychological risk factors with an individual victim, a comprehensive schedule will developed with the help of review of literature, resource material available related to assessment of suicide risk (Jacob 2010), experts in the fields of Extension Education and professionals in the field of Psychiatry. After development of schedule responses will collected from the family members with detail discussion on time line historical perspectives of the victim, neighbours, key informants, by making group discussions with other farmers of that village and by self observations made by researcher and identified different socio-psychological risk factors that are associated with an individual

victim externally. For every identified risk factor one score was allotted. Thus according to total risk factors identified with each victim that indicate the total socio-psycho risk factor score of victim.

3.6 Consequences

Conceptually consequences defined the result or effect of an action. Operationally in present study of farmers' suicide consequences refers to the changes that occurred within the family after suicidal death of family head or victim farmer in due course of time

The changes occurred within family and that also recognized by the family members has been ascertained. While discussing the issue, with victim's households, the different consequences that are presented by family members and also probed by researcher are collected and noted in interview schedule time to time before forgetting the things or leaving the place.

The noted consequences have been presented under different heads as per their occurrence in family.

3.7 Suggestions

Suggestions refer the opinion of family members about what action should have to be taken for avoiding suicides were considered. The responses of the households have noted and their frequencies and percentage were worked out.

3.8 Statistical analysis

The data were computed and processed and the established parameters like percentage, frequency, mean, standard deviation and coefficient of correlation analysis were used as per requirement.

Percentage

Percentage was used in descriptive analysis of data for making simple comparison.

Frequency

Frequency distribution is a series when a number of observation with similar or closely related value are put in separate bunches or group each group being in order of magnitude in a series.

1. Arithmetic mean (X)

It was calculated by summing all the score and dividing it by number of respondents.

$$X = \frac{\sum X}{N}$$

Where,

X = Arithmetic mean

∑X = Sum of respondent score

N = Number of respondents

2. Standard deviation

The standard deviation is found by taking the difference of each item in the series from arithmetic mean, squaring this difference, summing the all

squaring difference and dividing by the no of item and lastly calculating the square root of the product by using following formula.

$$S.D. = \frac{\Sigma X^2}{N}$$

Where,

S.D. = Standard deviation

ΣX^2 = Sum of square of the deviation from the mean

N = No. of respondent

3. Coefficient of correlation

The relationship between independent and dependent variables was calculated with the help of following given formula.

$$r = \frac{\Sigma XY - \frac{(\Sigma X)(\Sigma Y)}{n}}{\sqrt{\left[N\Sigma X^2 - (\Sigma X)^2\right] \times \left[N\Sigma Y^2 - (\Sigma Y)^2\right]}}$$

Where,

r = Coefficient of correlation

ΣX = Sum of the score of variable X

ΣY = Sum of the score of variable Y

ΣXY = Sum of products of 'X' and 'Y' variables

ΣX^2 = Sum of the square of 'X' variable

ΣY^2 = Sum of the square of 'Y' variable

N = Total number of respondents

CHAPTER-IV

RESULTS & DISCUSSION

CHAPTER IV

RESULTS AND DISCUSSION

This chapter deals with the results from the present investigation. The results are arranged after subjecting the data to statistical analysis. The data collected for the study have been classified, tabulated and analyzed in the light of objective of the study. The result and interpretation are presented under the following heads.

1. The personal, socio-economical, psychological and situational characteristics of the farmer families who committed suicides.

2. The socio-economic, psychological and situational causes which compelled the farmers to committed suicide.

3. The credit sources and indebtedness of the suicide farmers.

4. The relationship between selected characteristics of suicide farmers with their identified risk factor of suicide.

5. The post suicide consequences faced by farmer families.

6. Document the suggestions for avoiding suicides of farmers.

4.1. Personal, socio-economical, psychological and situational characteristics of victims who committed suicide

4.1.1 Age

Age was an important factor as suicide rate differs dramatically by age. In addition age-related psycho-social stressors and family or developmental issues might influence suicide risk (Jacob, 2006). The distribution of the victims according to their age has been presented in Table 5.

Table 5: Distribution of victims according to their Age

Sr. No.	Category	Age in Years	Frequency	Percentage (%)
1.	Young	Up to 34	09	22.50
2.	Middle	35 to 46	17	42.50
3.	Old	46 and Above	14	35.00
		Total	**40**	**100.00**

It is observed from Table 1 majority of the victims were under middle 42.50 per cent age category, followed by under old age young 35.00 per cent and remaining 22.50 per cent victims were found in young category.

It is inferred that middle and old age group seems to be more prone to suicides as compare to old. Probably this is the age group farmers have lot of family responsibilities on their shoulder. Therefore, they went in economic distress. Consequently large number of young and middle age group famers committed suicide.

Kamthe (2007) are also reported similar finding that majority of victims committed suicide in middle age group.

4.1.2 Education

Education was considered as one of the most important variable with the help of which the literacy level of victims can be assessed. The education level of the victims was studied and the result has been presented in Table 6.

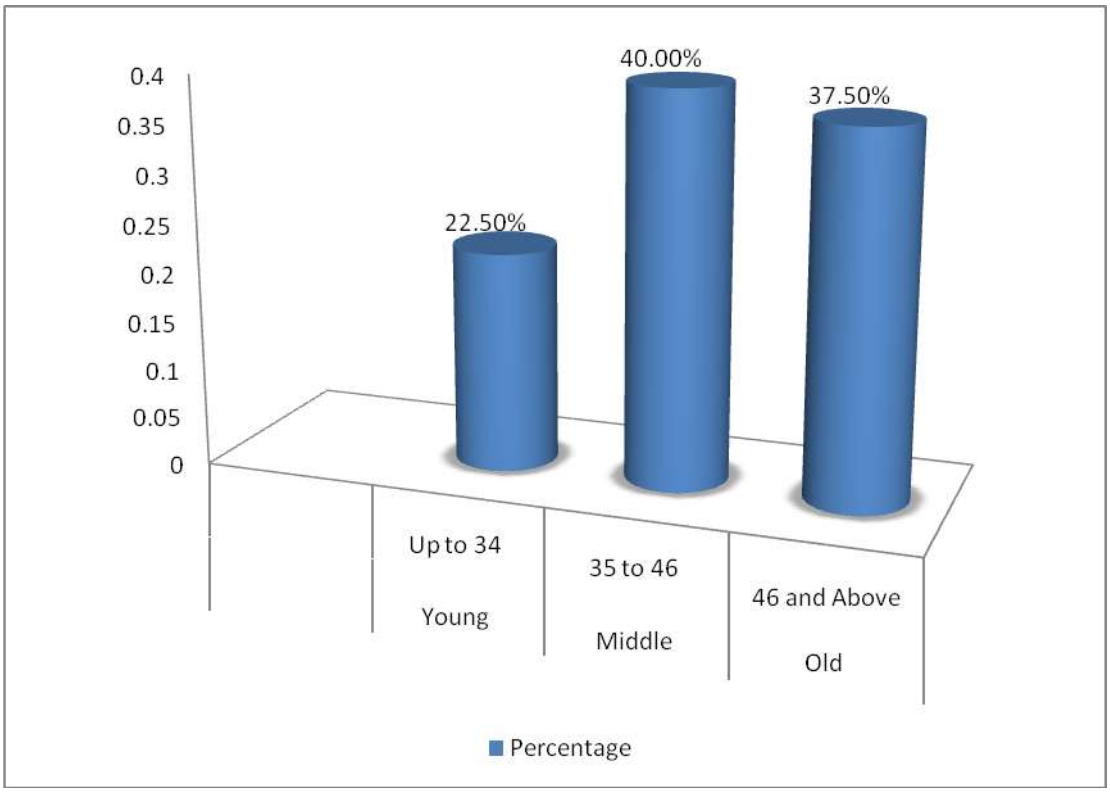


Fig1: Distribution of victim according to age

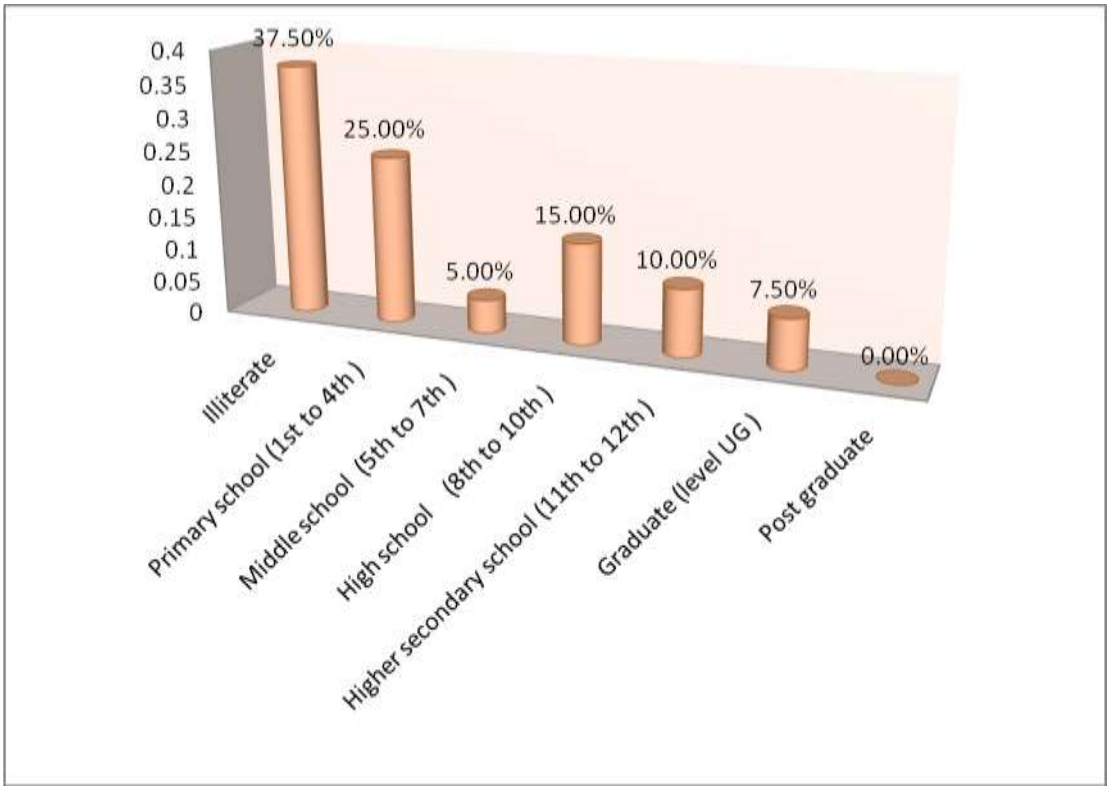


Fig 2: Distribution of victim according to education

Table 6: Distribution of selected victims on the basis of Educational level

Sr. No.	Educational level	Frequency	Percentage (%)
1.	Illiterate	15	37.50
2.	Primary school (1^{st} to 4^{th})	10	25.00
3.	Middle school (5^{th} to 7^{th})	02	05.00
4.	High school (8^{th} to 10^{th})	06	15.00
5.	Higher secondary school (11^{th} to 12^{th})	04	10.00
6.	Graduate (level UG)	03	07.50
7.	Post graduate	00	00.00
	Total	**40**	**100.00**

It is observed from Table 4 out of 40 majority of victims 62.50 per cent were literates and remaining 37.50 per cent were illiterate.

Within the literates 25.00 per cent were educated up to primary level. While 5.00 per cent had middle school level education, 15.00 per cent victims were having education up to high school level and 10.00 per cent victims had higher secondary school level education. Only 7.50 per cent victims taken graduation level education.

Illiteracy and traditional education system is largely responsible for increasing economic distress in Maharashtra. An uneducated people do not get knowledge of global changes and educated person is apathy to play role as a farmer in farm business due to absence of skill and educational fatigue. Any single suicide victim and respondents were not found taken formal education of agriculture science during visit.

Nearly similar results were quoted by Kale (2008)

4.1.3 Caste

Caste of an individual denotes the occupational status in the society. The distribution of the selected victims according to their respective caste were done in nine caste category as per the Maharashtra Government Resolution No. CBC-10/2006/PK-94/Ma and K-5, dated 25th May 2006 and presented in Table 7.

Table 7: Distribution of selected victims according to their Caste

Sr. No.	Caste category	Frequency	Percentage (%)
1.	Schedule Caste (SC)	01	02.50
2.	Schedule Tribe (ST)	00	00
3.	Vimukta Jati (VJ- A)	02	5.00
4.	Nomadic Tribe (NT- B)	00	00
5.	Nomadic Tribe (NT- C)	01	02.50
6.	Nomadic Tribe (NT- D)	01	02.50
7.	Other Backward Class (OBC)	03	07.50
8.	Special Backward Class (SBC)	00	00
9.	Open	32	80.00
	Total	**40**	**100.00**

It is observed from the table 7 majority 80.00 per cent suicide cases were belonged to open category and mostly the Maratha's were observed. Followed by victims belong to Other Backward Class (OBC) category were 7.50 per cent (Maximum from Kunbi), the victims belongs to Vimukta Jati (VJ-A) group 7.50 per cent (Maximum from Banjara), the victims belonging to Scheduled Tribe(ST) category were 2.50 per cent (Maximum from Budha), the

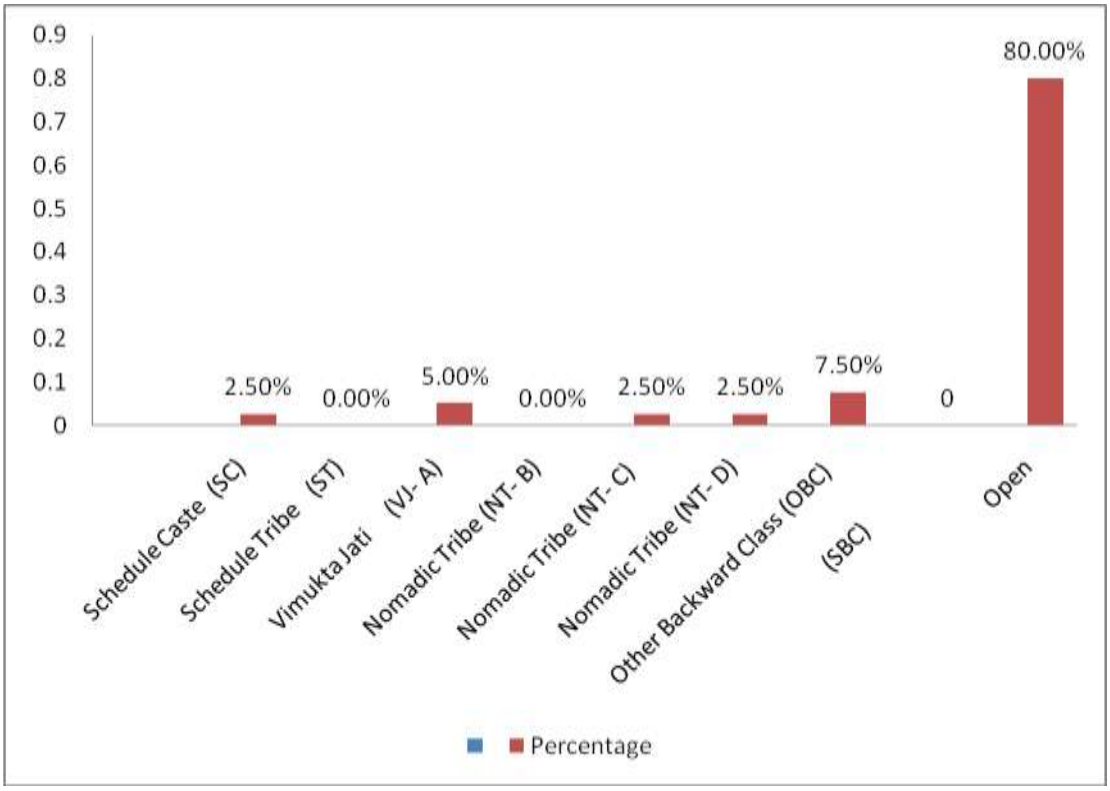


Fig3: Distribution of victim according to caste

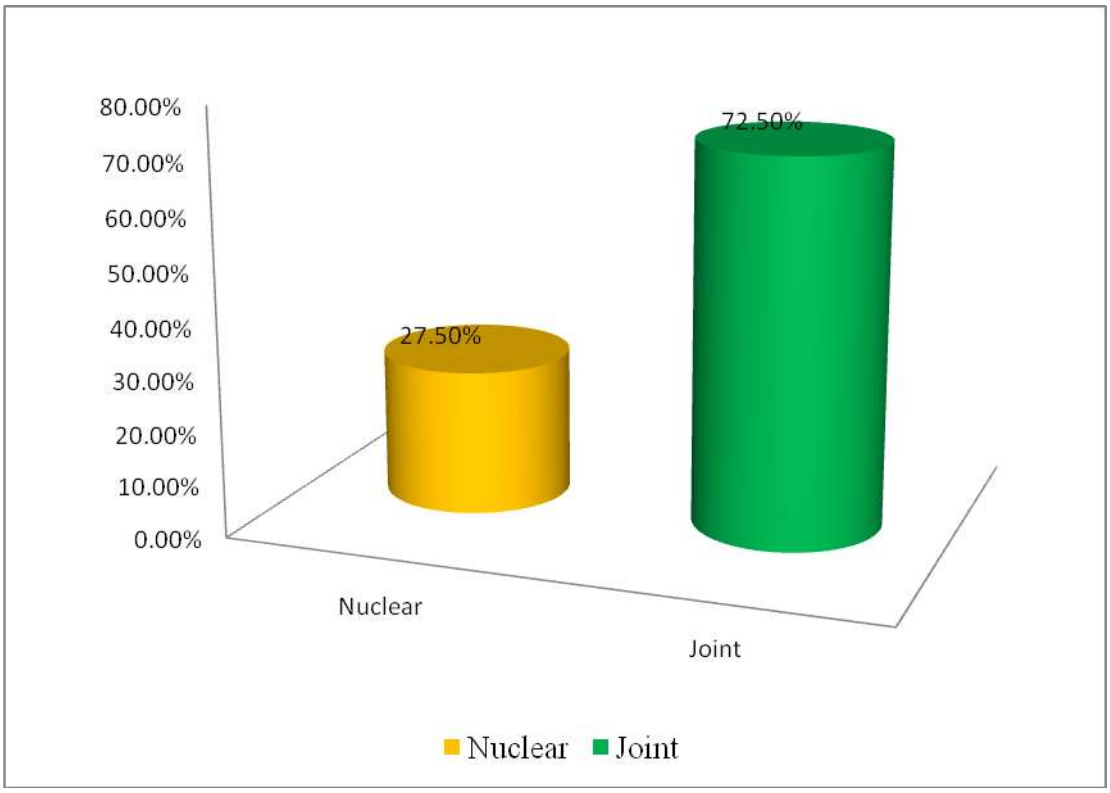


Fig4: Distribution of victim according to family type

victims belonging to Nomadic Tribe (NT-C) category were 02.50 per cent (Maximum from Dhangar caste) and also same frequency in Nomadic Tribe (NT-D) category were 2.50 per cent (Maximum from Wanjari caste) were observed respectively.

Caste structure plays a significant role in determining the occupational structure of Maharashtra. Predominantly the Marathas are the agriculturist community. Marathas have higher land holding as compare to other caste. Therefore, if there is any crisis in the agriculture then society has to face subsequent apathy.

Kale (2008) also reported similar finding.

4.1.4 Family type

Family type is an important social aspect. Now a day, due to fragmentation of land it is observed in villages that, big families are divided in to small families. This not only hampers the development of individual but also minimize the sharing the feeling among the members of family. Hence it is important to study the family type of the victim's under present investigation. The distribution of the selected victims as per the family type has been presented as under in Table 8

Table 8: Selected victim's according to their Family Type

Sr. No.	Family type	Frequency	Percentage (%)
1.	Nuclear	11	27.50
2.	Joint	29	72.50
	Total	**40**	**100.00**

It is observed from Table 8 majority of victims 72.50 per cent were from joint type of families and 27.50 per cent victims belonged to nuclear family. Suicide is always of the higher degree in the joint family. Because

when a person is in trouble or under a strain, finds an outlet for his worries, in the form of suicide.

Kamthe (2007) also reported same finding that majority of victims from nuclear type of family.

4.1.5 Family Size

Family size is indirectly responsible for the different problems in the family members. Large family size which is supportive to the family head. Small type family which is having less suicidal cases observed in table 9.

Table 9: Distribution of victims according to their Family Size

Sr. No.	Family Size	Frequency	Percentage (%)
1.	Small (Up to 3)	04	10.00
2.	Medium (4 to 6)	20	50.00
3.	Large (7 to 9)	11	27.50
4.	Very large (10 and Above)	05	12.50
	Total	**40**	**100.00**

It is observed from Table 9 majority 50.00 per cent suicides were concentrated in medium size family. Followed by 27.50 per cent victims having large family, 12.50 per cent victims were from very large family, where as only 10.00 per cent victims having small family size.

In medium and large size of family the income level of them is not sufficient so as to allow them to obtain basic commodities such as food and clothing, shelter, education and medical facilities for consumption on the one hand and to maintain cultivation expenditure on the other. Thus, it is inferred that majority of the suicides were concentrated between medium and large family size.

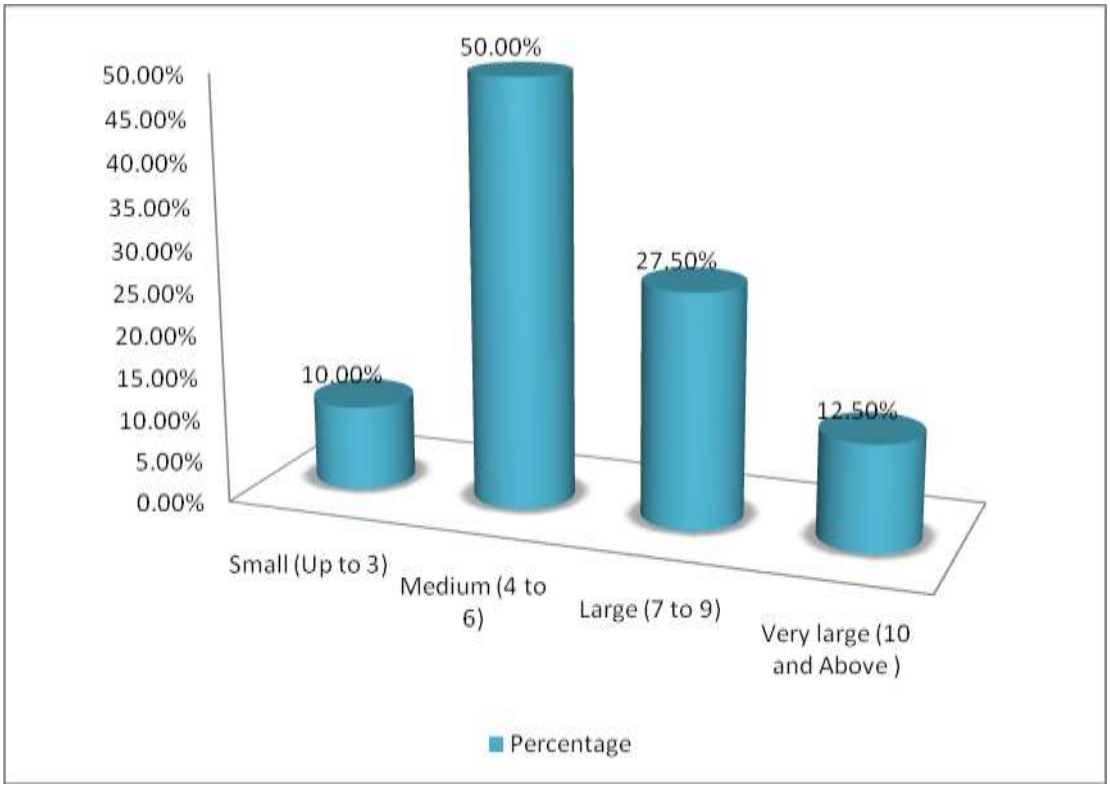


Fig 5: Distribution of victim according to family size

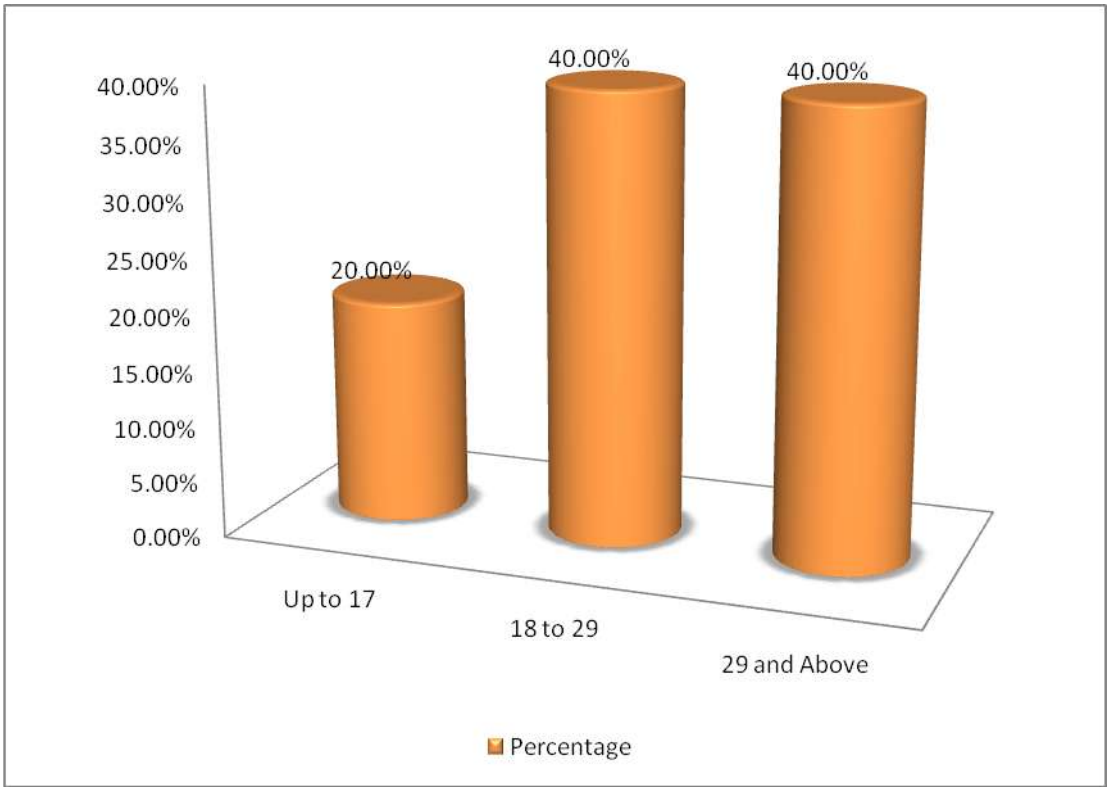


Fig6: Distribution of victim according to farming experience

Kamthe (2007) also reported that more than half 52.70 per cent of the deceased farmers had possessed medium (4 to 6 members) family size.

4.1.6 Farming experience

Farming experience plays an important role in bearing various risks in farming business. It is assumed that the farming experience increases the risk bearing capacity of an individual in his farming. Hence farming experience has been considered in present study. The distribution of the victim's according to their farming experience has been presented in Table 10 as follows.

Table 10: The distribution of the selected victims according to their Farming Experience

Sr. No.	Farming experience (years)	Frequency	Percentage (%)
1	Up to 17	08	20.00
2	18 to 29	18	45.00
3	29 and Above	14	35.00
	Total	**40**	**100.00**

It is observed from Table 10, majority of 45.00 per cent of the victims had farming experience between 18 to 29 years, followed by 35.00 per cent victims had farming experience 29 years and above, 20.00 per cent victims had farming experience up to 17 years. Thus it is observed from the above findings that more or less in all categories of farming experience, suicides were happened. Secondly it was also noticed that as the farming experience is increased the suicides rates were increased.

Kale (2008) also reported similar findings.

4.1.7 Land holding

Land holding which is directly responsible for the incidence of suicide. Small and marginal farmers having maximum suicidal cases observed in table 11.

Table 11: Distribution of selected victims according to Land size

Sr. No.	Holding group	Number of victims	Total area (ha.)	Average size of holding (ha.)
1.	**Marginal** (Up to 1.00 ha.)	15 (37.50)	11.2 (13.69)	0.74
2.	**Small** (1.01 to 2.00 ha.)	16 (40.00)	25.4 (31.05)	1.58
3.	**Semi-medium** (2.01 to 4.00 ha.)	06 (15.00)	12.4 (15.15)	2.06
4.	**Medium** (4.01 to 10.00 ha.)	02 (05.00)	22.4 (27.38)	11.2
5.	**Large** (10.01and above)	01 (02.50)	10.4 (12.71)	10.4
	Total	**40 (100)**	**81.8 (100)**	**2.04**

Table 11 shows that majority 40.00 per cent of the victim's were small farmers having land holding up to 1.01 to 2.00 hectares, followed by 37.50 per cent victims were marginal farmers possessing land between 1.00 hectare 15.00 per cent and 5.00 per cent of the victims had semi medium 2.01 to 4.00 ha and medium 4.01 to 10.00 ha land holding , large size farmer 2.50 per cent about (10.1and above) land holding respectively. The average size of holding in marginal, small, semi-medium and medium groups were 0.74 ha. 1.58 ha, 2.06 ha, 11.2 ha and 10.4 ha respectively.

Large number of selected suicide victim farmers was reported small and marginal farmers in Maharashtra. Small and marginal farmers often lack access to major agricultural services, such as credit, extension, insurance, and market. Small and marginal farmers were unable to meet the basic needs

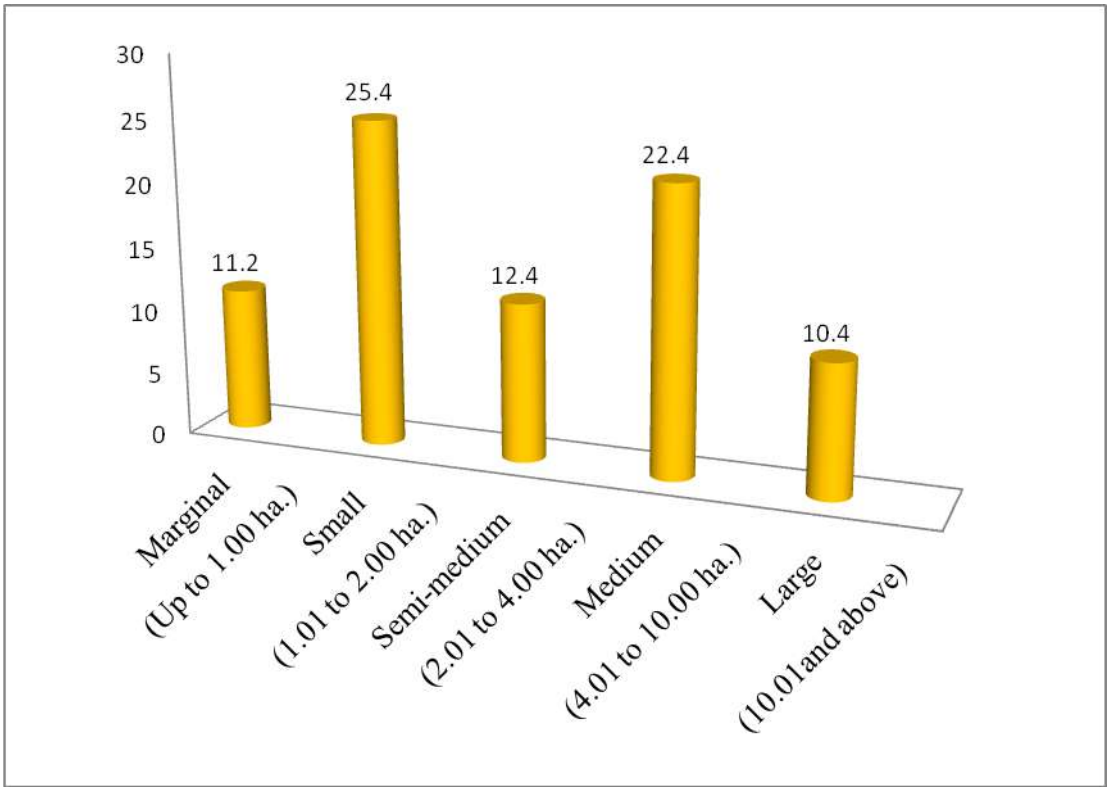


Fig7: Distribution of victim according to land holding

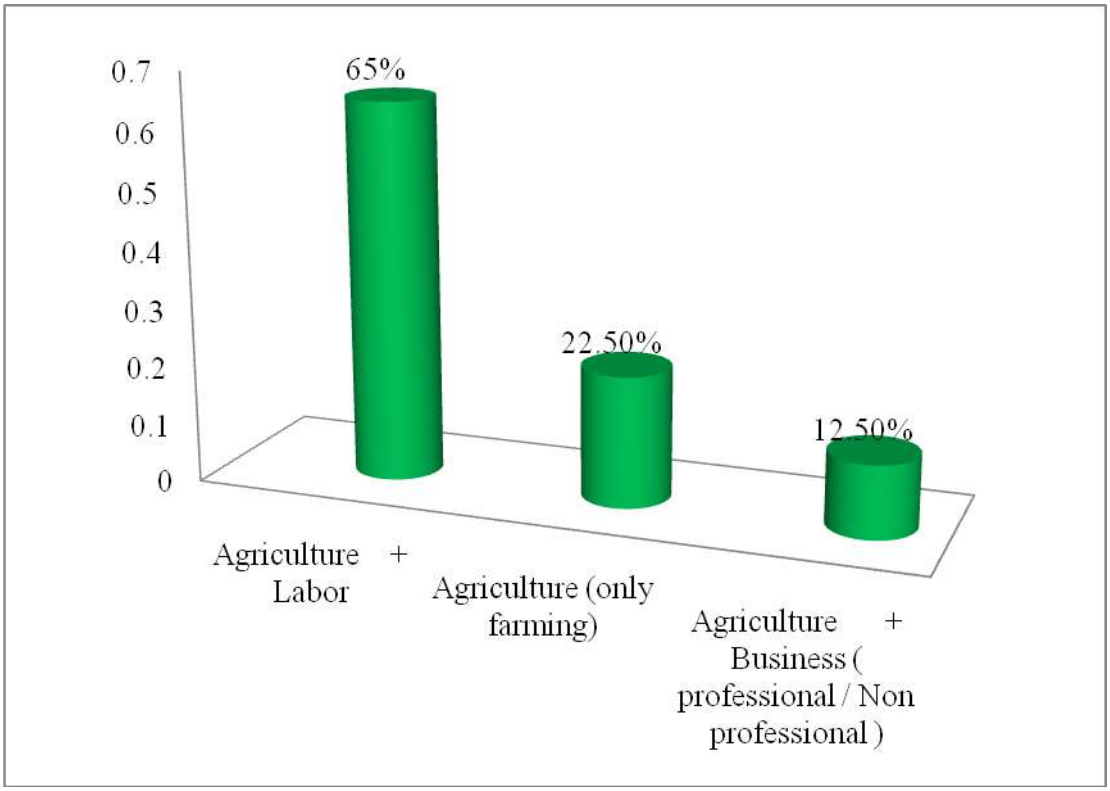


Fig8: Distribution of victim according to subsidiary occupation

income generated from farm business. Therefore, size of farm land is also responsible for increasing farmer's suicide in Maharashtra.

Kale (2008) also reported same finding that majority of the victims belonged to small and marginal land holdings categories.

4.1.8 Subsidiary occupation

Subsidiary occupation is an important indicator of socio-economic position of an individual through income status in a society, hence this variable was considered for the study. The distribution of victims according to their subsidiary occupations has been depicted in Table 12.

Table 12: Distribution of selected victim's households according to their Subsidiary occupations

Sr.No.	Subsidiary occupation	Frequency	Percentage (%)
1.	Agriculture + Labor	26	65.00
2.	Agriculture (only farming)	09	22.50
3.	Agriculture + Allied occupation	00	00.00
4.	Agriculture+ BusinessNon professional	05	12.50
5.	Agriculture + Service/ Pension	00	00.00
Total		**40**	**100.00**

`

It is observed from table 12 majority of victims 65.00 per cent were engaged in farm labor for wages earning as a subsidiary occupation to farming a supportive endeavor to farming and majority of them were marginal and small farmers followed by 22.50 per cent victims were had only farming as their main occupation and they did not have any subsidiary occupation, 12.50 per cent victims were doing Agriculture business with farming. No one victim was possessed salary/pension as a subsidiary occupation.

Lack of farm employment has created the excess burden on agriculture. Excess burden of workforce has not only created pressure on agriculture but also increased the cost of cultivation and thereby resultant

decline in returns from cultivation. Sometimes, excess supply of labour causes a decline in the wage rate below the subsistence level of living and increases the headcount of rural poverty among agricultural laborers'.

The findings of the present study also corroborate with the findings reported by Kale (2008).

4.1.9 Annual income

Income is a major determinant of the economic status of an individual. Every individual's style of living is decided to a great extent by his income. His expenditure on farming, allied occupations, household matters, indebtedness, and fulfillments of family responsibilities is decided by the income he earns. Everything can be adjusted but not the money. Low income creates very difficulty for an individual to manage affairs of the family. Such people become discouraged and cannot perform their functions properly (Madan, 1980). Keeping this in view, the annual income was considered for the study. The distribution of selected victim's according to their annual income has been presented in Table 11.

Table 13: Distribution of victims according to their Annual income

Sr. No.	Annual income	Frequency	Percentage (%)
1	Low (Up to 16,172)	00	00.00
2	Medium (16,173 to 2,13,253)	32	80.00
3	High (2,13,254 and Above)	08	20.00
	Total	**40**	**100.00**

It is observed from table 13 majority of the victims 80.00 per cent had annual income between (Rs.16,173 to Rs 2,13,253), followed by 20.00 per

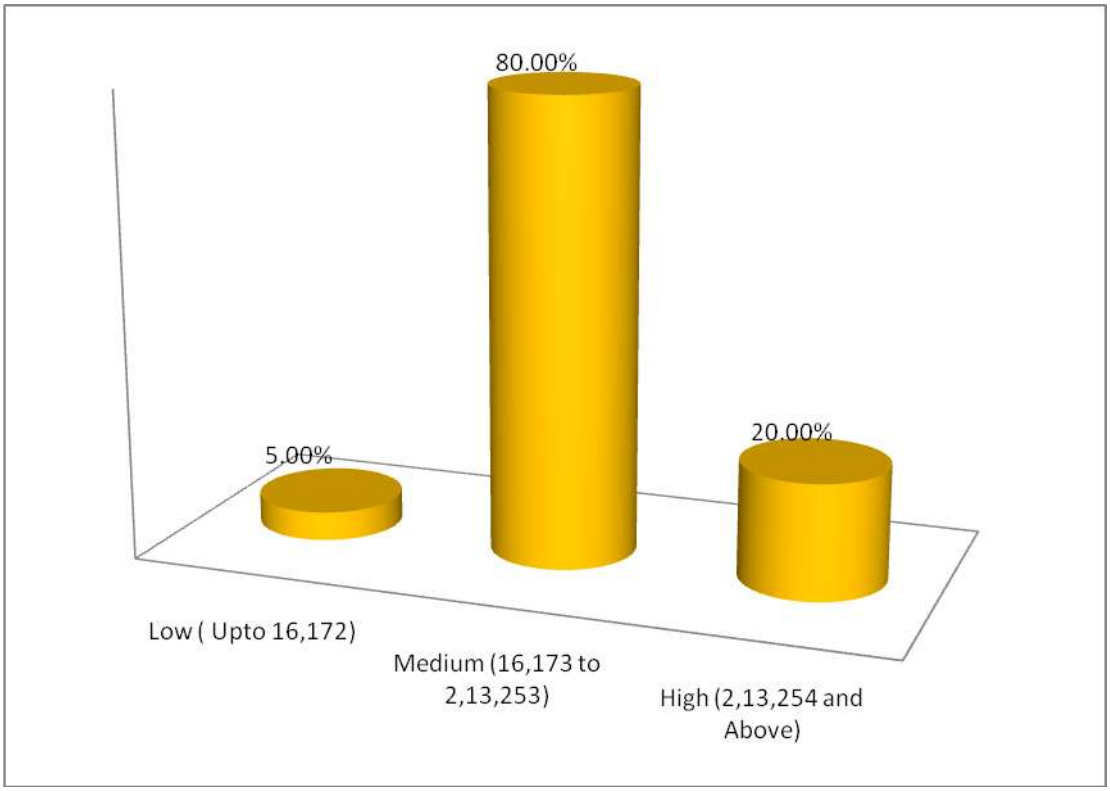


Fig9: Distribution of victim according to annual income

cent victims belonged from income group with annual income (2,13,254 and Above) , no one found low annual income.

The average annual income of all victims' households was Rs. 213253 which includes cultivation, wages, non-professional business income, service/ pension and income from allied occupations.

Marathwada regions of the state are far away from industrial development that's why they could not get opportunity of employment. Level of income generated through farm business is lower than non farm sector. Therefore, farmers are unable to meet the basic needs of our household.

The findings of the present study also corroborate with the findings reported by Kale (2008).

4.1.10 Socio-economic status

According to Jacob (2006) decline in socio-economic status was one of the psychosocial factor associated with an increased risk for suicide, hence these variable was considered for the study.

The socio-economic status shows the position of the individual and his family members occupied with reference to prevailing average standard of cultural position, effective income, material possession and participation in the group activities of the community (Bertrand, *et al.* 1958). While computating Socio-economic status eight indicators of socio-economic status like occupation, land holding, family education, annual income, socio-political participation, household, material possession and other attributes were considered and studied. The results pertaining to socio-economic status of the victims has been presented in Table 14.

Table 14: Distribution of victims according to their Socio- economic status

Sr. No.	Category	Frequency	Percentage (%)
2.	Low	07	17.50
3.	Medium	07	17.50
5.	High	26	65.00
	Total	**40**	**100.00**

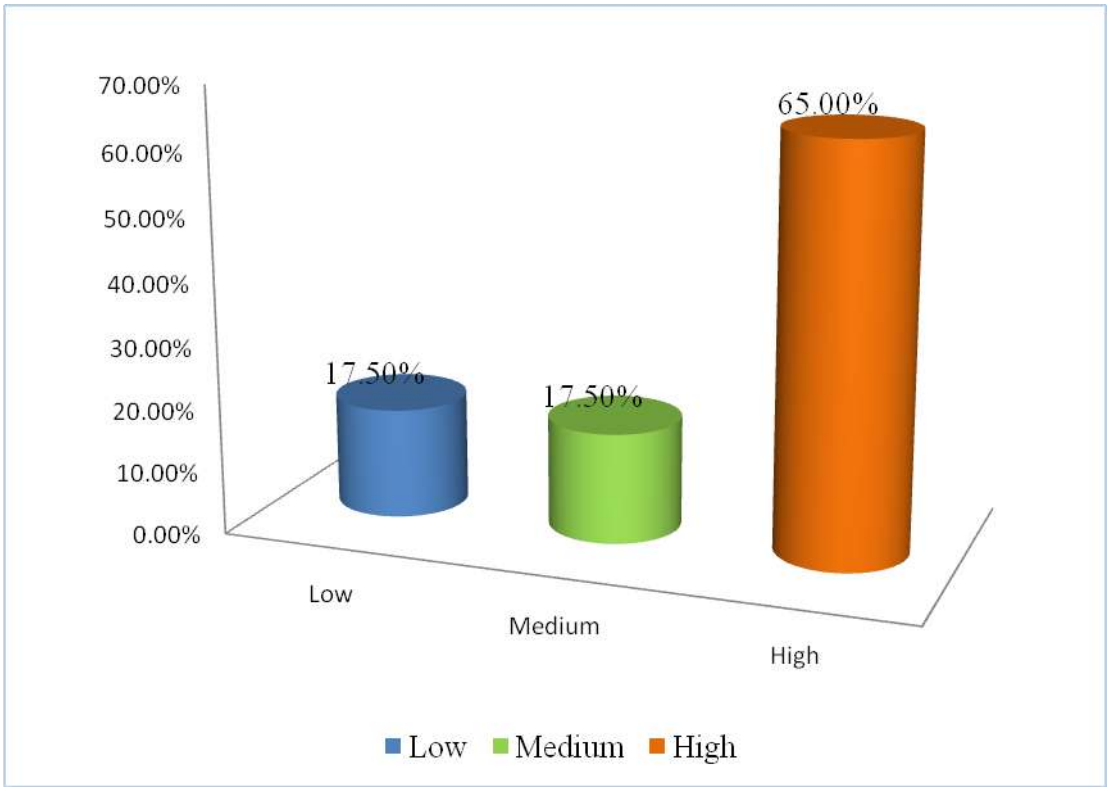


Fig10: Distribution of victim according to socio economic status

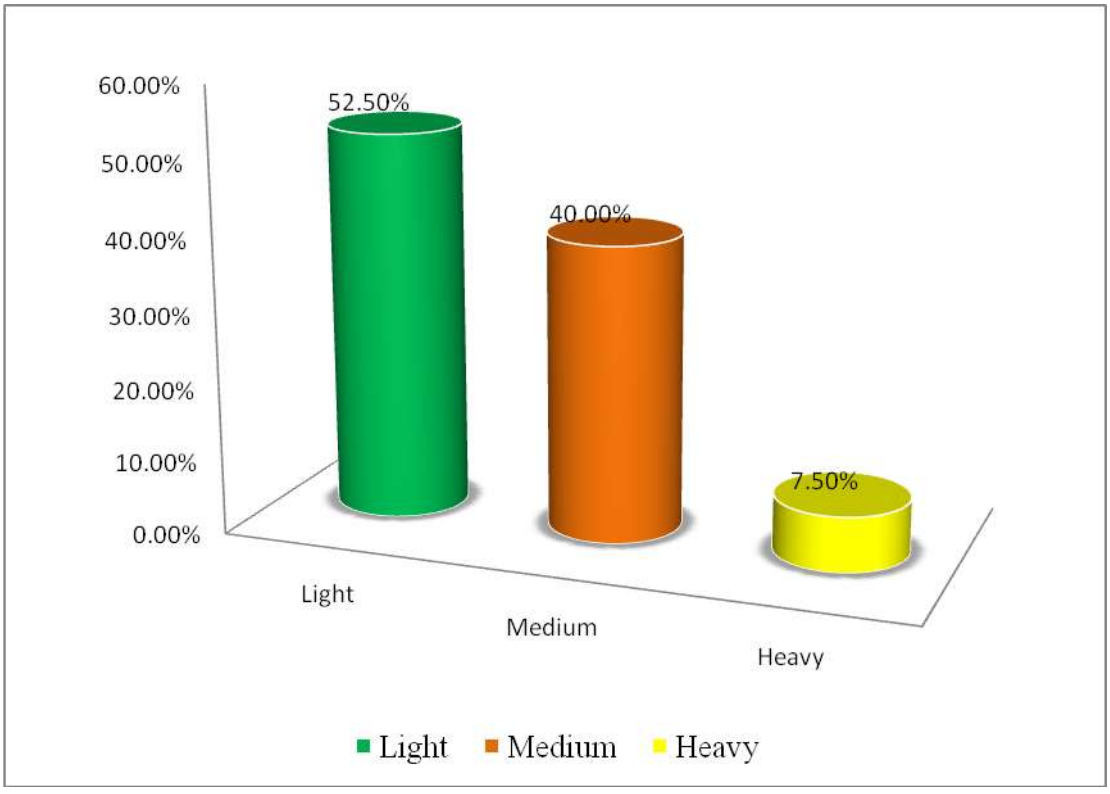


Fig11: Distribution of victim according to type of land

It is observed from Table 14 majority of victims were categorized in Medium 17.50 per cent socio-economic status. Same as 17.50 per cent victims were in low level of socio-economic status, 65.00 per cent victim were categorized in high socio-economic status level group.

Thus the present research study accepted that the 65.00 per cent suicides were concentrated high of socio-economic status group. Mass poverty and illiteracy combined with caste system, religious beliefs, etc. adversely affect the course of economic development. Hence high socio economic status is the one of the cause of suicide of farmers in Marathwada Region.

Kale (2008) also reported similar finding.

4.1.11 Type of land

Crops yield depends on various factors, out of which type of land is one of the important prerequisite for better yield of the crops. The data regarding the type of land of the selected victim's households has been presented in Table 15.

Table 15: Distribution of victims according to their Type of land

Sr. No.	Type of land	Frequency	Percentage (%)
1.	Light	21	52.50
2.	Medium	16	40.00
3.	Heavy	03	07.50
	Total	**40**	**100.00**

It is revealed that half of the deceased farmers 52.50 per cent having light soil type of land, followed by 40.00 per cent victims having medium soil type of land, 7.50per cent having heavy soil type of land.

Thus, it is concluded that 52.50 per cent of the deceased farmers holds the land having light soil type of land. Similarly more or less in all type of land holder's suicides was happened.

Deshmukh *et al.* (2007) and Kale (2008) also reported similar finding .

4.1.12 Irrigation facilities

Availability of irrigation facilities and their irrigation potential significantly affect the cropping pattern, production, productivity and ultimately income level of farmers by many folds (Shivappa 2006). Hence irrigation facilities available with the selected victim have been ascertained and data in this regard is presented in Table 14

Table 16: Distribution of victims according to their available Irrigation sources

Sr. No.	Irrigation sources	Number of victims	Percentage (%)
1.	No source	19	47.50
2.	Dam	00	00.00
3.	Canal	06	15.00
4.	Farm pond	00	00.00
5.	Well / Tube well	14	35.00
6.	Lake	00	00.00
7.	River	01	02.50
	Total	**40**	**100.00**

It is observed from table 16 majority of 47.50 per cent victims had not any source to access the irrigation, they solely depend on monsoon rains followed by 35.00 per cent victims had only open well /tube well as a irrigation source, 15.00 per cent victim's had canal as a irrigation source, 2.50 per cent victims had river as irrigation source. It is also noticed that most of the well were either dry or not have sufficient water for irrigation due to depletion of groundwater and less rains in recent years. In addition to this for using

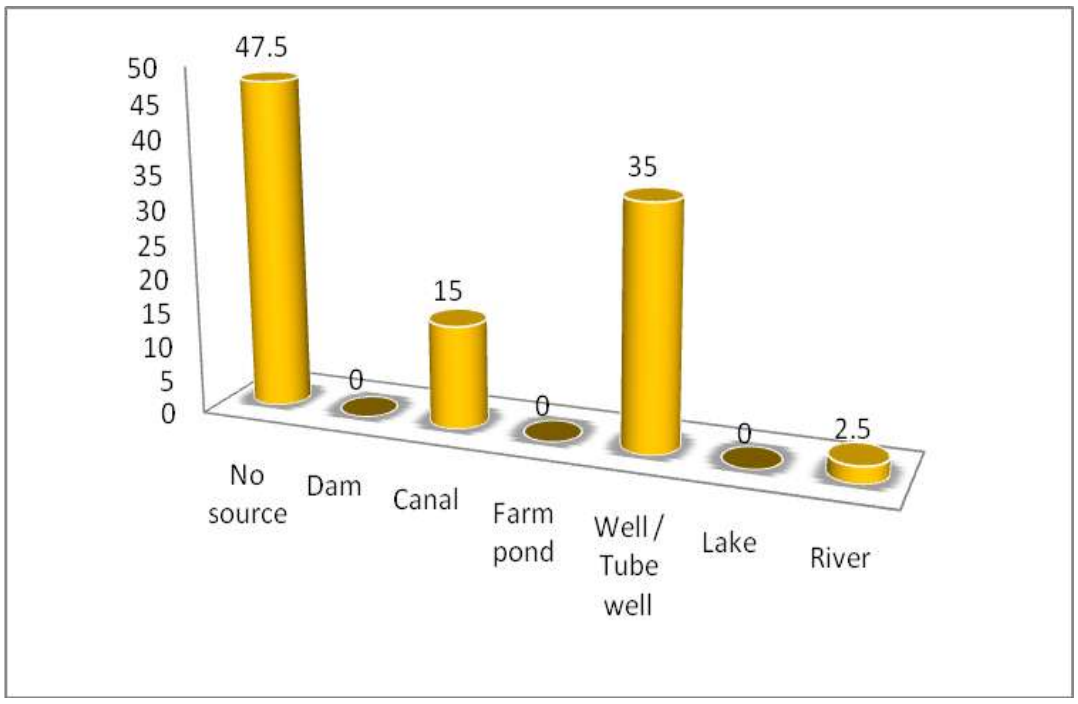


Fig12: Distribution of victim according to irrigation sources

available water for irrigation load shading of electricity was also the main hurdle was mentioned by family members.

It is therefore concluded that majority 47.50 per cent suicide cases were not having any source to access the irrigation. They were mostly depending on monsoon rains only; secondly due to lack of irrigation facilities their cropping intensity and frequency of crop failure among rainfed farmers have been more. Hence lack of irrigation facility is also the one of the cause of farmers' suicides in Marathwada Region.

Choudhary *et al.* (2016) also reported similar finding.

4.1.13 Agricultural infrastructure

The infrastructure development is one of necessary condition of agricultural development and alleviation of poverty. Infrastructure availability is helpful to sustain the growth in production, productivity and income generation in agriculture. Various research studies conducted in the past have proved that the capabilities of farmers to adopt new technologies as well as his overall economic development was hampered due to lack of infrastructure facilities. Hence in the present study, five important basic indicators of agricultural infrastructure were selected for study. These are input, credit sources, information sources, transport facilities and post harvest infrastructural facilities. The respondent households have been analyzed according to infrastructure and data is presented in Table 17.

Table 17: The distribution of the selected victims and his households according to their Agriculture infrastructure availability.

Sr. No.	Agricultural Infrastructure	Agriculture infrastructure availability of					
		Input	**Credits sources**	**Information**	**Transport**	**Post harvest**	**Total**
		Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
1.	**Low** (Up to 33.33)	01 (02.50)	02 (05.00)	04 (10.00)	25 (62.50)	40 (100)	03 (7.50)
2.	**Medium** (33.34 to 66.66)	38 (95.00)	38 (95.00)	35 (87.50)	15 (37.50)	00 (00)	36 (90.00)
3.	**High** (66.67 and above)	01 (02.50)	00 (00.00)	01 (02.50)	00 (00)	00 (00)	01 (2.50)
	Total	**40 (100)**	**40 (100)**	**40 (100)**	**40 (100)**	**40 (100)**	**40 (100)**

It is observed from Table 17 majority of 95.00 per cent victims had medium input infrastructure, rest of 2.50 per cent had high input as well as low input infrastructure.

While considering availability of credit sources it is found that about two third victims' households 95.00 per cent victims had medium availability of credit sources infrastructure, followed by 5.00 per cent victims had low credit sources infrastructure respectively.

Regarding availability of information infrastructure it is noted that majority of the 87.50 per cent victims had medium availability of information, followed by 10.00 per cent victims had low information and 2.50 per cent victims had high information information.

As per as availability of transport facilities as infrastructure 62.50 per cent victims had low availability of transport facilities, followed by 37.50 per cent had medium availability of transport infrastructure.

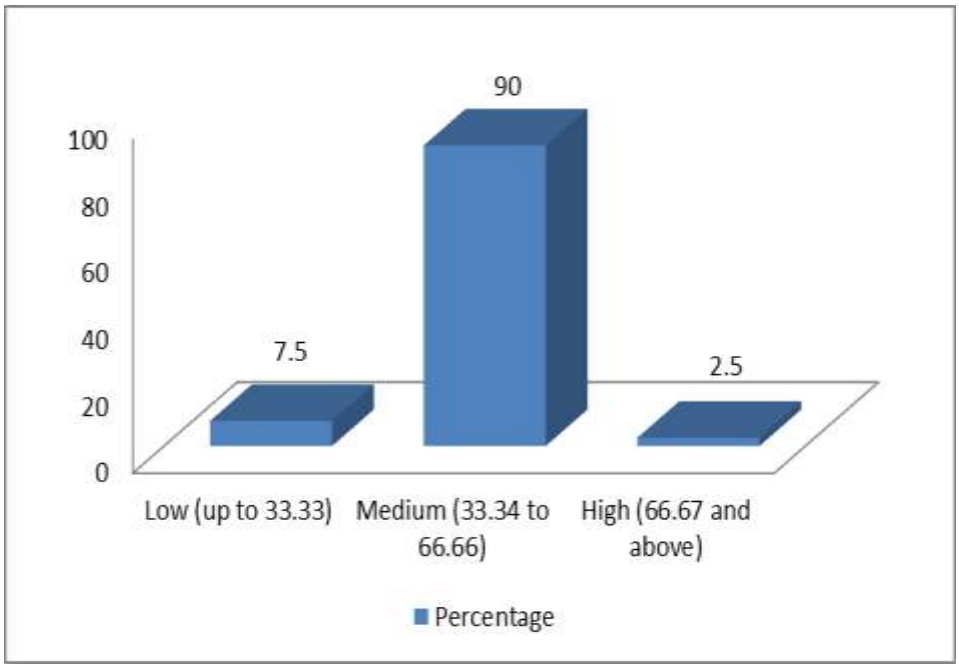


Fig: Distribution of victim according to Agricultural infrastructure

As regards availability of post harvest infrastructure it is noted that majority 100.00 per cent victims had low availability of post harvest infrastructure.

While considering total infrastructure availability of five components, all over victims 100.00 per cent had medium infrastructure availability for their farming business.

While considering total infrastructure availability of five components, majority 67.50 per cent respondents was having high infrastructure availability for their farming business and 32.50 per cent had medium infrastructure availability. It is also noticed that not a single household was found, having low infrastructure availability in totality. Seeds, fertilizers, pesticides and technology are major inputs of farm business.

Farm saved seeds were replaced by corporate seeds which needed fertilizers and pesticides. Consequently, cost of production has been increasing and agriculture became a costly affair. The Indian small farmers have failed to adjust with these changes. Managing finance for the agricultural work became a difficult task. Some small farmers leave farming and shifted other occupations due to lack of ability to understand the problems arise and grown in farm sector.

Roads, electricity, market, warehouses, communication means and processing industries are weak in Marathwada. Most of the high value crops are perishable and damaged during the travelling. Therefore, wastage of agriculture produces is found more and damaged produce could not get higher prices in market.

The findings of the present study also corroborate with the findings reported by Kale (2008).

4.1.14 Productivity:

Productivity is the agricultural production per unit area. The average crops yield of victims' households in qts /ha during 2015-2016 and 2016-2017 has been computed along with number of households who cultivate that particular crops and has been presented at a glance in Table 16.

Table 18: Average productivity of major crops of selected victims household

Sr. No.	Particulars	Frequency	Productivity (qtl /ha)		
			Average	Maximum	Minimum
1.	Soybean	37	12.72	36.00	3.00
2.	Cotton	26	13.40	21.00	4.00
3.	Turmeric	08	21.87	34.00	6.00
4.	Pigeon pea	03	6.65	11.00	5.00
5.	Wheat	07	17.50	27.00	4.00
6.	Bengal gram	15	09.15	15.00	4.00
7.	sorghum	11	11.47	17.00	3.00

It was observed from table 18 that, the average yield of soybean cultivated by victims was 12.72 qtl/ha. An maximum yield of soybean was 36 qtl/ha and an minimum yield of soybean was 3 qtl/ha.

Average yield of cotton crop cultivated by victims was 13.40 qtl/ha. An maximum yield of cotton was 21 qtl/ha and an minimum yield of cotton was 4 qtl/ha.

The turmeric crop average yield was 21.87 qtl/ ha. An maximum yield of turmeric was 34 qtl/ha and an minimum yield of turmeric was 6 qtl/ha.

In case of Pigeon pea average yield was 6.65 qtl/ha. An maximum yield of pigeon pea was 11 qtl/ha and an minimum yield of 5 qtl/ha.

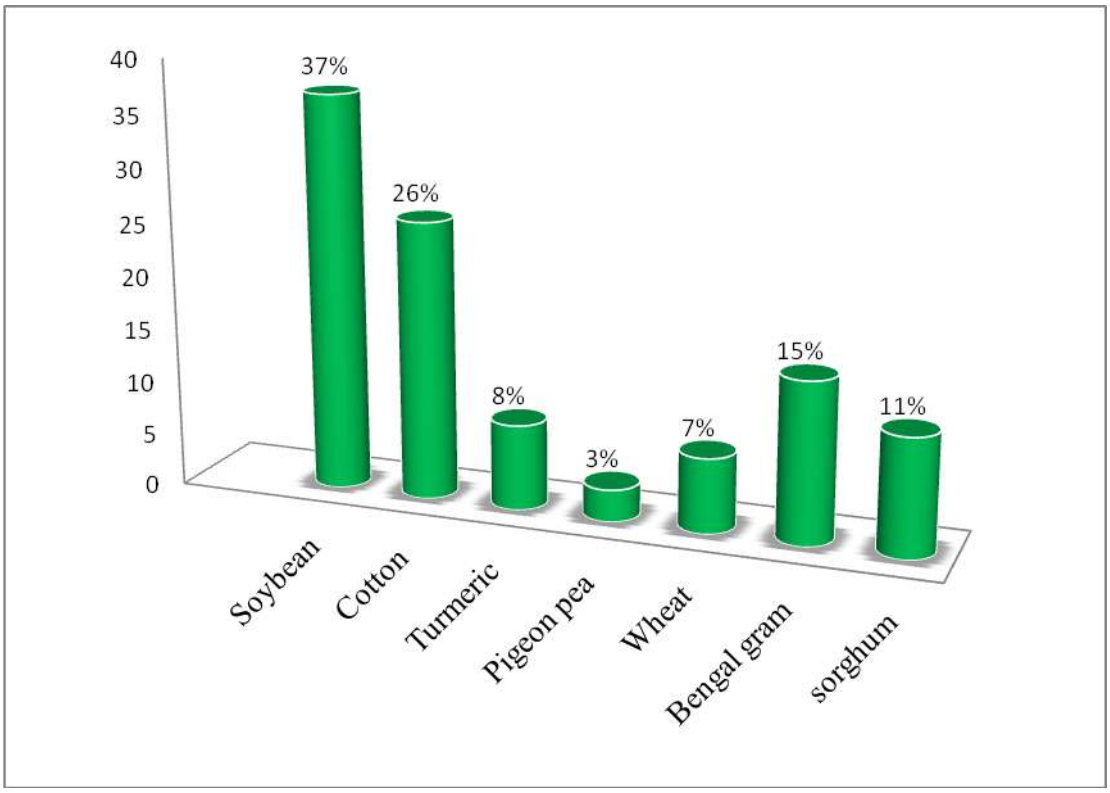


Fig: Distribution of victim according to crop productivity

As well as wheat average yield was 17.50 qtl/ha. An maximum yield of wheat was 27 qtl/ha and an minimum yield of wheat 4 qtl/ha.

Whereas Bengal gram average yield was 9.15 qtl/ha. An maximum yield of Bengal gram was 15 qtl/ha and an minimum yield of gram was 4 qtl/ha.

In case of sorghum average yield was 11.47 qtl/ha. An maximum yield of sorghum was 17 qtl/ha and an minimum yield of sorghum was 3 qtl/ha.

Thus a perusal of the results it was concluded that almost in all crops productivity is very low hence here lower production and productivity on the farms of the victims has been proved as one of the cause of farmers' suicides in Marathwada region. Due to the less productivity of crop the victim were not get enough return from farm sector. Hence farmers unable to meet their daily needs income obtain from farm business.

The findings of the present study also corroborate with the findings reported by Kale (2008).

4.1.15. Cropping pattern

Cropping pattern of selected victims household during the year 2014-2017 has been worked out in terms of percentage share of individual crops in gross cropped area and presented in Table 17.

Table 19: Cropping pattern of selected victims' last three years

Sr. No.	Particulars	Frequency	Percentage (%)
A. Kharif Season			
1.	Soybean	37	92.50
2.	Cotton	26	65.00
3.	Turmeric	08	20.00
4.	Pigeon pea	03	07.50
B. Rabi Season			
5.	Wheat	07	17.50

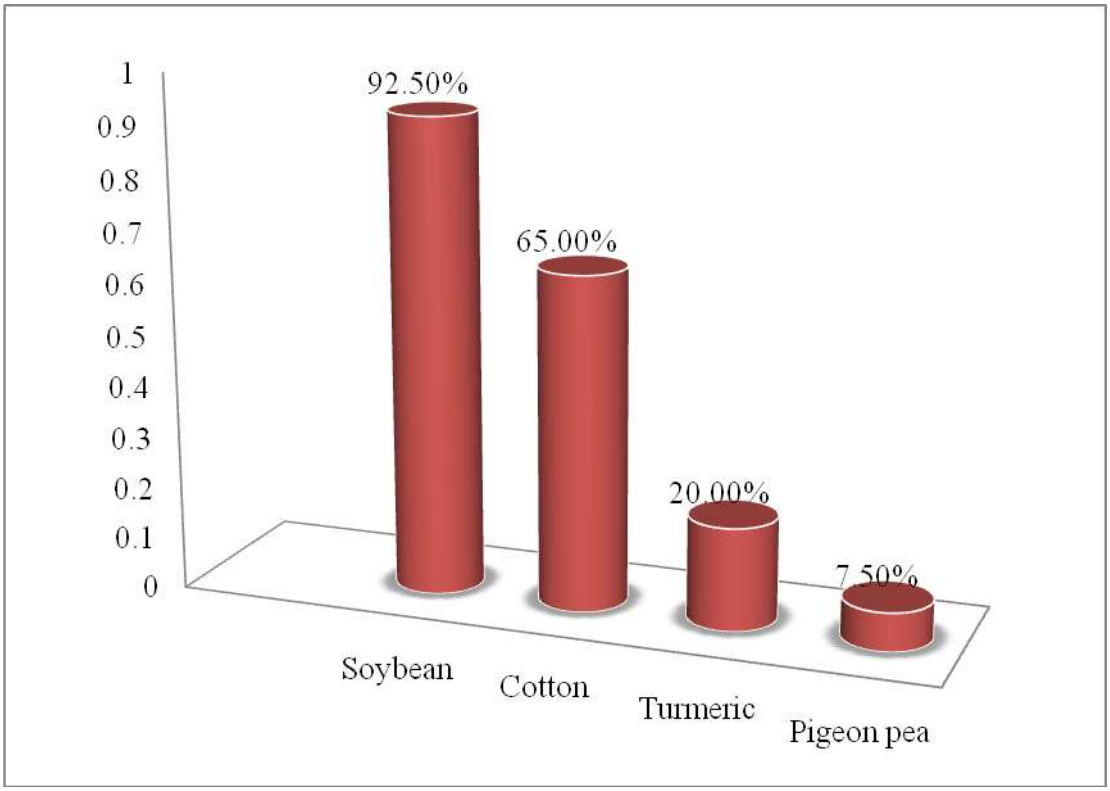


Fig13: Distribution of victim according to kharif crops

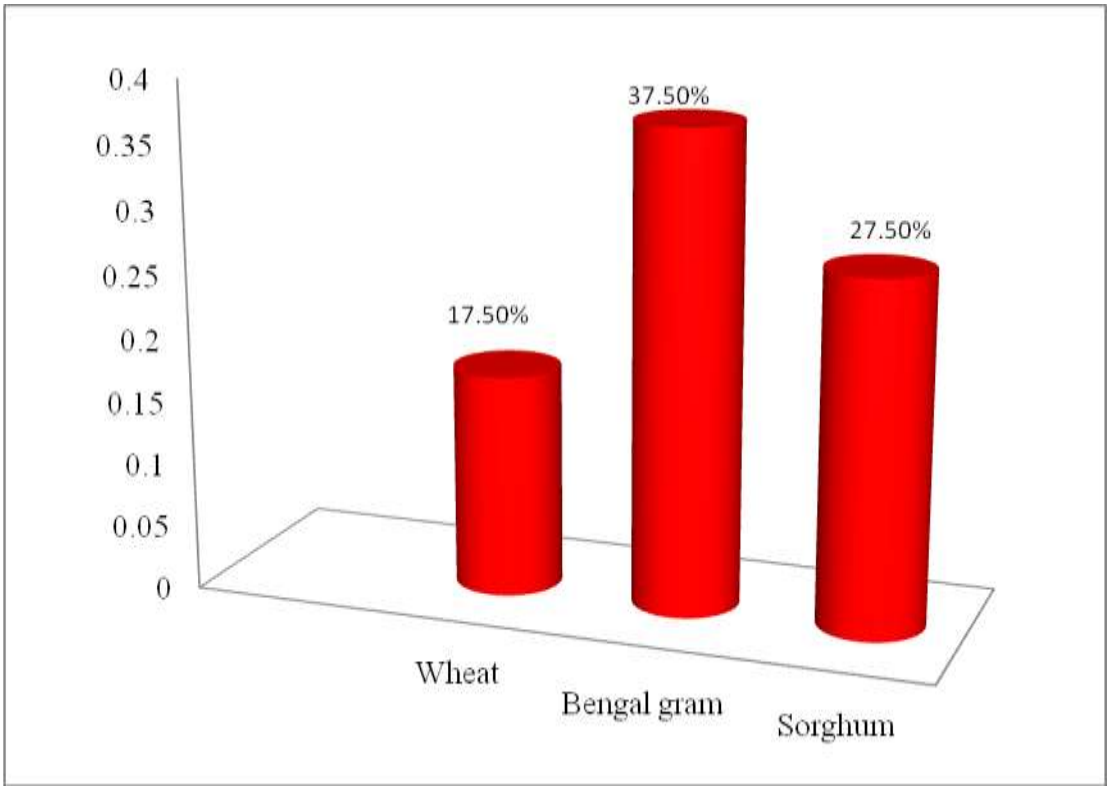


Fig14: Distribution of victim according to rabi crops

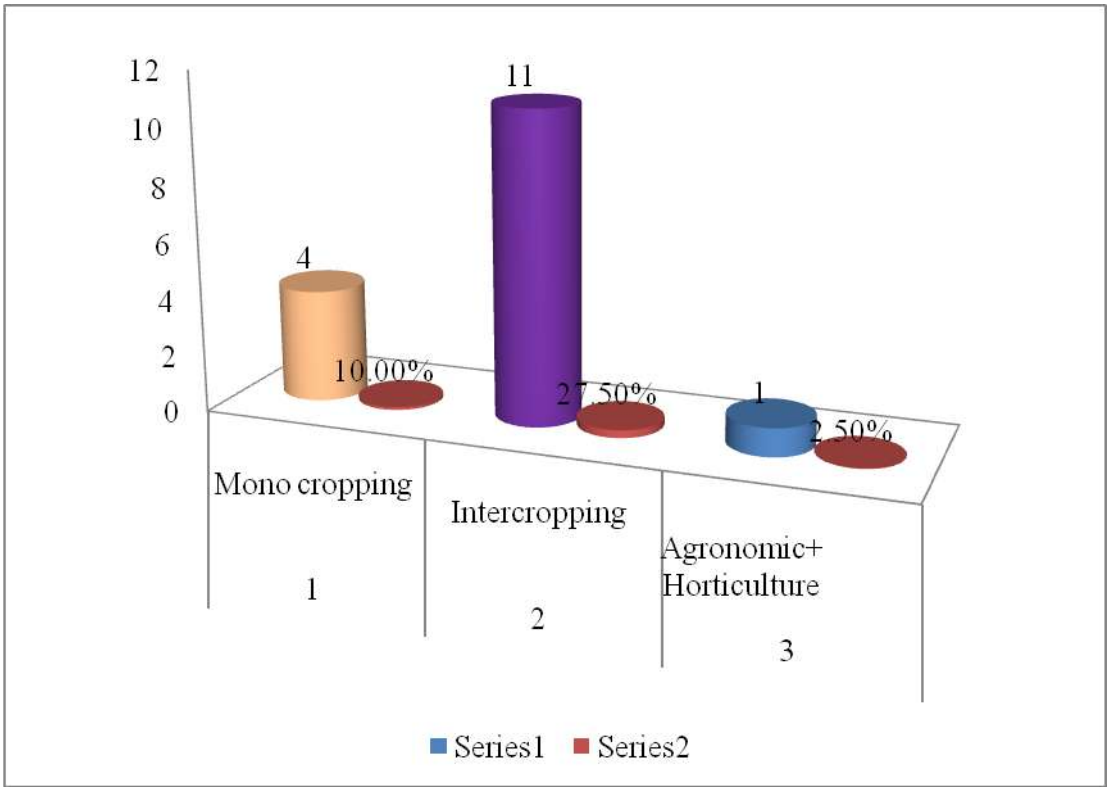


Fig15: Distribution of victim according cropping pattern

6.	Bengal gram	15	37.50
7.	Sorghum	11	27.50
D. Annual/Perennial			
8.	Sugarcane	00	00.00
E. Horticultural crops			
9.	Orange	01	02.50

1	Mono cropping	04	10.00
2	Intercropping	11	27.50
3	Agronomic+ Horticulture	01	02.50

It observed from table 19 that majority of victims were growing soybean 92.50 per cent, followed by cotton 65.00 per cent, turmeric 20.00 per cent, red gram 7.50 per cent in kharif season.

In rabi season majority of victims were found growing gram 37.50 per cent, followed by sorghum 27.50 per cent, wheat 17.50 per cent.

In summer season no one victims were found growing crop, due to unavailability of water. In horticultural crops 2.50 per cent victims growing orange.

In selected victims 10.00per cent had taken mono cropping, 27.50 per cent had taken intercropping, 2.50 per cent had taken agriculture + horticulture.

Cotton and Soybean dominate the cropping pattern of suicide hit Marathwada region of Maharashtra.

The findings of the present study also corroborate with the findings reported by Dandekar and Bhattacharya (2017).

4.1.16. Indebtedness position of the victims

Indebtedness is an obligation to pay money to another party. Borrowing from formal and informal sources has been one of the important

reasons for suicide cited in daily press reports and was also proved through various research studies. In present study, it was assumed that almost every victim may have an obligation to pay debt that may be borrowed from institutional or non-institutional sources. Indebtedness caused to great deal of mental tension to an individual. Hence indebtedness is an important aspect of the present research work.

In present study indebtedness has been considered as the total outstanding debt/loan amount of institutional and non-institutional credit sources towards the victims and his households at the time when he/she has committed suicide. The detail evident about indebtedness has been presented in detail in subsequent Table 20.

Table 20: Distribution of victims' households according to Indebtedness

Sr. No.	Particulars	Number of victims	Percentage (%)
1.	Indebted victims	39	97.50
2.	Free from debts	01	02.50
	Total	**40**	**100.00**

It is observed from the table 20 out of 40 victims majority of 97.50 per cent victims were found indebted, that mean majority of the victims have an obligation to pay debts to borrowed agencies/ sources, where as only 02.50 per cent were not found indebted.

Indebtedness is one of the important responsible factor to increase suicidal tendency among farmers. There are many causes of increasing inability to repay the loans among farmers i.e. high rate of interest, low rate of return, crop failure, low level of income and so on.

The present findings are in consonance with the findings reported by Mishra (2006) and Deashmukh *et al.* (2007).

4.1.17 Livelihood pattern

Livelihood defines the means of living or sustenance of an individual. In Marathwada farmers' have been committing suicide over the last five years. In the present study it was assumed that, those who committed suicide, their livelihood might not be sustainable. Hence this is an important aspect of the present study; it will show the livelihood status of an individual deceased farmer.

In present study livelihood pattern of the victim and his households refers, the engagement of the victim and his households in different livelihood sources or occupations or employment and income generated through it, with their annual expenditure on various items has been considered and analyzed. The data with regards to the livelihood pattern have been furnished in detail through various angles in subsequent Tables 19.

Table 21: Livelihood sources of the victims and their share in income.

Sr. No.	Source	Frequency (Percentage)	Average / House Hold
A. Income			
1	Agriculture	40 (100%)	1,66,335
2	Allied occupation	01(02.50%)	45,000
3	Wages earning	26 (65.00%)	12,200
4	Business (professional/non-professional)	05 (12.50%)	20,000
5	Service / pension	01(02.50%)	84,400
	Total Income (A)		**1,08,487**
B. Expenditure			
1	Food	40 (100%)	83,420
2	Clothing	40 (100%)	10,690
3	Education	35 (87.50%)	13,665
4	Health	24 (60.00%)	22,620
5	Agriculture	40 (100%)	28,710
6	Other	40(100%)	10,447
	Total Expenditure (B)		**1,69,552**
	Surplus/deficit (+/-) (A-B)		**-61,065**

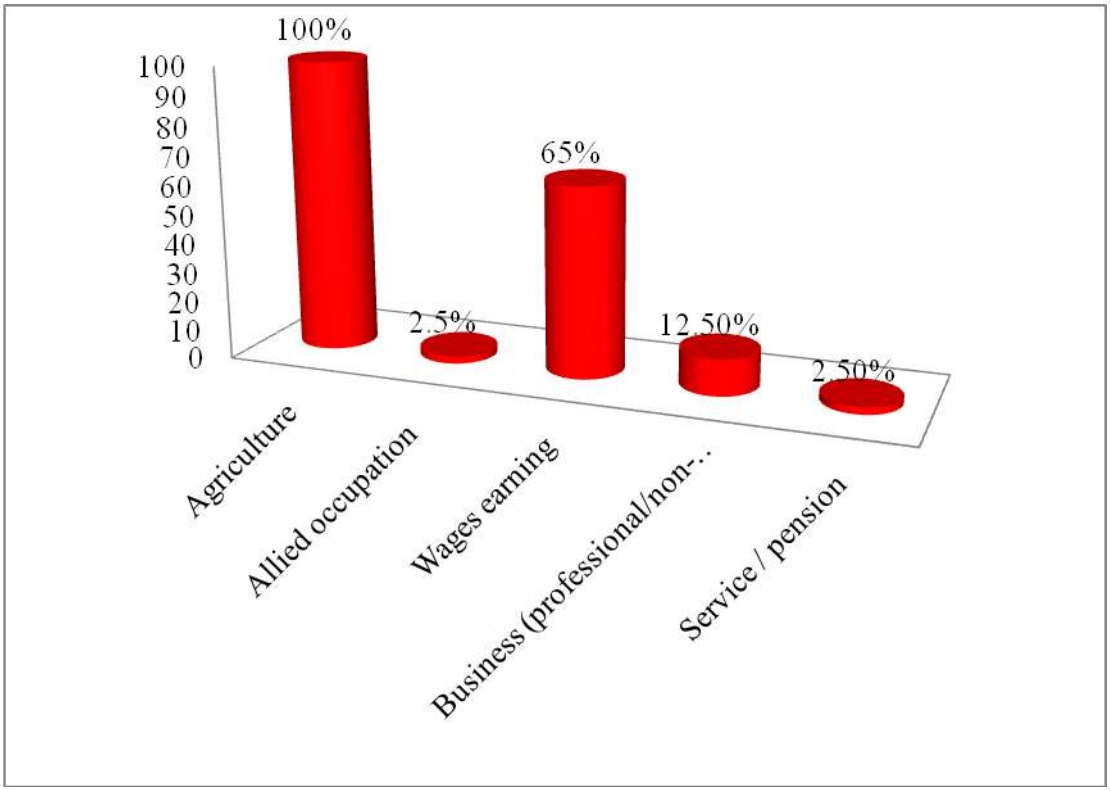


Fig17: Distribution of victim according to income sources

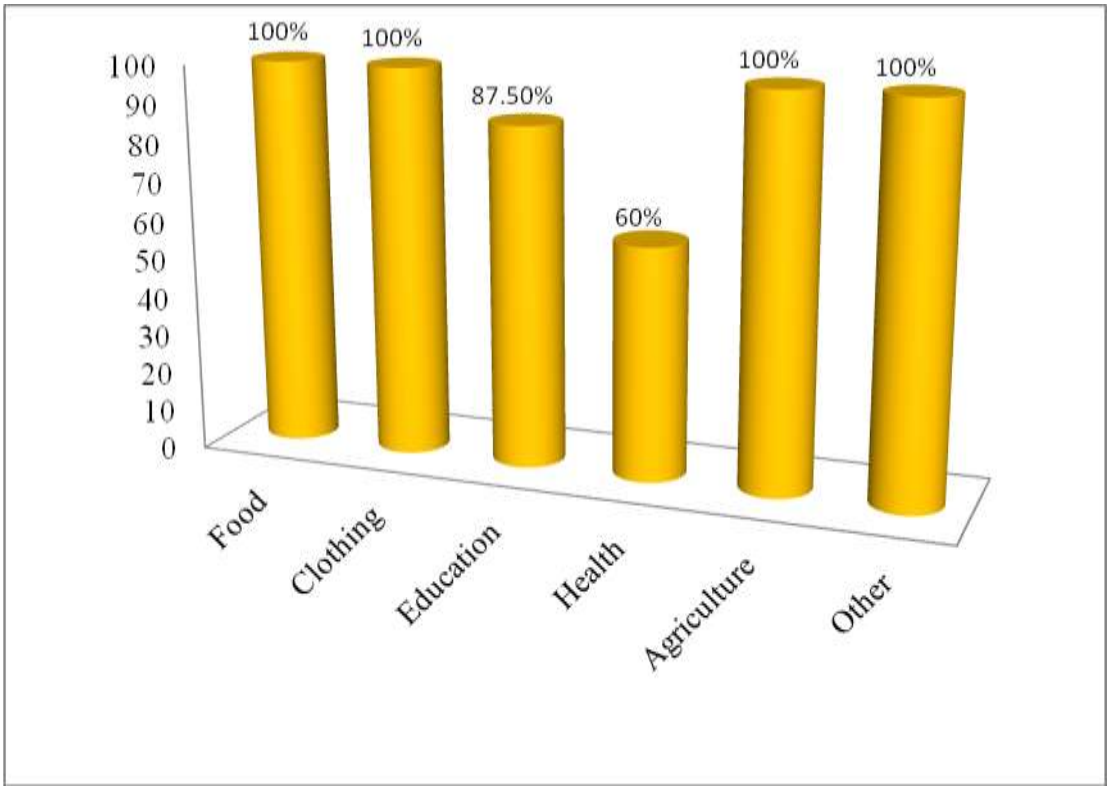


Fig18: Distribution of victim according to expenditure

It is observed from the Table 21 all over victims and his family had got the average total income Rs.1,08,487.00 from agriculture, followed by 62.50 per cent victims and his family had got the average total income Rs. 67,640.00 from wages, 30.00 per cent victims and his family had got the average total income Rs. 2,44,333.00 from service/pension, 22.50 per cent victims and his family had got the average total income Rs.59,111.00 from any professional and non professional business. 12.50 per cent victims and his family had got the total average income from allied occupation such dairy, goat farming etc.

In case of expenditure about overall victims had the average expenditure on food has largest share contributing nearly Rs.34550.00, total victims had the average expenditure on clothing Rs.8400.00, all victims had the average expenditure on agriculture Rs. 43697.00 near about all victims had the expenditure on other things such as home maintenance, travel, religious functions, animal husbandry, light bill and marriages, 95.00 per cent victims had the average expenditure on health Rs.88631, 65.00 per cent victims had the average expenditure on education Rs.41270.00

Thus it could be concluded that among the present livelihood sources it is found that only agriculture is the major livelihood source of overall deceased farmers. If there is any crisis in the agriculture then society has to face subsequent apathy.

The present findings are in consonance with the findings reported by Kale (2008)

4.1.18 Extent of Family Responsibility Fulfilled

Extent of family responsibilities fulfilled by an individual victims related to six major type of family responsibilities namely children's education, daughters/sister marriages, health treatment of family members, rituals after death in family, male children’s marriages and to perform the responsibility of

widow/divorced/disputed daughter or sister in family has been studied and the results are depicted in Table 22

Table 22: Distribution of the victims according to the responsibilities holds and their extent of fulfillment.

Sr. No.	Family Responsibilities	Holds	Extent of Fulfillment				
			Not at all	To little extent	To some extent	To great extent	To very great extent
			No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
1	Children's education	35 (87.50)	00 (00)	18 (51.42)	12 (34.28)	03 (08.57)	02 (05.71)
2	Daughter / sister marriages	23 (57.50)	00 (00)	03 (13.04)	06 (26.08)	08 (34.78)	06 (26.08)
3	Health treatment of family members	22 (55.00)	00 (00)	02 (09.09)	04 (18.18)	05 (22.72)	11 (50.00)
4	Rituals after death in family	08 (20.00)	00 (00)	00 (00)	06 (75.00)	00 (00)	02 (25.00)
5	Male child marriages	14 (35.00)	00 (00)	02 (14.28)	01 (7.14)	05 (35.71)	06 (42.85)
6	Responsibility of widow / divorced / disputed, daughter/ sister in family	01 (02.50)	00 (00)	00 (00)	01 (2.50)	00 (00)	00 (00)

It is observed from Table 22 out of total 40 victims majority 87.50 per cent victims holds the children's education responsibility in family, out of this 51.42 per cent victims had fulfilled this responsibility to little extent. This was followed by 34.28 per cent victims fulfilled it to some extent, 08.57 per cent cases fulfilled it to a great extent and only 05.71 per cent victims fulfilled it to very great extend of children's education responsibility.

Daughter/ sister marriages is an important obligation of family members, which holds by more than half 57.50 per cent victims, out of this majority 34.78 per cent victims had fulfilled the daughter/ sister marriages to a great extent. followed by 26.08 per cent victims has fulfilled daughter/ sister

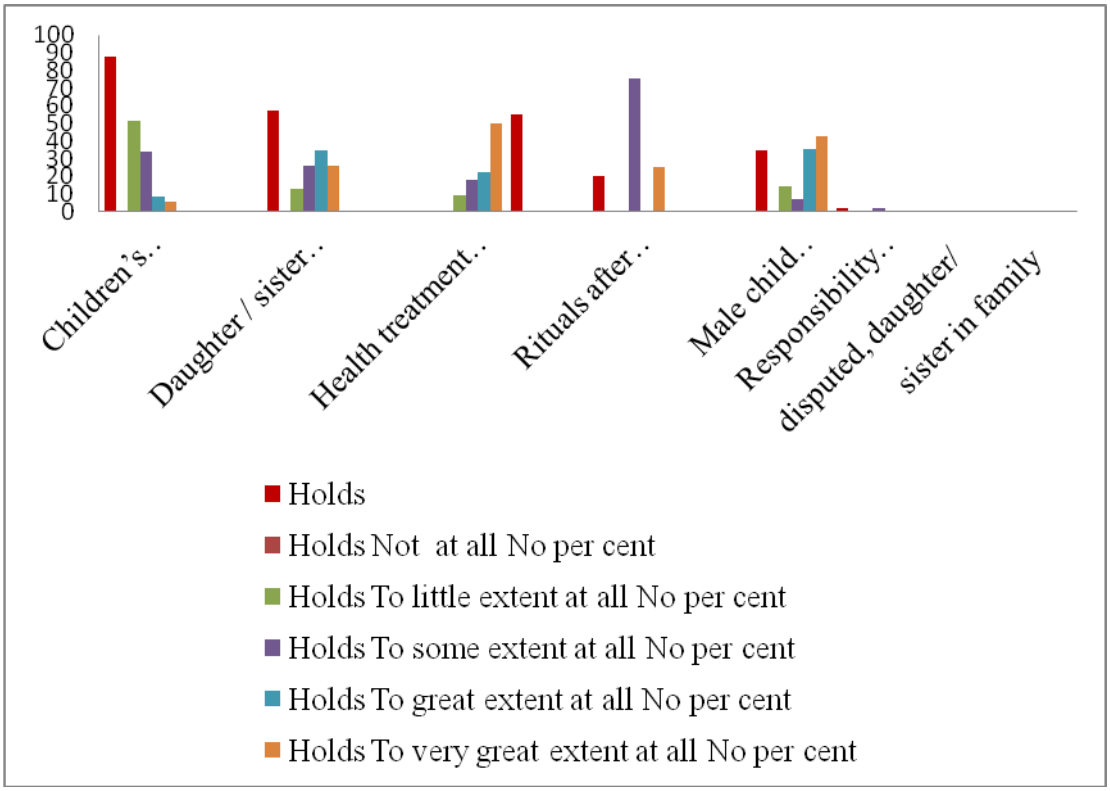


Fig20: Distribution of victim according to extent of family responsibilities fulfilled

marriages to a very great extend, 26.08 per cent victims had fulfilled it to some extent, 13.04 per cent victims fulfilled it to little extent.

Responsibility of health treatment of family members has been hold by 55.00 per cent victims, out of this majority 50.00 per cent victims had fulfilled it to very great extent, followed by 22.72 per cent victims to great extent, 18.18 per cent victims to some extent, and by only 9.09 per cent victim had fulfilled it to little extent.

Rituals after death in family has been hold 20.00 per cent victims, out of this majority of 75.00 per cent victims had fulfilled it to some extent, remaining 25.00 per cent fulfilled it very great extent.

Responsibility of male child marriages has been hold by 35.00 per cent victims; out of this 42.85 per cent victim had fulfilled it to a very great extent. Followed by 35.71 per cent victims fulfilled it to a great extent, 14.28 per cent victims had fulfilled it to little extend and only 7.14 per cent victim fulfilled it to some extent.

Responsibility of widow / divorced /disputed, daughter/sister in family has been hold by 2.50 per cent victims; all the 100.00 per cent victim has fulfilled it to some extent.

The present findings coincide with the findings of Kale (2008)

Ability To Perform The Family Responsibility

Table 23: Distribution of the victims according to the responsibilities holds and their ability to perform the family responsibilities

Sr. No.	Family responsibilities	Holds	Ability to perform		
			Able to Fulfill partially	Able to Fulfill completely	Unable
			No. (%)	No. (%)	No. (%)
1	Children's education	35 (87.50)	19 (54.28)	14 (40.00)	02 (05.71)
2	Daughter / sister marriages	23 (57.50)	17 (73.91)	06 (26.08)	00 (00)
3	Health treatment of family members	22 (55.00)	06 (27.27)	11 (50.00)	05 (22.72)
4	Rituals after death in family	08 (20.00)	05 (62.50)	03 (37.50)	00 (00)
5	Male child marriages	14 (35.00)	09 (64.28)	05 (35.71)	00 (00)
6	Responsibility of widow / divorced /disputed, daughter/sister in family	01 (02.50)	00 (00)	00 (00)	01 (2.50)

It is observed from table 23 out of the total 40 victims 87.50 per cent victims had holds the responsibility of children's education. Out of this 54.28 per cent victims were able partially to fulfilled the responsibility of children's education, followed by 40.00 per cent victims were able to fulfilled it completely and 5.71 per cent victims was unable to fulfill their children's education.

Responsibility of daughter/ sister marriages in family hold by 57.50 per cent victims, out of this majority of 73.91per cent victims were able to fulfilled partially the responsibility of daughter/ sister marriages. Followed by 26.08 per cent victims were able to fulfill completely and no one victims found unable to fulfilled responsibility of marriages of their daughter/ sisters in family.

As per as health treatment of their family member has been hold by 55.00 per cent victims, out of this majority 50.00 per cent of the victims were able to fulfill completely, followed by 27.27 per cent victims were able to fulfilled partially and 22.72 per cent cases were found unable to fulfill the responsibility.

Rituals after death in family has been hold by 20.00 per cent victims, out of this majority 62.50 per cent victims were able to fulfilled partially, remaining 37.50 per cent victims were able to fulfilled it completely.

While marriages of their male child in family hold by 35.00per cent, out of this 64.28 per cent victims were able to fulfill partially, followed by 35.71per cent victims was found able to fulfilled completely the responsibility of male child marriage.

As well as widow /divorced /disputed, daughter/sister in family has been hold by 02.50 per cent victims, near about all victims were unable to fulfill responsibility of divorced daughter.

4.1.19 Victim's habits

Habits are of two types, good and bad habits. Good habits of an individual promote health, wealth and everything, but bad habits may ruin everything. Once person becomes addicted to any habit, it becomes difficult to leave it. In various psychological autopsy research studies it was observed that bad habits like alcohol abuse or dependence were present in 25.00 per cent to 50.00 per cent cases those who died by suicide. Hence it is an important aspect to collect the information of alcohol addicted deceased farmers, with their other bad habits like smoking, chewing of tobacco, gambling etc.

An addiction of alcohol creates dispute among family member, increases unproductive expenses, create health issues on one hand, and absence of productive work on the other hand. It leads to economic distress.

The present findings coincide with the findings of Mishra (2006).

Table 24: Distribution of victim's according to their addiction

Sr. No.	Particulars	Number	Percentage (%)
1.	Victim's with addiction	24	60.00
2.	Victim's free from addiction	16	40.00
	Total	**40**	**100.00**

It is observed from Table 24 majority of 60.00 per cent victims were possessed either one or more bad habits with them, like chewing of tobacco, smoking, alcohol addiction or gambling, remaining 40.00 per cent were free from bad habits. The detailed information about bad habits of the selected victims has been presented in Table 25.

Table 25: Particulars about the existence of addiction among victims

Sr. No.	Habits	Frequency	Percentage (%)
1.	Chewing of tobacco	12	30.00
2.	Alcoholism	11	27.50
3.	Smoking i. Bidi - 00 ii. Cigar - 12 iii. Ganja - 02	14	35.00
4.	Gambling (Jugar / Satta)	01	02.50

It is observed from Table 25 that relatively higher proportion 35.00 per cent of the victims possessed regular Smoking habit, followed by 40.00 per cent having regular Chewing of tobacco habit, 27.50 per cent victims were observed under drinking alcohol habits, all over being smoke cigar. It was also observed that majority alcohol addicted victims also possessed additional likening of tobacco through chewing or smoking.

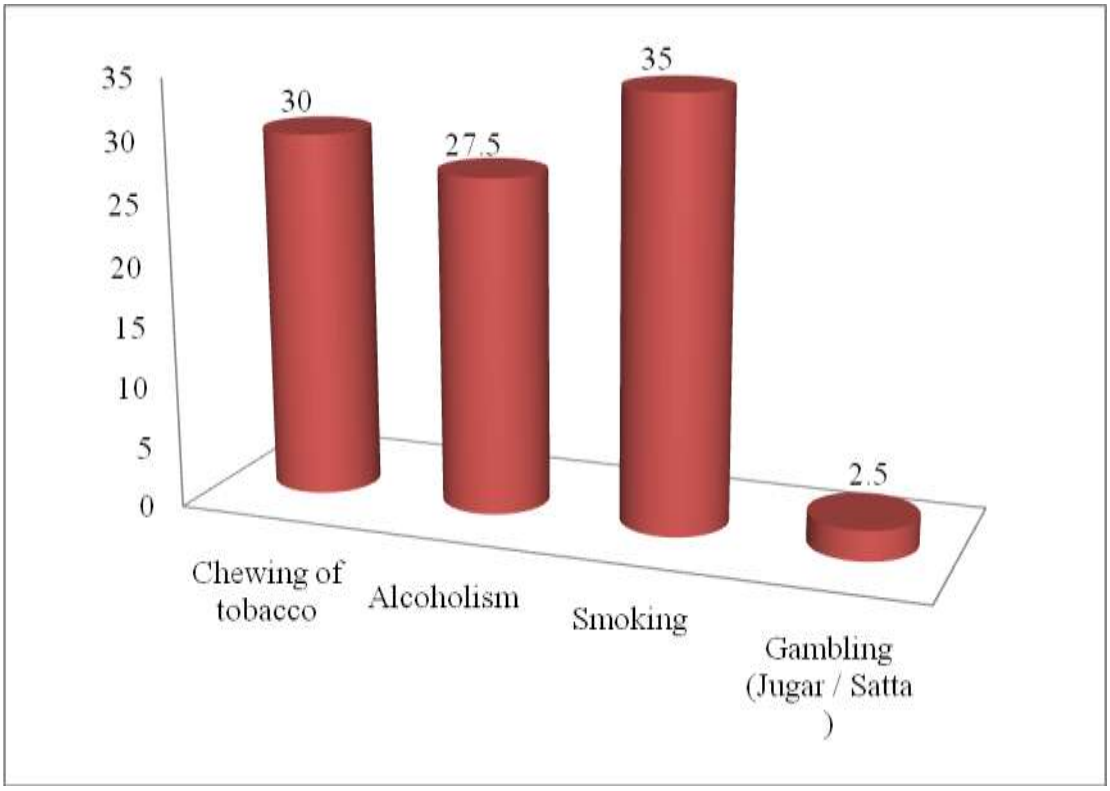


Fig21: Distribution of victim according to victims addiction

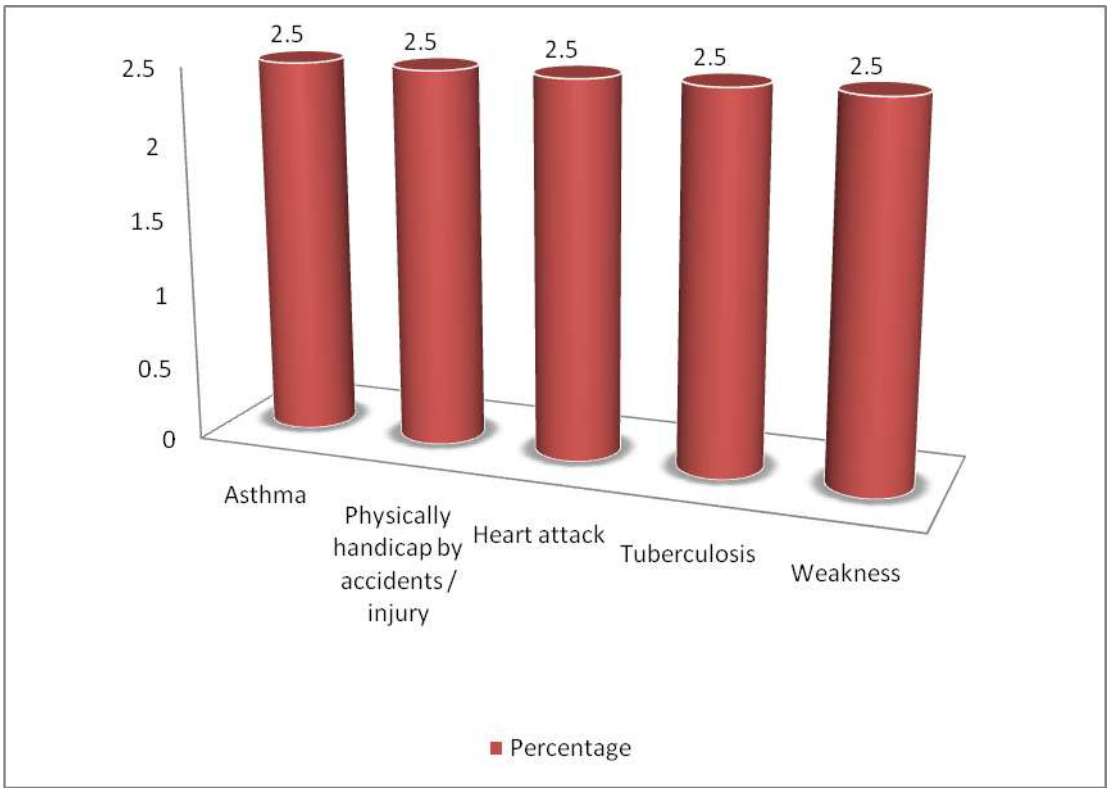


Fig22: Distribution of victim according to victims health

4.1.20 Victim's health

According to past research studies on suicide by various social scientists physical illness has been proved an important contributing risk factor of suicide in 10.00 to 51.00 per cent cases. Hence this is also important aspect of the present study. Here health status of suicide farmers during last five years before the incidence has been considered. The information on health status of the victims has been collected and present in Table 26.

Table 26: Distribution of victims according to their Health status

Sr. No.	Particulars	Frequency	Percentage (%)
1.	Victims having health problem	05	12.50
2.	Victims having free from health problem	35	87.50
	Total	**40**	**100**

It is observed from table 26 majority of 87.50 per cent victims had been observed free from disease, remaining 12.50 per cent victims had been ill.

Kale (2008) also reported similar finding that majority of the victims having free from health problem.

The details of the obvious diseases of selected deceased farmers have been presented in Table 27.

Table 27: Distribution of victims according to their Health problems

Sr. N0.	Name of diseases	Frequency	Percentage (%)
1.	Asthma	01	2.50
2.	Physically handicap by accidents / injury	01	2.50
3.	Heart attack	01	2.50
4.	Tuberculosis	01	2.50
5.	Weakness	01	2.50

It is observed from table 27 majority of 2.50 per cent victims had heart attack,2.50 per cent victims had Tuberculosis, 2.50 per cent victims had Asthma, 2.50 per cent physically handicapped, 2.50 per cent weakness.

4.1.21 Victims family health

In this study family health indicates the health status of victim's households excluding victim has been considered since from during last five years of incidence. Existence of any obvious diseases with family members has been considered for the study. It was assumed that some time ill health of family members may create financial problems for family head to take appropriate care due to poor economic condition. That leads again financial adjustment or to take loan from informal agencies. If family head unable to take appropriate care that leads again frustration. Hence this was also an important aspect of the study. The result pertaining to the health status of victims' households has been depicted in Table 28.

Table 28: Distribution of victims according to their Family members' health

Sr. No.	Particulars	Number	Percentage (%)
1	Family members having health problem	19	47.50
2	Family members were free from health problem	21	52.50
	Total	**40**	**100.00**

It is observed from Table 28 majority of 52.50 per cent victims family had not the health problem, remaining 47.50 per cent victims, ill health of his family members had been observed.

Kale (2008) also reported similar finding that majority of the victims having free from health problem.

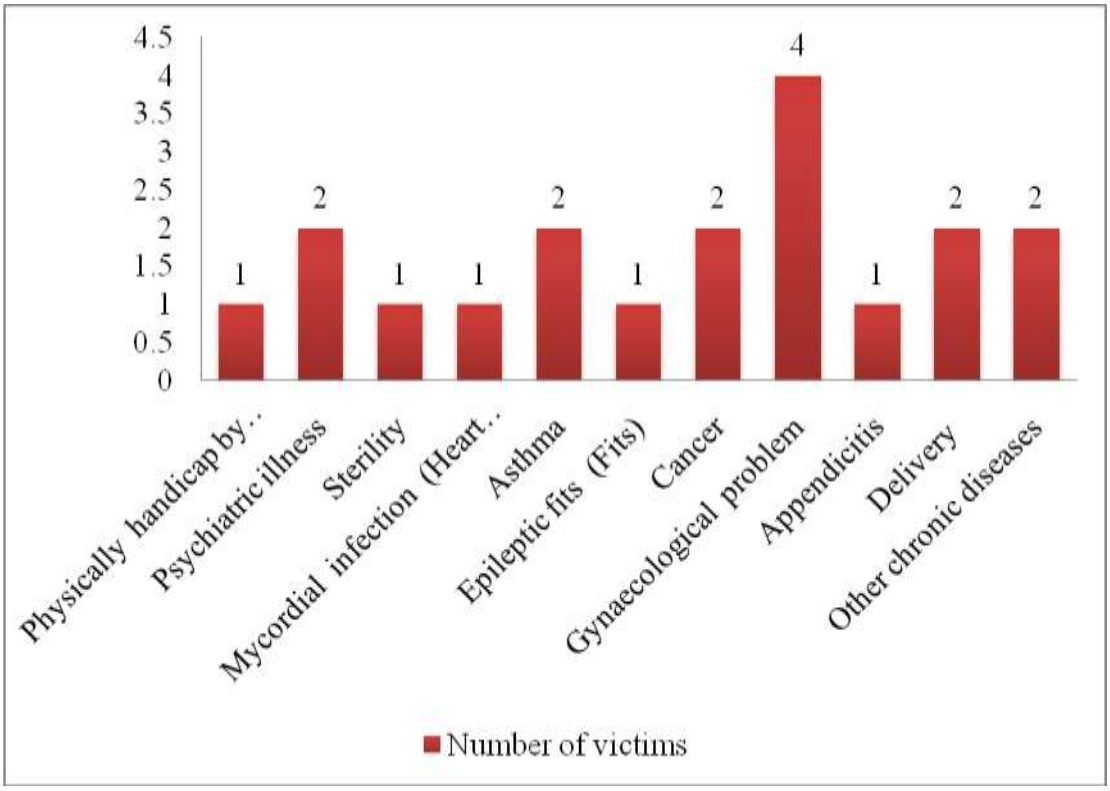


Fig23: Distribution of victim according to victims family health

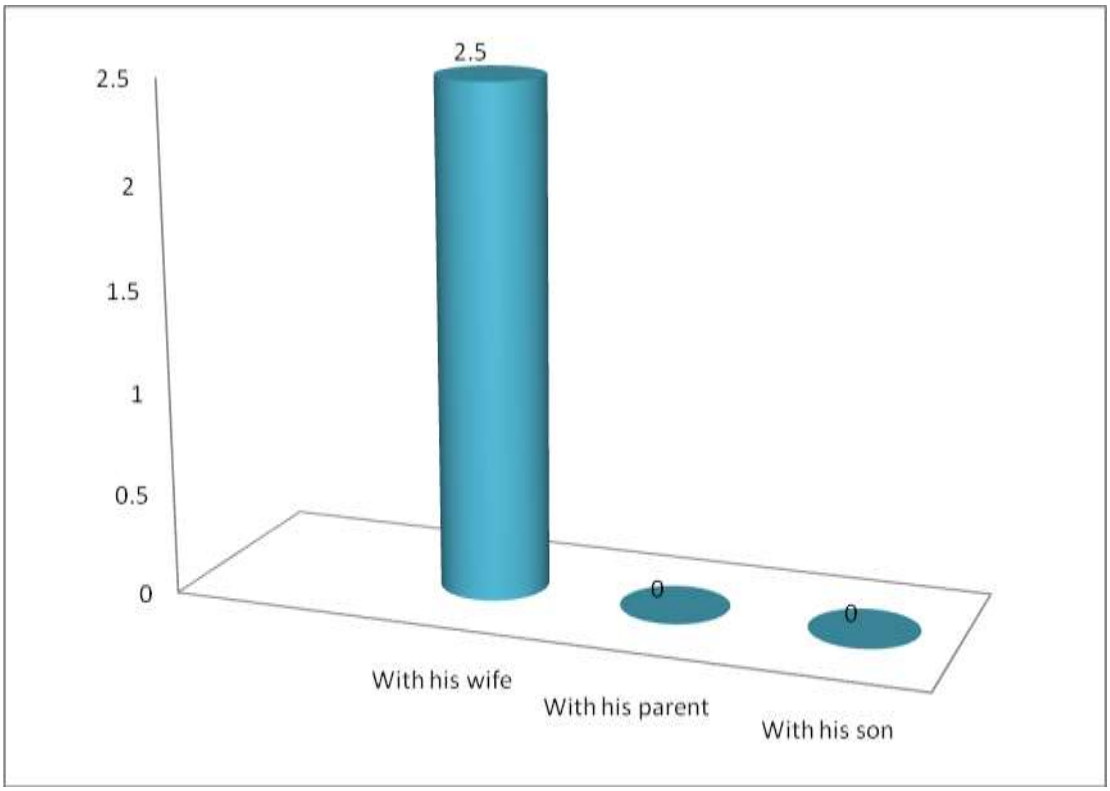


Fig24: Distribution of victim according to victims dispute

The detailed about the family members' health problem has been given in Table 29.

Table 29: Distribution of victim's family members according to their health Problems

Sr. No.	Name of diseases	Numbers
1	Physically handicap by accidents /injury	1
2	Psychiatric illness	2
3	Sterility	1
4	Mycordial infection (Heart attack)	1
5	Asthma	2
6	Epileptic fits (Fits)	1
7	Cancer	2
8	Gynecological problem	4
9	Appendicitis	1
10	Delivery	2
11	Other chronic diseases	2
	Total	19

(In one victim' family more than one family member had health problem)

It is observed from table 29 that among the ill health family members of the victims physically handicap by accidents /injury was observed prominently in family members, psychiatric illness, sterility, mycordial infection (Heart attack), Asthma, epileptic fits, cancer, gynecological problem, appendicitis, delivery and other chronic diseases were noted in family members of the deceased farmers.

4.1.22 Family dispute

Family disputes indicate the presence of dispute / quarrel between victim and his family members. As per the past research studied on suicides, presence of quarrel/ disputes has been proved as the specified cause of suicide. Hence in present study family disputes of the victims have been studied and data presented in Table 30.

Table 30: Distribution of victims according to their presence of dispute / quarrel with family members

Sr. No.	Victims	Number	Percentage (%)
1	Having dispute / quarrel with family members	1	2.50
2	Free from dispute / quarrel	39	97.50
	Total	**40**	**100.00**

It is observed from the Table 30 majority 97.50 per cent victims were free from any domestic disputes/ quarrel with their family members, remaining 2.50 per cent victims had disputes/quarrel with their family members and others due to domestic or other reasons. The detailed particulars about the presence of disputes/ quarrel among victims and his family members have been presented in Table 31.

Table 31: Particulars about presence of dispute / quarrel among victims and their family members.

Sr. No.	Dispute with	Frequency	Percentage	Reasons
1	With his wife	01	02.50	Domestic
2	With his parent	00	00.00	-
3	With his son	00	00.00	-

It is observed from table 31 out of the 40 victims majority of 10.00 per cent victims had dispute/ quarrel with his wife due to domestic reasons, there are no family dispute found with victims family.

Family dispute among the members of family has been also found immediate cause of farmers suicide among selected suicide victim. This dispute may be caused by addiction of alcohol, economic distress, love affairs and social stigma.

Kale (2008) also reported similar finding.

4.2 Socio-psycho Risk Factors of Suicide

The suicide is complex social and psychological phenomenon. Phal (2000) reported that the poverty, unemployment, loneliness, social and economic insecurity and conflicts in interpersonal relations are the important social factors contributing to suicid

Where as psychologically, the suicide prone person experiences mental distress because of certain crisis situation. Hence in present research study researcher had identified certain social and psychological risk factors that are external to the individual victim that definitely help in devising policy guidelines.

'Socio-psycho risk factors of suicide' is the dependent variable in present research endeavor. In present research study it was assumed that the farmers those who have committed suicide in Marathwada region, their social and psychological web might not be sustainable. They may have many social and psychological problems. These problems had created an adverse impact on their well being and impair the quality of life. In this study socio-psycho risk factors of suicide refers the aggregation of different socio-psychological risk factors coexisted with an individual victim externally since from during last five years of suicide incidence. The same has been studied and the data has been presented in Table 32.

The findings of the present study also corroborate with the findings reported by Behere and Behere (2008) and Kale (2008).

Table 32: Distribution of victims according to their identified Socio-psycho risk factors of suicides

Sr. No.	Risk factors	Frequency	Percentage (%)
A. Agriculture related			
1	Failure of crops due to drought / lack of supportive irrigation	38	95.00
2	Failure of crops due to hailstorm	01	02.50
3	Failure of crops due to insect / disease	01	02.50
4	Failure of crops due to less seed germination	00	00
5	Failure of crops due to unseasonal rains	00	00
6	Failure of dug open well or tube well	00	00
B. Indebtedness related			
1	Increased indebtedness	29	72.50
2	Torching by money lender for repayment of loan	04	10.00
3	Recovery pressure from money lender	05	12.50
4	Humiliation at public place by money lender	02	05.00
5	Availment of loan from non institution	10	25.00
C. Social			
1	Dowry	00	00
2	Divorce	00	00
3	Drop in social status	01	02.50
4	Drop in economic status	18	45.00
5	Marriageable age of daughters / sisters	13	32.50
6	Suicide of family member or any near pears	14	35.00
7	Dispute with the family member / neighbor or others	02	05.00
8	Death of the family member prior to suicide	00	00.00
9	Chronic illness or handicapped persons in the family	20	50.00
10	Involved of victims in criminal case	00	00.00
11	Defeated in the civil cases	00	00.00
12	Addictions of victim	23	57.50
13	Extra marital affairs victims	01	02.50
14	Extra marital affairs of victims family member	00	00.00
D. Psychological			
1	Loneliness	38	95.00
2	Behavioral changes in the victims before suicide	06	15.00

It is observed from Table 32 shows various agriculture related risk factor of suicide. It was seen that 95.00 per cent causes for suicide was failure of crop due to draught / lack of supportive irrigation, followed by 2.50 per cent, cause for suicide was failure of crop due to insect and disease, 2.50 per cent failure of crop due to hailstorm.

As per as indebtedness related risk factors of suicide, it was seen that 72.50 per cent causes for suicide was increased indebtedness, followed by availment of loan from non institution 25.00 per cent, recovery pressure by money lender 12.50 per cent, torching by money lender for recovery of loan 10.00 per cent, humiliation at public place by money lender (5.00per cent) and Auction of assets / livestock / other household stocks.

While in social risk factors of suicide, it is seen that majority addiction of victims 57.50 per cent followed by chronic illness or handicapped person in the family 50.00 per cent , causes for suicide was drop in socio-economic status 47.50 per cent, suicide of family member or any near pear 35.00 per cent , marriageable age of daughter / sister 32.50 per cent, dispute with the family member/neighbor or other, extra marital affair of victims 2.50 per cent.

In psychological risk factors of suicide, it is seen that loneliness 95.00 per cent followed by 15.00 per cent psychological causes of suicide was behavioral changes in the victims before suicide.

4.3 Source Wise Indebtedness

Table 33: Indebtedness position of the victims' households according to the credit sources

Sr. No.	Source	No of victims found		Amount in rupees per borrowing	Outstanding amount per victims	Per cent of outstanding to total credit availed
		Indebted	Defaulter			
A. Institutional source						
1	Co-operative bank	04 (10.25)	04 (100)	30250	82520	272.79
2	Nationalize bank	25 (64.10)	25 (100)	237440	384000	161.72
3	Rural bank	09 (23.07)	09 (100)	95223	137570	144.47
4	Self-help group	00	00	00000	0000	00000
B. Non-Institutional source						
5	Private money lender	07 (17.94)	07 (100)	74285	103000	138.65
6	Friends and relatives	09 (23.07)	08 (88.88)	117667	325200	276.37

It is observed from Table 33 majority of victims 64.10 per cent had taken the loan from nationalize bank. Followed by 23.07 per cent victims had taken loan from rural banks and same as that victims had taken loan from friends and relatives, 17.94 per cent victims had taken loan from private money lender, 10.25 per cent victims had taken loan from co-operative bank, no one victims had taken loan from self-help group and traders/merchants.

From co-operative bank the average loan Rs. 30250.00 taken by victims from co-operative bank with the outstanding amount Rs. 82520.00 where per cent outstanding to total credit availed was 272.79 per cent.

The average loan Rs. 237440.00 taken by victims from nationalize bank with the outstanding amount Rs 384000.00 where per cent outstanding to total credit availed was 161.72 per cent.

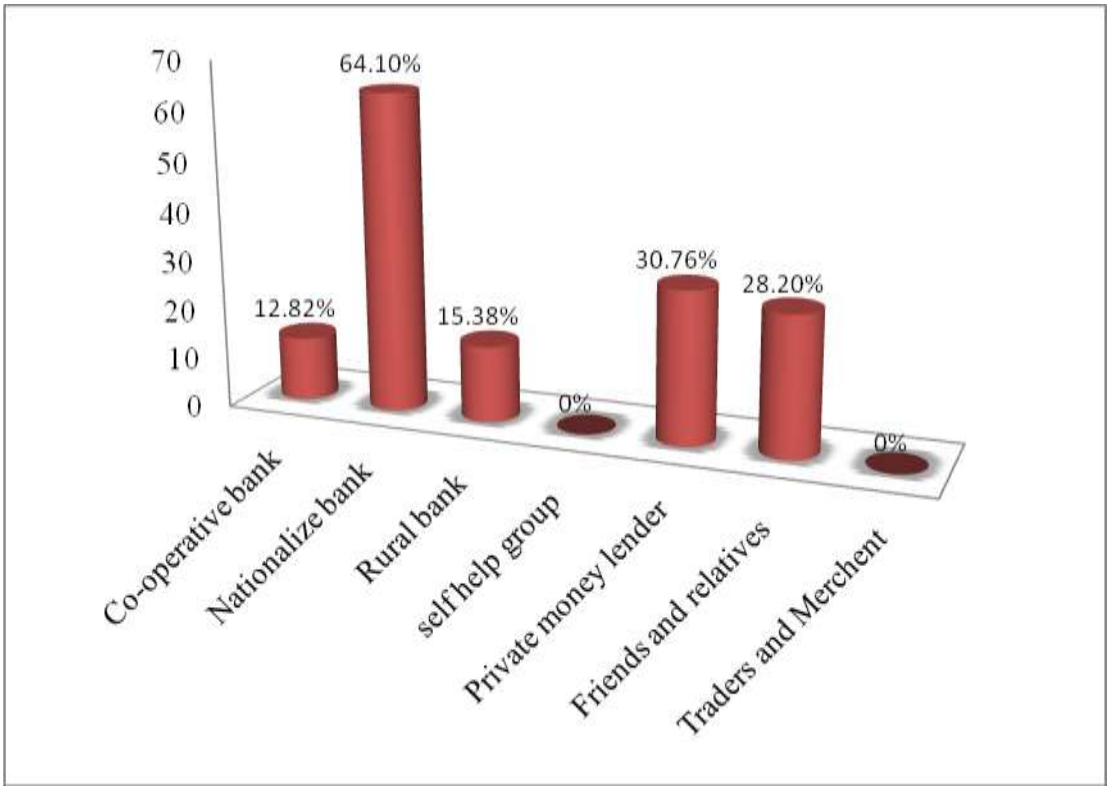


Fig16: Distribution of victim according to sources of credit

The average loan Rs. 95223.00 taken by victims from rural bank with the outstanding amount Rs 137570.00 where per cent outstanding to total credit availed was 144.47 per cent.

As per as private money lender are concern the average loan Rs. 74285.00 taken by victims from private money lender with the outstanding amount Rs 103000.00 where per cent outstanding to total credit availed was 138.65 per cent

The average loan Rs. 117667.00 taken by victims from friends and relatives with the outstanding amount Rs 325200.00 where per cent outstanding to total credit availed was 276.37 per cent

Thus from the above finding it is clear that the victims obtained the credits from multiple sources as 50.00 per cent victims had utilized both institutional and non-institutional credit sources for fulfilling their credit need. Hence 50 per cent victims possessed higher responsibilities to return the debts. Particularly borrowings from non-institutional sources like moneylenders, friends and relatives have to return it at the promised date. When farmers were not able to repay the money borrowed from friends and relatives or money lenders on time, it created tension and family problems as the creditors are very familiar and seen every day.

The above findings are in conformity with the observations of Satishkumar and Rao (2004), and Dev (2006), they reported that the victims obtained the credits from multiple sources for fulfilling their credit needs.

Table 34: Distribution of victims according to their outstanding debt

Category	Amount of debt in Rs.	Frequency	Percentage (%)
Low	Up to 20,831	04	10.25
Medium	20,832 to 5,25,491	33	84.61
High	5,25,492 and above	02	05.14
Total		**39**	**100.00**

It is observed from Table 32 majority of victims 84.61 per cent had medium outstanding debt amount, followed by 10.25 per cent victims had low debt amount, rest of 13.51 per cent victims had high debt amount.

4.4 Relational analysis

The data were subjected to the statistical tools like correlation. This correlation analysis will help in determining the relationship of selected personal, socio-economic, situational and socio-psychological characteristics of suicide farmers and their families with identified number of risk factors of suicide number of risk factors. The results are presented as follows

4.5 Correlation of Coefficient

Table 35: Coefficient of Correlation of selected characteristics of the Victims with their identified number of Socio-psycho Risk Factors of Suicides

Sr. No.	Characteristics	"r" value
A. Personal		
1	Age	-0.016
2	Education	0.082
3	Caste	0.148
4	Family size	0.040
5	Family type	0.103
6	Farming experience	-0.154
B. Socio-economic		
7	Land holding	0.056
8	Subsidiary occupation	-0.197*
9	Annual income	-0.212*
10	Socio-economic status	-0.068
C. Situational		
11	Type of land	0.164
12	Irrigation facilities	0.302*
13	Agriculture infrastructure	0.202*
14	Cropping pattern	0.068
15	Indebtedness	0.221*
16	Livelihood pattern	-0.026
17	Extent of family responsibility fulfilled	-0.046
D. Socio-psychological		
18	Victim's habits	0.037
19	Victim's health	-0.040
20	Family health	0.369**
21	Family disputes	0.059

** Significant at 0.01 level of probability *Significant at 0.05 level of probability

The correlation coefficients were computed which indicate the relationships of the selected characteristics of the victims with their identified number of risk factors of suicide. The findings obtained in this regard are depicted in Table 33.

A closer look at the values of correlation coefficient Table 34 brings into light that the personal characteristics namely, the age, education, caste, family size, family type and farming experience of the victims did not show any significant relationship with the identified number of risk factors of suicide. The non-significant relationship of these personal variables indicates that these variables have no significant influence over the identified number of risk factors of suicide of the victims. The reason might be that the identified number of risk factor might be governed by other variables like socio-economic, situational and socio-psycho variables. Hence the null hypothesis made earlier that "there is no significant relationship between personal, socio-economic, situational and socio-psychological characteristics of the victims with their identified number of socio-psychological risk factors of suicide" has been accepted and as such proved for all personal variables.

As regards to the socio-economic variables, the land holding and socio-economic status were found to have non-significant relationship with the identified number of risk factors of suicide, where as subsidiary occupation and annual income is observed to have negative significant relationship with the identified number of risk factors of suicide. This shows that with the decrease in income the risk factors of suicide with the victims are more prominant and hence presence of low income has been proved as one of the specified cause of suicide of farmers in Marathwada. The reason may be that an income of the family is most important basic factors in everybody's life for fulfilling family needs. Everything can be adjusted but not the money. The annual income of the victims directly influences the economic viability, stability and rational behaviour of an individual and hence the decreasing the income levels increases the risk factors in an individual victim that is quite

natural. Hence the general hypothesis of the present study that the present spate of suicides in Marathwada region of Maharashtra is due to economic crises has been accepted and proved.

As per as situational characteristics the type of land and cropping pattern are positively non-significant. Livelihood pattern and extent of family responsibility fulfilled were negatively non-significant related with the identified number of risk factors of suicide, where as irrigation facilities available with victims were observed to be having negatively significant relationship with identified number of risk factors of suicides. This indicates that with the decrease in irrigation facilities with victims there had been an increase in risk factors of suicides among the victims. This indicates that the irrigation facilities with individuals definitely increased the production, productivity and finally income level of an individual, but irrigation potential among the selected victims was found to be very low. This may be the cause for increasing the risk factors of suicide among the victims.

In addition to this, indebtedness, irrigation facilities and agriculture infrastructure has shown positive significant relationship with identified number of risk factors of suicide. This shows that with increasing the indebtedness and agriculture infrastructure there is an increase in risk factors of suicide. There are many causes of increasing inability to repay the loans among farmers i.e. high rate of interest, low rate of return, crop failure, low level of income and so on.

In group of socio-psychological characteristics the victim's habit, family dispute were observed positive non- significant relationship with identified number of risk factors of suicide of the victims. Victims health shows negatively non-significant relationship with identified number of risk factors of suicide of the victims. Whereas family health has shown positive and highly significant relationship, as a head of family he is always concern with the health of family and due to low income he may not able to provide all

medical facilities to his family members. Hence family health had shown highly significant towards risk factors of suicide of the victims.

4.6 Consequences

Suicide is a social phenomenon; it creates severe personal, social and economic consequences within family (Jacob 2006). In Marathwada farmers, who committed suicide were mostly the family heads and the main bread earner of the family members. The chronically brood agrarian crisis is wholly responsible for their spate of suicides and these suicides have been happened by and large due to low income level of the households and their deteriorating socio-economic status in the society. Though family head left from the severe agrarian crisis, it is very difficult for his family members to survive/ lives in the worst hit zone of Marathwada. For many victims' spouse or many widows and their family members suicide is not about the dead, it is about the living and for them they soldiers on. Every moment of life has been a struggle for them. In our field survey we have identified various severe consequences or changes that occurred after death of family head within the family and are recognized and intended by family members. The data pertaining to the identified consequences has been presented in four main heads as mentioned in Table 36.

Table 36: Distribution of victims' households according to their consequences

Sr. No.	Consequences	Frequency	Percentage (%)
A. Economical			
1	Discontinuation of agricultural activity	10	25.00
2	Discontinuation of allied business	08	20.00
3	Children of the victims had left the school	06	15.00
4	Children were sent to live with relatives	02	05.00
5	Postponement of child marriages	04	10.00
6	Dispute among family	02	05.00
7	Increase outstanding debt	29	67.50
8	Withdrawal of extra loan	06	15.00
9	Discontinuation of ill family member treatment	06	15.00
10	Land / livestock sold	07	17.50
11	Gold /jewelry sold	06	15.00
B. Social			
1	Disrepute in society	00	00.00
2	Break relationship by relatives	01	02.50
3	Barrier in girl marriage	00	00.00
C. Psychological			
1	Family member went in depression	32	80.00
2	Family member went neurotism	07	17.50
3	Developed a sense of hopelessness	26	65.00
4	Developed insecurity among family	23	57.50
5	Death of family member after suicide of victims	02	05.00
6	Loss of interest in work	15	37.50
7	Illness among family members	30	75.00

It is observed from table 36 various economical impact on victims family after his death such as increase outstanding debt 67.50 per cent, discontinuation of agricultural activity 25.00 per cent, discontinuation of allied business 20.00 per cent, land/ livestock sold 17.50 per cent, children of the victims had left the school 15.00 per cent, withdrawal of extra, discontinuation of ill family member treatment, gold/ jewelry sold respectively. Postponement of child marriages 10.00 per cent, 5.00 per cent Children were sent to live with relatives and dispute among family

As per as social impact on victims family such as disrepute in society not observed, break relationship by relatives 2.50 per cent, barrier in girl marriages not observed.

While in psychological impact on victims family such as family member went in depression 80.00 per cent, illness among family members 75.00 per cent, developed a sense of hopelessness 65.00 per cent, loss of interest in work 37.50 per cent, family member went neurotism 17.50 per cent, developed insecurity among family 5.00 per cent.

The findings of the present study also corroborate with the findings reported by Manjunatha and Ramappa (2017) and Kale (2008).

4.7 Suggestions to prevent suicide

Suggestion for avoiding present spate of suicides is one of the important aspects of this study. It refers the opinion of family members about what action should have to be taken for avoiding recurrence of suicides. Which can helps to some extent for finding out ground realities of suicides and helps to suggest different measures to solve farmers' distress in Marthwada region. The responses perceived from the family members of the deceased farmers have been noted and presented in Table 37.

Table 37: Suggestions to prevent suicide as perceived by the family members of the deceased farmers.

Sr. No.	Suggestions to prevent suicide	Frequency	Percentage (%)
1.	Remunerative prices to farm produce.	30	75.00
2.	Provision/ creation of irrigation facilities.	13	32.50
3.	Complete ban on alcohol and gambling	03	07.50
4.	Abundant electric supply for farming.	03	07.50
5.	Complete waiving of old loans.	28	70.00
6.	Creation of subsidiary occupations as other income sources.	08	20.00
7.	Crop insurance should provide for all crops	10	25.00
8.	Job availment for any family member	08	20.00
9.	Mass marriages system should be encourage in society.	04	10.00
10.	Strict vigilance on the quality of inputs in the market.	10	25.00
11.	Affordable health treatment for all	03	07.50
12.	Skill development programs for farmers	04	10.00
13.	Waiving educational fee's in the year of natural calamity	20	50.00
14.	Development of agriculture infrastructure facility and input at low cost	10	25.00
15.	Special scholarship should be provided by government to the student of farming community	20	50.00
16.	Small and marginal farmer should be benefited from Gharkul yojana	10	25.00
17.	Alcohol should be banned in every village	03	07.50
18.	Information of every government scheme related to agriculture and rural area should be reached to the farmer	04	10.00

It is clear from Table 37 suggestion given by victims family was remunerative prices to farm produce 75.00 per cent, complete waiving of old loans 70.00 per cent, waiving educational fees in the year of natural calamity 50.00 per cent, special scholarship should be provided by government to the student of farming community 50.00 per cent, provision/ creation of irrigation facilities 32.50 per cent, strict vigilance on the quality of inputs in the market

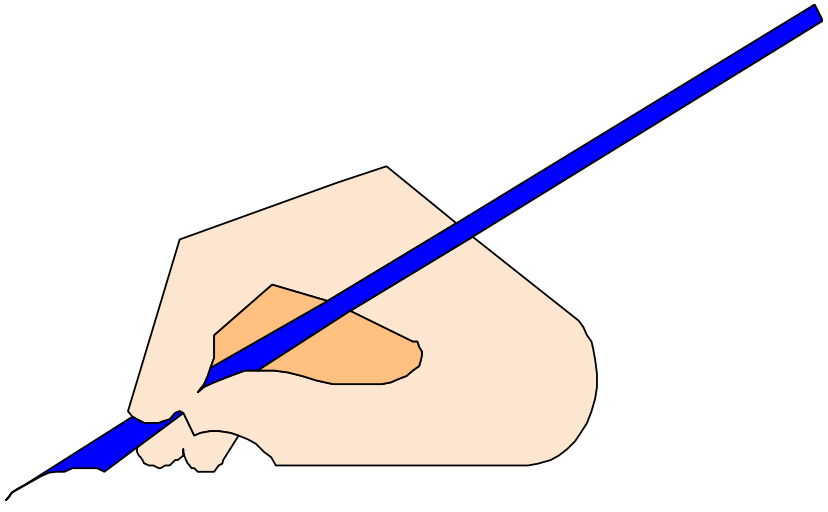
25.00 per cent, crop insurance should provide for all crops 25.00 per cent, reasonable rate of light bill, development of agriculture infrastructure facility and input at low cost 25.00 per cent, small and marginal farmer should be benefited from Gharkul yojana 25.00 per cent, creation of subsidiary occupations as a other income sources 20.00 per cent job availment for any family member 20.00 per cent.

Skill development programs for farmers 10.00 per cent, total subsidy on micro irrigation, information of every government scheme related to agriculture and rural area should be reached to the farmer 10.00 per cent, mass marriages system should be encourage in society 10.00 per cent, complete ban on alcohol and gambling 07.50 per cent, abundant electric supply for farming 07.50 per cent, affordable health treatment for all 7.50 per cent, alcohol should be banned in every village 07.50 per cent. Thus it was concluded that, majority of the victims' family members suggested for complete waiving of old loans as the important measures to be taken to prevent the recurrence of suicide tragedies. The present findings are in line with the findings reported by Deshmukh *et al*. (2007).

Farmers' suicides are the result of the agrarian crisis, which cannot be solved only with firefighting techniques. A well thought concerted strategy for the both short and long term is needed. While the government should have to focus on above suggestions made by the family members' of deceased farmers. Majority of the family members suggested for complete waiving of old loans. That means there is an urgent need to declare immediately to announce complete waiving of old loans in Marathwada region.

The findings of the present study also corroborate with the findings reported by Manjunatha and Ramappa (2017), Kale (2008) and Deshmukh *et al.* (2007)

CHAPTER-V



SUMMARY AND CONCLUSIONS

CHAPTER V

SUMMARY AND CONCLUSIONS

Recently the phenomenon of suicides of the farmers' in Marathwada and other part of the country is one of the most tragic events in the history of India. In Marathwada particularly in low rainfall and low irrigation tracts farmers suicides have been happening in droves and the frightening phenomenon continues to persist and recur year after year, without any signs of abatement, hence this issue has been an important among thinkers, researcher and social workers. Why does this happen? Which are the real causes. For finding the answers of these questions including studying the consequences after suicide of family head and by taking suggestions from victims' households to avoiding these tragic phenomenon the current exercise was conducted in highly suicide prone districts of Marathwada i.e. Hingoli. The independent variables selected for the study was age, education, caste, family size, family type, farming experience, land holding, subsidiary occupation, annual income and socio-economic status, type of land, irrigation facilities, agriculture infrastructure, productivity, indebtedness, livelihood pattern, extent of family responsibility fulfilled, victim's habits, victim's health, family health and family dispute. While 'Socio-psycho risk factors of suicides' with the victim was studied as dependent variable. The primary data was collected through personal interview for the year 2017-18, for fulfilling the following specific objectives.

5.1 Specific objectives of the study

1) To study the personal, socio-economic, socio-psycho and situational characteristics of the farmers and families of the farmers who committed suicides.

2) To study the socio-economic, psychological and situational causes which compelled the farmers to commit suicide.

3) To study the credit sources and indebtedness of the suicide farmers.

4) To study the relationship between selected characteristics of suicide farmers' with their identified risk factors of suicide.

5) To study the post suicide consequences faced by farmers families.

6) To document the suggestions for avoiding suicides of farmers.

5.2 Methodology

The study was conducted in highly suicide concentrated Hingoli districts of Marathwada by conducting field survey with exploratory design of social research. In this study the respondents were the households of selected victims, those who committed suicide during January 2015 to December 2017 and had declared as a legal victims. In all 40 legal victims' households formed the sample of the study. Victims were selected with the help of proportionate method of random sampling, which covers 24 villages and 3 tahsils of Hingoli districts.

5.3 Results and Discussion

5.3.1 Distributional Analysis

5.3.1.1 Age

The age's wise distribution of the victims 40 per cent were under middle age category, followed by 37.50 per cent were old age and remaining 22.50 per cent victims were found under young category.

It is inferred that middle age and old group seems to be more prone to suicides as compare to young. Probably this is the age group farmers have lot of family responsibilities on their shoulder. Therefore, they went in economic distress. Consequently large number of young and middle age group famers committed suicide.

5.3.1.2 Education

Out of the total sample 37.50 per cent were illiterate. Within the literates 25.00 per cent victims were having education up to primary school level and 15.00 per cent were educated up to high school level. While 10.00 per cent victims had higher secondary school level education. Only 07.50 per cent possessed UG level education and 05.00 per cent had middle school level education.

Illiteracy and traditional education system is largely responsible for increasing economic distress in Maharashtra. An uneducated people do not get knowledge of global changes and educated person is apathy to play role as a farmer in farm business due to absence of skill and educational fatigue. Any single suicide victim and respondents were not found taken formal education of agriculture science during visit.

5.3.1.3 Caste

Majority 80.00 per cent suicide cases were belonged to open category from all selected three tahsil (Maximum 30 cases from Maratha caste and 2 cases from wani caste). This was followed by 7.50 per cent victim's were observed from Other Backward Class (OBC) group (Kumbhar from three tahsil) ,Vimukta Jati (VJ-A) category were 5 per cent (Maximum from Banjara caste from Vasmat tahsil). The victims belonging to SC category (2.50 per cent) and among SC category mostly Budha from Aundha tahsil. Where as 2.50 per cent victim's were belonging from Nomadic Tribe-D group (Wanjari from Vasmat tahsil).

Caste structure plays a significant role in determining the occupational structure of Maharashtra. Predominantly the Marathas are the agriculturist community. Marathas have higher land holding as compare to other caste. Therefore, if there is any crisis in the agriculture then society has to face subsequent apathy.

5.3.1.4 Family Size

Majority 50.00 per cent suicides were concentrated in medium size family having 4 to 6 family members. While 27.50 per cent victims were having large family size (7 to 9 members), followed by 27.50 per cent victims were from very large family group having 10 or more than 10 family members.

10.00 per cent victims having small family size (up to 3 members).

Whereas only In medium and large size of family the income level of them is not sufficient so as to allow them to obtain basic commodities such as food and clothing, shelter, education and medical facilities for consumption on the one hand and to maintain cultivation expenditure on the other. Thus, it is inferred that majority of the suicides were concentrated between medium and large family size.

5.3.1.5 Family type

Maximum 72.50 per cent victims were from joint type of families and 27.50 per cent victim’s belonged to nuclear family.

Suicide is higher degree in the joint family. Because when a person is in trouble or under a strain, finds an outlet for his worries, in the form of suicide.

5.3.1.6 Farming experience

It is observed that victims 40.00 per cent had medium farming experience between 18 to 29 years, followed by 40.00 per cent of the victims had high farming experience 29 and above years. While 20.00 per cent victims had less farming experience up to 17 years.

Thus it is observed from the above findings that more or less in all categories of farming experience, suicides were happened. Secondly it was also noticed that as the farming experience is increased the suicides rates were declined.

5.3.1.7 Land holding

Majority 40.00 per cent of the victim's were small farmers having land holding between 1.01 to 2.00 hectares, followed by 37.50 per cent victims were marginal farmers possessing land up to 1.00 hectare. Where as 15.00 per cent and 5.00 per cent of the victims had semi medium (2.01 to 4.00 ha) and medium (4.01 to 10.00 ha) land holding, respectively.

The average size of holding in marginal, small, semi-medium and medium groups were 0.74 ha, 1.58 ha, 2.06 ha. and 11.2 ha respectively. The overall size of holding was worked out to 2.04 hectares.

Large number of selected suicide victim farmers was reported small and marginal farmers in Maharashtra. Small and marginal farmers often lack access to major agricultural services, such as credit, extension, insurance, and market. Small and marginal farmers were unable to meet the basic needs income generated from farm business. Therefore, size of farm land is also responsible for increasing farmer's suicide in Maharashtra.

5.3.1.8 Subsidiary occupation

Majority of victims 65 per cent were engaged in farm labour for wages earning as a supportive endeavor to farming and majority of them were

marginal and small farmers. While 22.50 per cent victims were have only farming as their main occupation and they did not have a any back up system, mostly they were medium (4.01-10.00 ha.) land holders. Whereas 12.50 per cent deceased farmers were doing either caste related or other non-professional business with farming.

Lack of farm employment has created the excess burden on agriculture. Excess burden of workforce has not only created pressure on agriculture but also increased the cost of cultivation and thereby resultant decline in returns from cultivation. Sometimes, excess supply of labour causes a decline in the wage rate below the subsistence level of living and increases the headcount of rural poverty among agricultural labourers.

5.3.1.9 Annual income

Majority of the victims 80.00 per cent had annual income between Rs. 16,173 to 2,13,253 this followed by 20.00 per cent respondents belonged from income group with annual income up to Rs. 2,13,254.

Marathwada regions of the state are far away from industrial development that's why they could not get opportunity of employment. Level of income generated through farm business is lower than non farm sector. Therefore, farmers are unable to meet the basic needs of our household.

5.3.1.10 Socio-economics status

Most of the deceased farmers were categorized in high level 65.00 per cent and medium level 17.50 per cent and 17.50 per cent victims were in low level of socio-economic status.

Thus the present research study accepted that the 75.00 per cent suicides were concentrated low of socio-economic status group. Mass poverty and illiteracy combined with caste system, religious beliefs, etc. adversely

affect the course of economic development Hence low Socio Economic Status is the one of the cause of suicide of farmers in Marathwada Region.

5.3.1.11 Type of land

Half of the deceased farmers 52.50 per cent were having light soil type of land, followed by 40.00 per cent respondents having medium soil type of land. While 07.50 per cent possess heavy soil type of land.

Thus, it is concluded that 50.00 per cent of the deceased farmers holds the land having light soil type of land. Similarly more or less in all type of land holder's suicides was happened.

5.3.1.12 Irrigation facilities

Nearly 47.50 per cent victims have not having any source to access the irrigation. They solely depend on monsoon rains. Nearly 35.00 per cent deceased farmers having only open well and tube well as irrigation source. Whereas remaining 15.00 and 2.50 per cent victims have canal and river respectively. It is also noticed that most of the well were either dry or not have sufficient water for irrigation due to depletion of groundwater and less rains in recent years. In addition to this for using available water for irrigation load shading of electricity was also the main hurdle was mentioned by family members.

It is also noticed that most of the well were either dry or not have sufficient water for irrigation due to depletion of groundwater and less rains in recent years. In addition to this for using available water for irrigation load shading of electricity was also the main hurdle was mentioned by family members.

It is therefore concluded that majority 47.50 per cent suicide cases were not having any source to access the irrigation. They were mostly depending on monsoon rains only; secondly due to lack of irrigation facilities

their cropping intensity and frequency of crop failure among rainfed farmers have been more. Hence lack of irrigation facility is also the one of the cause of farmers' suicides in Marathwada Region.

5.3.1.13 Agricultural infrastructure

Nearly 95.00 per cent deceased farmers were found to have medium input infrastructure, followed by 02.50 per cent had high input infrastructure and 02.50 per cent deceased farmer had low input infrastructure.

While considering availability of credit sources it is found that victims' households 95.00 per cent had medium availability of credit sources infrastructure, followed by 05.00 per cent had high credit sources infrastructure respectively.

Regarding availability of information infrastructure it is noted that majority of the respondents 87.50 per cent had medium availability of information infrastructure, followed by 10.00 and 2.50 per cent having low and high information infrastructure respectively.

The availability of transport facilities as infrastructure when studied it was observed that half 62.50 per cent households had low availability of transport facilities, followed by 37.50 per cent had medium availability of transport facilities.

While considering total infrastructure availability of five components, majority 90.00 per cent respondents were having medium infrastructure availability for there farming business, and 7.50 per cent had low infrastructure availability and only 2.50 per cent respondents was having high infrastructure availability . It is also noticed that not a single household was found, having low infrastructure availability in totality.

Seeds, fertilizers, pesticides and technology are major inputs of farm business. Farm saved seeds were replaced by corporate seeds which

needed fertilizers and pesticides. Consequently, cost of production has been increasing and agriculture became a costly affair. The Indian small farmers have failed to adjust with these changes. Managing finance for the agricultural work became a difficult task. Some small farmers leave farming and shifted other occupations due to lack of ability to understand the problems arise and grown in farm sector.

Roads, electricity, market, warehouses, communication means and processing industries are weak in Marathwada. Most of the high value crops are perishable and damaged during the travelling. Therefore, wastage of agriculture produces is found more and damaged produce could not get higher prices in market.

5.3.1.14 Productivity

The average yield of soyabean cultivated by victims was 12.72 qtl/ha. An maximum yield of soyabean was 36 qtl/ha and an minimum and yield of cotton was 3 qtl/ha.

Followed by average yield of cotton crop cultivated by victims was 13.40 qtl/ha. An maximum yield of cotton was 21 qtl/ha and an minimum yield of cotton was 4 qtl/ha.

In case of turmeric average yield was 21.87 qtl/ha. An maximum yield of turmeric was 36 qtl/ha and an minimum yield of 6 qtl/ha.

While in pigeon pea average yield was 6.65 qtl/ha. An maximum yield of pigeon pea was 11 qtl/ha and an average yield of pigeon pea was 5 qtl/ha.

Whereas average yield of wheat was 17.50 qtl/ha. An maximum yield of wheat was 34 qtl/ha and an minimum yield of wheat was 4 qtl/ha.

In case of Bengal gram average yield was 9.15 qtl/ha. An maximum yield of Bengal gram was 15 qtl/ha and an minimum yield of Bengal gram was 4 qtl/ha.

In sorhgum average yield was 11.47 qtl/ha. An maximum yield of sorghum was 27 qtl/ha and an average yield of sorghum was 3 qtl/ha.

Thus a perusal of the results it was concluded that almost in all crops productivity is very low hence here lower production and productivity on the farms of the victims has been proved as one of the cause of farmers' suicides in Marathwada region. Due to the low productivity of crop the victim were not able to get good farm produce. Hence farmers were unable to meet their daily needs from low returns.

5.3.1.15 Cropping pattern :

Majority of victims were growing soyabean 92.50 per cent, followed by cotton 65.00 per cent, Turmeric 20.00 per cent, and pigeon pea 7.50 per cent.

In rabi season majority of victims were found growing sorghum and wheat 17.50 per cent, followed by Bengal gram 37.50 per cent.

In annual / perennial crop only 02.50 per cent, victims growing orange crop.

In selected victims 10.00 per cent, had taken mono cropping, 27.50 per cent had taken intercropping.

Thus it could be concluded that over 57.50 per cent area were cultivated by taking only rainfed cotton and soyabean crops in kharif season, by selected deceased farmers. While very negligible area was under Rabi and horticultural crops it might be due to lack of irrigation facilities.

5.3.1.16 Indebtedness

As per as indebtedness is concern 97.50 per cent victims were found indebted, that mean majority of the victims have an obligation to pay debts to borrowed agencies/ sources, where as only one victims had not taken loan.

5.4.1 Source wise indebtedness

Majority of victims 64.10 per cent had taken the loan from nationalize bank. Followed by 27.07 per cent victims had taken loan from friends and relatives and rural banks, 17.94 per cent victims had taken loan from private money lender, 10.12 per cent victims had taken loan from cooperative banks.

The average loan Rs. 30250 taken by victims from co-operative bank with the outstanding amount Rs. 82520 where per cent outstanding to total credit availed was 272.79 per cent.

The average loan Rs. 2,37,440 taken by victims from nationalize bank with the outstanding amount Rs 3,84,000 where per cent outstanding to total credit availed was 161.72 per cent.

The average loan Rs. 95,223 taken by victims from rural bank with the outstanding amount Rs 1,37,570 where per cent outstanding to total credit availed was 144.47 per cent.

The average loan Rs. 74,285 taken by victims from private money lender with the outstanding amount Rs 1,03,000 where percent outstanding to total credit availed was 138.65 per cent.

The average loan Rs. 11,7,667 taken by victims from friends and relatives with the outstanding amount Rs 3,25,200 where per cent outstanding to total credit availed was 276.37 per cent.

Thus from the above finding it is clear that the victims obtained the credits from multiple sources as 50 per cent victims had utilized both institutional and non-institutional credit sources for fulfilling their credit need. Hence 50 per cent victims possessed higher responsibilities to return the debts. Particularly borrowings from non-institutional sources like moneylenders, friends and relatives have to return it at the promised date. When farmers were not able to repay the money borrowed from friends and relatives or money lenders on time, it created tension and family problems as the creditors are very familiar and seen every day.

5.4.2 Average outstanding debts

Majority of victims 84.61 per cent had medium outstanding debt amount, followed 10.25 per cent had low outstanding debt amount and remaining 5.14 per cent victims had high debt amount.

Indebtedness is one of the important responsible factor to increase suicidal tendency among farmers. There are many causes of increasing inability to repay the loans among farmers i.e. high rate of interest, low rate of return, crop failure, low level of income and so on.

5.3.1.17 Livelihood Pattern

All over 100 per cent victims and his family had got the average total income Rs.1,66,335.00 from agriculture, followed by 65 per cent victims and his family had got the average total income Rs. 12200.00 from wages, 12.50 per cent victims and his family had got the average total income Rs.20,000.00 from any professional and non professional business, 2.50 per cent victims and his family had got the average total income Rs. 84400.00 from service/pension, 2.50 per cent victims and his family had got the total average income Rs. 45,000.00 from allied occupation such dairy, goat farming etc.

In case of expenditure overall 100 per cent victims had the average expenditure on food has largest share contributing nearly

Rs.83,420.00, Followed by 100 per cent victims had the average expenditure on clothing Rs.10690.00, more than eighty per cent (87.50%) victims had the average expenditure on education Rs. 13665.00,near about all the victims had the expenditure on other things such as home maintenance, travel, religious functions, animal husbandry, light bill and marriages Rs.10447.00, all the victims had the average expenditure on agriculture Rs.28710.00 and 87.50 per cent victims had the average expenditure on education Rs.5248.00.

Thus it could be concluded that among the present livelihood sources it is found that only agriculture is the major livelihood source of overall deceased farmers. If there is any crisis in the agriculture then society has to face subsequent apathy.

5.3.1.18 Extent of Family Responsibility Fulfilled

Out of total 40 victims' majority 35 (92.50%) victims holds the children's education responsibility in family; out of this 18 (51.42%) victims had fulfilled this responsibility to little extent.while followed by 12 (34.28 %) victims fulfilled to some extent whereas 8.57 per cent victims fulfilled the responsibility to great extent and only two victims (05.71%) fulfilled the responsibility to a very great extent

Daughter/ sister marriages is an important obligation of family members, which holds by 23 (57.50 %) victims, out of this majority 8 (34.78%) victims had fulfilled the daughter/ sister marriages to a great extent. Whereas 6 (26.08%) victims had fulfilled it to some extent and very great extent. only 3 (13.04%) victims had fulfilled the daughter/ sister marriages to little extent.

Responsibility of male child marriages has been hold by 14 (35.00 %) victims; out of this 6 (42.85 %) victim each had fulfilled it to a very great extent. This was followed by 5 (35.71 %) victims had fulfilled it to a great extent. This was followed by 2 (14.28 %) victims had fulfilled it to little extent and single (7.14 %) victims had fulfilled it to some extent.

As per as health treatment of family members has been hold by 22 (55.00 %) deceased farmers, out of this majority 11 (50.00 %) victims each had fulfilled it to very great extent. While 5(22.72 %) victims had fulfilled it to a great extent. Whereas 4 (18.18 %) and 2 (09.09 %) victims had fulfilled some extent and to little extent.

Respectively rituals after death in family members has been hold by 08 (20.00 %) deceased farmers, out of this majority 06 (75.00 %) victims had fulfilled to some extent and other 02 (25.00 %) victims had fulfilled to a very great extent.

While meager 1 (2.50 %) victims holds the responsibility of widow / divorced /disputed, daughter/sister in family has fulfilled it to some extent.

5.3.1.19 Ability to perform the family responsibility

Out of the total 40 victims 87.50 per cent victims had holds the responsibility of children's education. Out of this 54.28 per cent victims were able partially to fulfilled the responsibility of children's education, followed by 40.00 per cent victims were able to fulfilled it completely and 05.71 per cent victims was unable to fulfill their children's education.

Responsibility of daughter/ sister marriages in family hold by 57.50 per cent victims, out of this majority of 73.91 per cent victims were able to fulfilled completely the responsibility of daughter/ sister marriages. Followed by 26.08 per cent victims were able to fulfilled partially responsibility of marriages of their daughter/ sisters in family.

As per as responsibility of health treatment of the family member has been hold by 55.00 per cent victims, out of this majority 50.00 per cent of the victims were able to fulfill completely, followed by 27.27 per cent victims were able to fulfilled partially and very few 22.72 per cent cases were found unable to fulfill the responsibility.

Marriages responsibility of their male child in family hold by 35.00 per cent, out of this 64.28 per cent victims were able to fulfill partially, and 35.71 per cent victims were found able to fulfilled completely the responsibility of male child marriage.

Whereas the responsibility of widow /divorced /disputed, daughter/sister in family has been hold by 02.50 per cent victim out of this 02.50 per cent victims were found unable to fulfilled the responsibility of divorced daughter.

Responsibility of rituals after death in family has been hold by 20.00 per cent, out of this 62.50 per cent victims were able to fulfill partially and 37.50 per cent victims were found able to fulfilled completely the responsibility of rituals after death in family.

5.3.1.20 Victim's Habits

Nearly 24 (60 per cent) deceased farmers were possessed either one or more addiction with them, like chewing of tobacco, smoking, alcohol addiction or gambling. Whereas 40 per cent were free from addiction.

An addiction of alcohol creates dispute among family member, increases unproductive expenses, create health issues on one hand, and absence of productive work on the other hand. It leads to economic distress.

5.3.1.21 Victim's Health

Majority of 87.50 per cent was free from health problems remaining 12.50 per cent victims had health problem**.**

5.3.1.22 Family Health

Out of total sample 52.50 per cent victims family health was good. While 47.50 per cent family members were having health problem.

5.3.1.23 Family Disputes

Out of total sample 97.50 per cent victims were free from any domestic disputes/ quarrel with their family members. While 2.50 per cent victims disputes/ quarrel was noticed with their family members due to domestic reasons.

An addiction of alcohol creates dispute among family member, increases unproductive expenses, create health issues on one hand, and absence of productive work on the other hand. It leads to economic distress.

5.5 Socio-psycho Risk Factors of Suicide

Agriculture related risk factor of suicide. It was seen that 95.00 per cent causes for suicide was failure of crop due to draught / lack of supportive irrigation, followed by 2.50 per cent causes for suicide was failure of crop due to hailstorms , 2.50 per cent cause for suicide was failure of crop due to insect and disease .

As per as indebtedness related risk factors of suicide. It was seen that 72.50 per cent causes for suicide was increased indebtedness, followed by 25.00 per cent causes for suicide was availment of loan from non institution, 12.50 per cent causes for suicide was recovery pressure by money lender, 10.00 per cent causes for suicide was torching by money lender for repayment of loan and 05.00 per cent causes for suicide was humiliation at public place by money lender.

Social risk factors of suicide. It was seen that majorly 57.50 per cent causes for suicide was addiction of victims, followed by 50.00 per cent causes for suicide was chronic illness or handicapped person in the family, 45.00 per cent causes for suicide was drop in socio-economic status, 35.00 per cent causes for suicide was suicide of family member or any near pear, 32.50 per cent marriageable age of daughter / sister, 2.50 per cent causes for suicide

was dispute with the family member / neighbor or others and 2.50 per cent causes for suicide was extra marital affairs victims.

While in psychological risk factors of suicide. It was seen that 95.00 per cent psychological causes of suicide was loneliness, followed by 15.00 per cent psychological causes of suicide was behavioral changes in the victims before suicide.

5.6 Relational Analysis

Relationship between selected characteristics of suicide farmers with their identified risk factor of suicide

Correlational analysis revealed that the all selected personal characteristics namely, the age, education, caste, family size, family type and farming experience of the victims were non-significant relationship with identified risk factors of suicide.

As per as socio-economics variables viz. land holding, annual income and socio-economic status were non-significantly related with the identified risk factors of suicide. Whereas subsidiary occupation has observed significant relationship with the identified risk factors of suicide.

While the situational characteristics viz. the type of land, irrigation facilities, agriculture infrastructure and cropping pattern were non-significantly related with the identified risk factors of suicide. Whereas indebtedness with victims were observed to be positive and highly significant relationship with identified risk factors of suicides. In addition to this extent of family responsibility fulfilled by the victims has shown the negative and non-significant relationship with identified risk factors of suicide.

Whereas socio-psychological characteristics of one concern family health had shown positive and significant relationship with identified risk factors of the victims suicide. While victim healths, victim habbits and

family dispute could not show any relationship with identified risk factors of victim suicide.

5.7 Consequences

As per as economic impact of family members after death of victims there was in more in debt among 67.50 per cent families .while 25.00 per cent of discontinuation of agricultural activity, 20.00 per cent discontinuation of allied business, 17.50 per cent sold land/ livestock, 15.00 per cent withdrawal of extra loan , 15.00 per cent children of the victims had left the school, 15.00 per cent discontinuation of ill family member treatment**.** 12.50 per cent postponement of child marriages, 5.00 per cent children were sent to live with relatives, 5.00 per cent occur dispute among family, 5.00 per cent sold gold/ jwellery .

While in social impact of victims family 2.50 per cent barrier in girl marriages were absented as social consequences.

Whereas psychological impact on victims family such as 80.00 per cent family member went in depression, 75.00 per cent loss of interest in work, 65.00 per cent developed a sense of hopelessness , 37.50 per cent illness among family members, 17.50 per cent family member went neurotism, 5.00 per cent developed insecurity among family, 2.50 per cent death of family member after suicide of victims.

5.8 Suggestions to Prevent Suicide

Suggestion given by victims family was 75.00 per cent Remunerative prices to farm produce, 70.00 per cent Complete waiving of old loans, 50.00 per cent special scholarship should be provided by government to the student of farming community, expressed about 32.50 per cent provision/ creation of irrigation facilities, while 25.00 per cent per cent crop insurance should provide for all crops, whereas 25.00 per cent small and marginal farmer should be benefited from gharkul yojana, 25.00 per cent development of

agriculture infrastructure facility and input at low cost. whereas 20.00 per cent victims family expressed about job availment for any family member, 20.00 per cent creation of subsidiary occupations as a other income sources, , ten per cent suggested about community marriages system should be encourage in society, information of every government scheme related to agriculture and rural area should be reached to the farmer. Only 7.50 per cent suggested that alcohol should be banned in every village, abundant electric supply for farming, affordable health treatment for all farming community respectively.

Thus it was concluded that, majority of the victims' family members suggested for complete waiving of old loans as the important measures to be taken to prevent the recurrence of suicide tragedies.

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CHAPTER-VI

IMPLICATION

CHAPTER VI

IMPLICATION

The study was undertaken to interviewing the socio-economic, psychological and situational causes of suicide farmer family in the light of finding the implication are given below.

Maximum numbers of victims observed very less market prices to their farm produce. Due to less market prices the annual income of farmers decreases tremendously.

The drying up of institutional credit and exploitative non institutional credit trap in the face of rising costs and declining profitability have led to pervasive indebtedness among farmers. High interest rate made farmers unaffordable to obtained loan. Less numbers of victims having allied occupation, source of irrigation is unavailable to the farmers and less water reservoir. Victim's family health's problems are observed, due to that indebtedness increases. For avoidance such type of problems following implication are necessary.

1. Remunerative prices for all the agricultural produce should be based on total cost of cultivation i.e. from land preparation to marketing of produce and then minimum support price should be declared.
2. Agriculture loan should be provided at low interest rates as like industrial sector for more infrastructure development.
3. The entrepreneurial training should be arranged to the family member of farmer based on the available resources in the respective villages by various extension agencies.
4. It is observed from the data that 02.50 per cent victim means only one victim had allied occupation which is negligible. Hence it is recommended to

promote IFS (integrated farming system) models for small and marginal farmers as a diversified source of income.

5. Based on the finding of the research to mitigate the drought situation in Hingoli district, the government should establish the farm pond or water reservoirs for the farmers, it will help to increase the area under irrigation.

6. Drought and insufficient water availability was the main cause of crop failure. Hence it is recommended for ground water recharge, rain water harvesting and distillation of ponds / tanks can increase water availability.

7. Crop failure and less income was found to be the basic cause of suicide. It is therefore suggested that the individual farmer should cover the crop insurance scheme. The state government should ensure through policy frame work the indemnity be paid within a week after reporting the failure of crop, which will decrease indebtedness among the farming community.

8. Victims family member suggested that government should make the policy to waive or reschedule the outstanding loan of farmers whenever the crop failure due to natural calamities. This will save the farmers from indebtedness.

9. Local and private moneylenders were the main non institutional sources who charges high interest rate and follow harsh ways to recover the loan amount. However, they approach the non institutional sources. Hence, the government should implement strong laws on non institutional lenders through cap on the interest rates equal to the institutional lenders through lending rates.

10. There should be certain institutional mechanism for post suicide welfare of the family should be undertaking and victims family should be given preference in availing the benefits of various development schemes at least for the period three years and special scholarship should be started to the children's of farming community for higher education.

11. The correlation coefficient between socio-psycho risk factor of suicide and 22 variables indicated that the irrigation facilities, agriculture infrastructure

and indebtedness and family health had positive and significant relationship with socio-psycho risk factor of suicide and socio-economic status, livelihood pattern, and victim health had negative and significant relationship. Extension agencies should give more emphasis on above variable the various extension programmes conducted in suicide prone areas of Marathwada.

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THESIS ABSTRACT

Department of Extension Education
College of Agriculture,
Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani.

Thesis Title

"SOCIO-ECONOMIC, PSYCHOLOGICAL AND SITUATIONAL CAUSES OF FARMERS SUICIDES IN HINGOLI DISTRICT"

Name of the student :**Mr. S. P. Kolhe** Research Guide: **Dr. R. D. Ahire**
Reg. No. : **2016 A/ 85 M** Head,
Degree : **M.Sc. (Agri.)** Dept. of Ext. Education,VNMKV, Parbhani

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ABSTRACT

The present study was conducted with specific objectives to study the "socio-economic, psychological and situational causes of farmers suicides in Hingoli district" for the study from Marathwada region of Maharashtra. The list of suicided farmers from 2010 to 2017 was obtained from Divisional Commissionerate Office, Auragabad. In Hingolidistricts During 2010 to 2017 total 189 farmers were suicided. Out of these eligible farmers were considered for the study. However, only 40 suicidedfarmers family could be interviewed during the study.'EX-POST-FACTO' research design is worthy to apply when the independent variables have already acted upon. Hence, this design was used in the present study.

Majority of the respondents were from middle age, had illiterate ,from open category,joint family type, medium family size, in between 19 to 29 years medium farming experience, small size of land holding, agriculture and wages earning was the subsidiary occupation, medium annual income, high socio-economic, light type of land, no source of irrigation, medium type agricultural infrastructure, soybean and cotton grower, indebted victims from nationalize banks friends and relatives, addicted victims, free from health problems, free from family health problem, free from dispute/quarrel.

Risk factors of suicide increases due to failure of crop (drought,lack of supportive irrigation), increased indebtedness, drop in economic status, loneliness.

The relationship of the characteristics of the suicide farmers namely education, caste, family size, family type, land holding, type of land ,irrigation facilities, cropping pattern, indebtedness, victims habits, family dispute was found to be positive and non-significant.

It was however, observed that the relationship between age and farming experience, subsidiary occupation, annual income, socio-economic status, livelihood pattern, extent of family responsibility fulfilled, victims health was negative and non-significant.

The relationship between agriculture infrastructure is positively significant and family health positively highly significant.

Maximum number of the victim's family suggested for 'Remunerative prices to farm produce,Provision/creation of irrigation facilities, Complete ban on alcohol and gambling, Abundant electric supply for farming community,Complete waiving of old loans, Provision of easy, timely and sufficient credit at low interest rate, Creation of subsidiary occupations as a other income sources, Crop insurance should provide for all crops, Job availment for any family member, Mass marriages system should be encourage in society.

Timely employment by creating non-farm employment opportunities.Strict vigilance on the quality of inputs in the market. Affordable health treatment for all, Control on private money lender, Control price fluctuation of agricultural commodity, Special scholarship should be provided by government to the student of farming community, Small and marginal farmer should be benefited from gharkul yojana, information of every government scheme related to agriculture and rural area should be reached to the farmer.

APPENDIX

विस्तार शिक्षण विभाग

वसंतराव नाईक मराठवाडा विदयापीठ . परभणी

कृषि महाविदयालय परभणी

मुलाखत प्रश्नावली

विषय ः हिंगोली जिल्हयातील आत्महत्याग्रस्त शेतक-यांची सामाजिक - आर्थिक. मानसिक आणि परीस्थितीनुरूप कारणे .

अभ्यासक ः कोल्हे एस . पी . **मार्गदर्शक ः डॉ . आर . डी . अहिरे**

नोंदणी क्र ः 2016A/90M विभाग प्रमुख

विस्तार शिक्षण विभाग

व . ना . म . कृ . वि . परभणी

आत्महत्याग्रस्त शेतक-याचे नाव ः

घाव ः **तालुका ः** **जिल्हा ः**

1} वय: वर्ष **लिंग :** स्त्रि/पुरूष **वैवाहिक माहिती:** विवाहित /अविवाहीत

आत्महत्येची तारिख :

2} शिक्षण :

अशिक्षीत

प्राथमिक

उच्च प्राथमिक

माध्यमिक

उच्च माध्यमिक

पदवी

पदव्युत्तर

तांत्रिक शिक्षण

3} जात ः **प्रवर्ग ः** खुला/ इ . मा . व . /अ . जा . /अ . ज . /भ . ज . /इतर

4} कुटूंब प्रकार ः विभक्त /संयुक्त

5} कुटूंबाचा आकार ः एकूण संख्या ः

अ . क्र .	**कुटूंबातील सदस्य**	**18 वर्षाखालील**	**18 वर्षावरील**
1	लहान मुले		
2	पुरूष		
3	स्त्रि		
4	एकुण		

6} शेतीचा अनुभव ः एकुण वर्ष

7} जमिनीची धारणा ः

अ.क्र.	जमिनीचा प्रकार	एकुण मालकीची जमिन	स्वतःची जमिन		दुस–याकडुन भाडेतत्वांवर घेतलेली
			स्वतः पिकवलेली	भाडेतत्वांवर दिलेली	
1	कोरडवाहू				
2	ओलिताखालिल { आठमाही }				
3	ओलिताखालिल { वर्षभर }				

8} पीक पदधती ः { आत्महत्यापूर्वीचे मागिल वर्ष }

पिक	क्षेत्र { हे. }		
	बागायत	जिरायत	एकूण
खरिप			
1			
2			
3			
4			
रब्बी			
1			
2			
3			
4			
उन्हाळी			
1			
2			
3			
4			
द्वीवार्षीक/ बहुवार्षीक			
1			
2			
फळबागा व इतर			
1			
2			
3			
4			

9} जोड व्यवसाय ः

1} शेती

2} शेती+शेतमजुर

3} शेती+दुग्धव्यवसाय

4} शेती+शेळी/ मेंढी/वराह पालन

5} शेती+कुककुटपालन/बदकपालण

6} शेती+रेशिम उदयोग

7} शेती+नोकरी {नंमुद करा }

8} शेती+इतर व्यवसाय

9} शेती+विकेता

10} शेती+वाहणचालक

10} सामाजिक व आर्थिक स्थिती ः

घटक/सुचक	Score
1} व्यवसाय ः	
अ} शेतक–याचा स्वताःचा व्यवसाय	
1}शेती+मजुरी	1
2}शेती	2
3}शेती+जोडधंदा	3
4}शेती +व्यवसाय	4
5}शेती + नोकरी	5
ब} कुटूंबातील इतर सदस्यांचा व्यवसाय {मुलगा /भाउ}	
1}मजुरी	1
2}शेती+मजुरी	2
3}शेती	3
4}शेती+जोडधंदा	4
5}शेती+व्यवसाय	5
6}शेती+नोकरी	6
2} जमिणीची थारणा ः	
अ} जमिणीचा आकार ः	
अ}सिमांत{1.00हे पर्यत}	1
ब}लहाण{1ते2हे पर्यत}	2
क}अर्ध–मध्यम{2 . 01ते4 . 00}	3
ड}मध्यम{4 . 01ते10 . 00}	4
इ}मोठा{10हे वर}	5
ब} शेतीचा प्रकार ः	
1 . कोरडवाहु	1
2 . ओलिताखालील	2
क} पिक पद्धती ः	
1}हंगामी पिक पद्धती	1
2}दोण पिक पद्धती	2
3}द्वीवार्षीक पिक पद्धती	3
4फळबागा	4
ड} पाण्याची उप्अलब्धता ः	
1}कोणताही नाही	0
2}नदी	1
3}विहीर	2

4}कालवा	3
इ} जमिणीची मालकी ः	
1} स्वमालकिची हे	1
2}भाडेतत्वावरील हे	2
ई}वार्षीक वेताणावरील सालगडी ः	
1}नाही	0
2}आहे	1
3}कुटूंबाचे शिक्षण ः	

अ.क	शिक्षण	पती	पत्नी		
1	अशिक्षीत				0
2	लिहता वाचता येने				1
3	प्राथमिक				2
4	माध्यमिक				3
5	उच्च.माध्यमिक				4
6	तांत्रिक				5
7	कला शाखेतील शिक्षण				5
8	पदवी				6

4}वार्षिक उत्पन्न ः	
1}दारिद्र रेषेखालिल	1
2}50000 पर्यत	2
3}50000 ते 100000 पर्यत	3
4}100000ते 150000 पर्यत	4
5}150000ते आर्थिक मागास प्रवर्ग	5
6} आर्थिक मागास प्रवर्गावरील	6
5}सामाजिक–राजकिय सहभाग ः	
दिवंगत शेतकरी कोणत्या सामाजिक किंवा राजकीय पदावर होता काय ? होय/नाहि { असल्यास नमुद करा.}	
1} एखादया सामाजिक किंवा राजकिय संस्थेचे सदस्यत्व	1
2}} एखादया सामाजिक आणि राजकिय संस्थेचे सदस्यत्व	2
3} एखादया सामाजिक किंवा राजकिय पद नसताना सामाजिक कार्यात सहभाग	3
4} एखादया संस्थेतील आर्थिक योगदान	3
5} एखादया सामाजिक किंवा राजकिय संस्थेचे पद	4
6}गाव पुढारी/सरपंच	5
7}मोठया लोकसमुहाचा नेता	6
6} घरासंमंधी माहिती ः	
1}घराचा प्रकार –	
1}छपराचे	1
2}मातिचे	2
3}विटांच्या भिंती व फरशी असलेले	3
4}सिमेंट–कॉंक्रीटचे वनलेले	4
5}दुमजली	5
2}घराची मालकि–	
1} भाडयाचे	1
2} स्वत:मालकीचे	2
3}इतर सुविधा–	
1}सौच्चालय व शोषखडडा	1
2}घरात आड/वोअरवेल	2
3}वायोगॅस जोडनी	3

4}LPG गॅस जोडनी	4
4}घराची अवस्था–	
1}तुटलेले	1
2}मोडकळीस आलेले	2
3}सुव्यवस्थित व कुंपन नसलेले	3
4} सुव्यवस्थित व कुंपन असलेले	4
5}प्रकाशाची सोय–	
1}रॉकेलचा दिवा/मेणवत्ती	1
2}विजेचा दिवा	2
6}कुटुंबाचा प्रकार–	
1}विभक्त	1
2}संयुक्त	2
7}कुटुंबाचा आकार–	
1}लहाण {1ते3सदस्य}	1
2}मध्यम {4ते6सदस्य}	2
3}मोठा {7ते9सदस्य}	3
4}खुप मोठा {10च्या वर सदस्य}	4
8}गोडाउनची सुविधा–	
1}नाही	0
2}आहे	1
7}साहित्यची मालकी ः	
1}शेतकी अवजारे	
अ.कुलव	1
ब.कोळपे	1
क.लाकडी नांगर	1
ड.लाकडी पाभार	1
इ.खत देण्याचे कोळपे	2
ई.लोखंडी पाभार	2
उ.फवारणी/थुरळणी यंत्र	3
ऊ.डिझेल इंजिन	4
ए.विदयुत मोटार	4
ऐ.मळणी यंत्र	5
2}घरातील साथणे–	
1}धान्याची साठवणुक	
1}कणगी	1
2}लोखेडी कोठी	1
2}फर्निचर	
1}खुर्ची	1
2}टेवल	1
3}कपाट	2
4}दिवाण	3
5}सोफा	3
3}इतर घरगुती साथणे	
1} घडयाळ	1
2} फॅन	2
3} क्यामेरा	2
4} सी.डी.प्लेअर	3
5} मिक्सर	3
6} टेप रेकॉरर्डर	3
7} टी.व्ही.	4

8} टेलीफोन	4
9} कुलर	5
10} रेफ्रिजेरेटर	5
3} जनांवरांची मालकी	
कामाची जनावरे {बिलजोडी }	
भागिदारी	1
स्वतंत्र	2
दुधाळ जनावरे	
भागिदारी	1
स्वतंत्र	2
शेळी / मेंढी	
भागिदारी	1
स्वतंत्र	2
पोल्टी	1
4} माहीतीचे साथने ः	
पुस्तक	1
मासिक	2
वर्तमानपत्र	3
रेडिओ	3
टी . व्ही .	4
इंटरनेट	5
5} शेतातील निवारा ः	
जनावरांचा गोठा	
कच्चा	1
पक्का	2
अवजारांचे शेड	
कच्चा	1
पक्का	2
6} वाहतुकीची साधने ः	
सायकल	1
बैलगाडी	2
मोटरसायकल	3
जिप	4
टॅक्टर /टेम्पो	4
7} शिवार भेट/प्रदर्शन	
नेहमी	3
कधी कधी	2
कधीही नाही	1
8} इतर गुणविशेष	
बिज उत्पादक	1
प्रगतशिल शेतकरी	2
पुरस्कार विजेता	3
कृषिपंडित	3
9} कर्ज	
कर्जदार	1
कर्ज नसलेला	2
10} परतफेडिची मानसीकता	
शंकास्पद	1
प्रामाणिक	2

11} वार्षिक उत्पन्न ः{आत्महत्यापूर्वीचे मागील वर्ष }

अ.क्र.	कुटूंबातील सदस्यांची नावे	मुख्य व्यवसाय		जोड व्यवसाय		एकूण उत्पन्न रू.
		व्यवसायाचे नाव	मिळकत रू.	व्यवसायाचे नाव	मिळकत रू.	
1.						
2.						

12} जमिनीचा प्रकार ः हालकी /मध्यम / भारी

13} सिंचनाची सोय ः

अ.क्र	सिंचनाचे साधन	
1	णदि	
2	टलाव	
3	विहीर / वोरवेल	
4	शेततळे	
5	खालवा	
6	धरण /बंधारा	
7	कोणतेही नाही	

14} शेतीसाठीची सुविधा व साधणे

शेतीसाठीची सुविधा व साधणे	पुरेसा Score(3)	अपुरी Score(2)	उपलब्ध नाहि Score(1)
अ} शेतीसाठीची आवश्यक साधने			
1. चांगले बियाणे			
2. शेणखत / कंपोस्ट			
3. रासायनिक खते			
4. जैविक खते			
5. किटकनाशक / तननाशक			
6. स्वतःची बैलजोडी			
7. शेतीची अवजारे			
8. फवारणी /धुरळनी यंत्रे			
9. काढणी यंत्रे/ मळनी यंत्र			
10. वीज जोडणी			
11. पाण्याची सुविधा			
12. पाणलोट विकास कामे			
ब} सिंचनाची साधणे ः 1. ठिबक सिंचन 2. तुषार सिंचन			
क} पैशाची {कर्जाची} उपलब्धताा ः			
1. सहकारी पतसंस्था			
2. भूविकास बॅक			
3. राष्टीयीकृत बॅक			
4. ग्रामिण बॅक			
5. खाजगी सावकार			
ड} माहितीची साधणे ः			
1. पुस्तके			
2. मासिके			

3 . वर्तमाण पत्र			
4 . रेडिओ			
5 . टी . व्ही			
6 . इंटरनेट			
7 . कृषि सेवा केंद्र			
8 . कृषि विज्ञाण केंद्र			
9 . शेतकरी मेळावे			
10 . कृषि सेवक / कृषि अधिकारी			
11 . कृषि चिकीत्सालय			
12 . कृषि प्रदर्शण			
इ}वाहतुकिची साथणे ः			
1 . पक्का रस्ता			
2 . सायकल			
3 . मोटरसायकल			
4 . जिप / कार			
5 . बैलगाडि			
6 . टॅक्टर			
7 . टेम्पो			

15}उत्पादकता ः

अ . क्र	पिक	जात	एकुण क्षेत्र (एकर)			एकुण उत्पन्न (qtl)	उत्पादकता (qtl/acer)	मिळालेली किंमत (Rs/qtl)	एकुण उत्पन्न (Rs)
			बागायत	जिरायत	एकुण				
अ)	खरिप								
1									
2									
3									
4									
ब)	रब्बी								
1									
2									
3									
क)	उन्हाळी								
1									
2									
3									
ड)	द्वीवार्षीक								
1									
2									
इ)	फळबागा								
1									
2									
3									
ई)	इतर								
1									
2									

16}कर्जबाजारीपणा ः आत्महत्याग्रस्त शेतक-यावर थकित कर्ज होते काय ? (होय/नाही) होय असल्यास माहिती दया .

अ . क्र	कर्जाचा स्त्रोत	वर्ष	घेतलेले कर्ज (Rs)	कर्जाचे कारण	परत केलेले कर्ज (Rs)	थकित कर्ज			व्याजाचा दर	कर्जफेडीत विलंब होय/नाही
						कर्जाची रक्कम (Rs)	व्याज (Rs)	एकुण (Rs)		
अ	**औपचारीक स्त्रोत**									
1	सहकारी पतसंस्था									
2	सहकारी बॅंक									
3	नागरी बॅंक									
4	व्यापारी बॅंक									
5	ग्रामिण बॅंक									
6	बचत गटाकडून									
	एकूण अ									
ब	**अनौपचारीक स्त्रोत**									
1	शावकार									
2	मोठया शेतक– याकडून									
3	मित्र/ नातेवाइक									
4	व्यापारी									
5	इतर									
	एकूण ब									
	एकूण अ+ ब									

17} उपजिविकेचे साधणे ः

कामासाठी शहराकडे हंगामी स्थलांतर होय / नाही

जर होत असेल तर **1** . कोठे

2 . स्थलांतराची संख्या

3 . व्यवसाय / कामाचे नाव

4 . कामाचा कालावधी

5 . उत्पन्न

अ . क्र .	कौटूंबिक उपजिवीकेची साधने	वार्षिक उत्पन्न (रू)
1	शेती	
2	पशुपालन	
3	मजूरी	
4	व्यवसाय	
5	नोकरी	

6	इतर	
	एकूण उत्पन्न (रू)	

अ.क्र.	खर्चाचे घटक	खर्च (रू)
1	अन्न	
2	कपडे	
3	घर	
4	शिक्षण	
5	आरोग्य	
6	प्रवास	
7	सण	
8	कर {घरपटटी/ पाणीपटटी }	
9	शेती	
10	पशुपालन	
11	विजवील	
12	धार्मिक देणग्या	
	एकुन खर्च (रू)	

18}कौटुंबिक जबाबदारीची पुर्तता ः

दिवंगत शेतक–याने कुटुंबाच्या जबावदारीची पुर्तता केली का ? होय/ नाही

केल्यास किती प्रमाणात

अ.क्र	जबाबदारीचे नाव	पुर्ण पार पाडली होय/नाही	जर होय असेल तर किती प्रमाणात पार पाडली					जबाबदारी पार पाडण्याची क्षमता		
			खुप मोठया प्रमाणात	मोठया प्रमाणात	काही प्रमाणात	कमी प्रमाणात	पार पाडली नाही	असमर्थ	काही प्रमाणत समर्थ	पुर्णपने समर्थ
1.	मुलांचे शिक्षण									
2.	मुलगी/वहिनीचे लग्न									
3.	कुटुंब सदस्याचा आरोग्य उपचार									
4.	मरणोत्तर धार्मिक विधी									
5.	तरूण मुलाचे लग्न									
6.	कुटुंबातील विथवा किंवा घटस्फोटित मुलगी/वहिण									
7.	इतर (नमुद करा)									

19}शेतक-याच्या सवयी ः

मृत शेतक-यास काही वाईट सवयी होत्या का ? होय /नाही होय असल्यास कोणती .

अ.क्र	सवय	कालावधी	वारंवारता
1.	सिगारेट ओढणे		
2.	गांजा ओढणे		
3.	तंबाखु खाणे		
4.	दारू पिणे		
5.	झुगार खेळणे		
6.	इतर		

20}दिवंगत शेतक-याचे आरोग्य ः

दिवंगत शेतकरी कोणत्या आरोग्याच्या समस्येने पिडीत होता काय ? होय/नाही असल्यास कोणत्या

अ.क्र	रोगाचे नाव	रोगाच्या अस्तित्वाचा कालावथी	उपचारासाठीचा वार्षीक खर्च
1.			
2.			
3.			

21}कौटुंबिक आरोग्य ः शेतक-याच्या कुटुंबातील एखादा सदस्य रोगग्रस्त होता काय ? होय/ नाही होय असल्यास माहीती लिहा .

अ.क्र	सदस्याचे नाव	रोगाचे नाव	रोगाच्या अस्तित्वाचा कालावथी	उपचारासाठीचा वार्षीक खर्च
1.				
2.				
3.				

22}कौटुंबिक वादविवाद ः

दिवंगत शेतक-याचा कुटुंबात कोणाशी नात्यामध्ये तनाव निर्माण होईल असा वाद–विवाद होता का ? होय/ नाही

अ.क्र	ज्याबरोबर वाद होता त्या सदस्याचे नाव	कारण	किती कालावधीपासुन होता
1.			
2.			
3.			

भाग –II

शेतक-याच्या आत्महत्येस कारणिभुत असणारे सामाजिक व माणसिक घटक

आत्महत्येस कारणीभूत घटक	✓
1)आत्महत्या केलेला शेतकरी कर्जबाजारी होता काय	
अ.कर्ज फेडीसाठी छळवणुक	
ब.कर्ज देणा-याकडुन त्वरीत कर्ज फेडीचा आग्रह	
क.कर्जफेडीवरूण सार्वजणिक ठिकाणी अपमाण	
2.खालिल कारणांमुळे आर्थिक स्थिती ढासळली का	
अ.मालमत्तेचा लिलाव	

व . आर्थिक पत ढासळाणे	
क . घरातील वस्तु किंवा जनावरे उचलुन नेने	
3 . मृत व्यक्ती एकलकोंडा होता किंवा आपल्य समस्या इतरांना सांगत नव्हता का	
4 . खालिल कारणांमुळे पिक वाया गेले होते का दुष्काळ/पुर/अवकाळी पाउस /गारपीट/वियानांची उगवन न होने	
5 . मृत्युपुर्वी सामजिक दर्जात वदल झाल होता का	
6 . लग्नाच्या वयाच्या मुलगी/ वहीणीच्या लग्नाची चिंता होती का	
7 . मृत्युपुर्वी गावात शेजारी किंवा घरात कोणी आत्महत्या केलि होती का	
8 . मृत व्यक्तीच्या स्वभावात मृत्युपूर्वी काही वदल झाला होता का	
9 . मृताचे शेजारी /इतर कोणावरोवर भांडण होते का	
10 . मृत्युपुर्वी घरातील व्यक्तिचे निधन झाले होते का	
11 . मृत्युपुर्वी कुटूंवात कोणी आत्महत्या केली होती का	
12 . घरातील एखादी व्यक्ती आजारी किंवा अपंग होती का	
13 . मृत व्यक्ती फौजदारी खटल्यात गुंतली होती का	
14 . मृत व्यक्ती दिवाणी खटल्यात हरली होती का	
15 . मृत व्यक्ती व्यसणात गुंतली होती का	
16 . कर्ज काढुन खोदलेल्या विहिर/वोअरवेलला पाणि न लागने	
17इतर	

शेतक-याच्या मृत्युांतर कुटूंबावर झालेले परिणाम

अ . आर्थिक

1 . शेती पडीक पडली

2 . दुय्यम व्यवसाय वंद पडला

3 . मुलांचे शिक्षन थांवले

4 . मुलांना जगण्याकरता नातेवाइकांकडे पाठविण्यात आले

5 . मुलीचे लग्न थांवले

6 . कुटूंवामध्ये वाद निर्माण झाला

7 . कर्जाची थकवाकी वाढली

8 . अधिकचे कर्ज काढले

9 . कुटूंवातिल आजारी सदस्याचा एलाज थांवला

10 . मालमत्ता/गुरे विकावी लागली

11 . सोने/दागीने विकावे लागले

ब . सामाजिक

1 . समाजात अप्रतिष्ठा झाली

2 . नातेवाईकांनी संमंध तोडले

3 . शेजारी मित्रांनी संमंध तोडले

4 . मुलिचे/वहिणीचे लग्न थांवले

5 . इतर

क . माणसिक

1 . कुटूंबातिल व्यक्ती मानसिक तणावात गेली

2 . कुटूंबातील एखादी व्यक्ति भ्रमिष्ट झाली

3 . कुटूंबातिल व्यक्ती नाउमेद झाल्या

4 . कुटूंबात भविष्यावीषयी भय/असुरक्षितता निर्मान झाली

5 . कुटूंबातिल एखादया व्यक्तीचा धास्ताउन मृत्यु झाला

6 . कुटूंबातील एखादी व्यक्ति आजारी पडली

7 . कुटूंबाचे कामात मन न लगने

8 . इतर

आत्महत्या थांबविण्याचे उपाय/सुचणा

Annexure-II
List of selected Villages

Sr.No.	District	Talukas	Villages	No. of respondents
1	Hingoli	Vasmat	Girgaon	7
			Puyani (Bk)	3
			Tembhurni	3
			Chikhli	2
			Akoli	2
			Yelewadi	1
			Balegaon	1
			Darephal	1
			Thorava	1
			Aaral	1
			Ganeshpur	1
		Aundha	Aankhali	2
			Paradi sangale	2
			Shirad shahapur	1
			Lakh	1
			Yelegaon	1
			Malasgaon	1
			Yehalegaon	1
			Telgaon	1
		Shengaon	Savana	3
			Bhankheda	1
			Talni	1
			Goregaon	1
			Ajegaon	1

Annexure III
List of selected victims for study with their detail address.

Sr.No	Name of farmer	Village	Taluka
1	Ramchandra Ganpatrao Nadre	Girgaon	Vasmat
2	Raosaheb Jatharrao Karale	Girgaon	Vasmat
3	Vitthal Marotrao Kakade	Girgaon	Vasmat
4	Anuradha Deshmukh	Girgaon	Vasmat
5	Dyaneshwar Shyamrao Jadhav	Girgaon	Vasmat
6	Vyankatesh Ramji Karale	Girgaon	Vasmat
7	Balaji Dubaji Karale	Girgaon	Vasmat
8	Aasroba Laxman Hiwale	Puyani Bk.	Vasmat
9	Narayan Tulashiram Jamage	Puyani Bk.	Vasmat
10	Pandharinath Vitthal Hiwale	Puyani Bk.	Vasmat
11	Dattarao Naroba Savandkar	Tembhurni	Vasmat
12	Mahadu Laxman Shinde	Tembhurni	Vasmat
13	Jaggannath Bhimrao Savandkar	Tembhurni	Vasmat
14	Sakharam maroti Pandavaveer	Chikhli	Vasmat
15	Dinaji Nivrutti Kale	Chikhli	Vasmat
16	Ramrao Bapurao Kadam	Aakoli	Vasmat
17	Nirmala Bapurao Kadam	Aakoli	Vasmat
18	Shankar Arjun Kadam	Ganeshpur	Vasmat
19	Ambadas Bapurao Nalage	Aaral	Vasmat
20	Gangadhar Laxman Devre	Thorava	Vasmat
21	Manik Umaji Bhalerao	Darephal	Vasmat
22	Gangadhar Dattarao Gore	Balegaon	Vasmat
23	Bhagirathi Balaji Shelake	Yelewadi	Vasmat
24	Subhashrao Sakharam Naik	Savana	Shengaon
25	Babanrao Narayanrao Naik	Savana	Shengaon
26	Keshav Parasram Giri	savana	Shengaon
27	Manik Lashkar Pawar	Bhankheda	Shengaon
28	Parvati Murlidhar Kale	Talni	Shengaon
29	Janardhan Tulshiram Khillari	Goregaon	Shengaon
30	Shankar Keshav Karale	Aajegaon	Shengaon
31	Sopan Kisanrao Sangle	Paradi Sangle	Aundha
32	Dingambar Kisanrao Sangle	Paradi Sangle	Aundha
33	Daulat Narayan Garkar	Ankhali	Aundha
34	Madhukar Shyamrao Garkar	Ankhali	Aundha
35	Shyamrao Rambhau Parde	Shirad shahapur	Aundha
36	Narayan Yadavrao Londhe	Lakh	Aundha
37	Subhashrao Balavantrao Solanki	Yelegaon	Aundha
38	Manik Marotrao Aakhare	Malasgaon	Aundha
39	Rangnath Ganeshrao Solanki	Yehalegaon	Aundha
40	Gajanan vamanrao Raut	Telgaon	Aundha

VITAE

Mr. SACHIN PANJABRAO KOLHE

A candidate of the degree of

MASTER OF SCIENCE

In

AGRICULTURE (EXTENSION EDUCATION)

2018

Biographical Information:

Personal data: Born at Amkhed, Chikhli Dist.- Buldana, Maharashtra on 25th October, 1991. S/o Mr. Panjabrao and Mrs. Anita.

Educational data:

1. Received the degree of Bachelor of Science (Agriculture) from M.P.K.V. Rahuri in 2016.
2. Secured P.G. seat at College of Agriculture, Parbhani VNMKV, Parbhani, Maharashtra through MCAER-CET in 2016.
3. Attended one International level Agriculture Conferences.
4. Attended one national level Agriculture Conferences.
5. Attended one training program on "Maharashtra Project on climate resilient Agriculture", at RAMETI, Aurangabad.

Permanent Address: Sachin Kolhe, S/o Mr. Panjabrao
At.AmkhedPost.Abashi
Ta. Chikhli, Dist. Buldana,
Maharashtra - 443201,
Mobile No.: 9552659187 / 7972994533

Email: spkolhe556@gmail.com