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Bodke BG

Department of Extension
Education, College of
Agriculture, Vasantao Naik
Marathwada Krishi Vidyapeeth,
Parbhani, Maharashtra, India

Deshmukh PR

Department of Extension
Education, College of
Agriculture, Vasantao Naik
Marathwada Krishi Vidyapeeth,
Parbhani, Maharashtra, India

Naganikar SG

Department of Extension
Education, College of
Agriculture, Vasantao Naik
Marathwada Krishi Vidyapeeth,
Parbhani, Maharashtra, India

Correspondence

Bodke BG

Department of Extension
Education, College of
Agriculture, Vasantao Naik
Marathwada Krishi Vidyapeeth,
Parbhani, Maharashtra, India

Relationship between selected characteristics of suicide farmers' with their identified risk factors of suicide in Nanded district

Bodke BG, Deshmukh PR and Naganikar SG

Abstract

Present investigation conducted in Nanded district in Marathwada region of Maharashtra state. From this district four talukas were selected based on considerable farmer suicide cases. Twenty seven villages were selected randomly based on considerable farmer suicide cases. Forty victims were selected randomly for the study. The ex-post facto research design was used for the study. The data were collected with help of pretested interview schedule from the victim's households as per their convenience at their home. The statistical methods and test such as frequency, percentage, mean, standard deviation and correlation of coefficient were used for analysis of data. It is noticed that most of the 65.00 per cent victims were from middle age group, total selected 40 sample were male gender, 97.50 per cent victims got married, 27.50 per cent victims were having primary school level education infrastructure, 57.50 per cent victims had cotton and soybean based cropping pattern, 85.00 per cent victims were founded indebted. Livelihood pattern shows that all victims depend on agriculture for their livelihood on an average majority of victim's net earnings was very merge. Majority of 87.50 per cent victim's expenses was on the children education and 100 per cent health treatment of family. Majority of 92.50 per cent victims were having responsibility of children education and 92.50 per cent health treatment of family member, 60.00 per cent victims had bad habits, 20.00 per cent victims suffered by severe health problem, 42.50 per cent victims family had severe health problem and 7.50 per cent victims had dispute with the family member., 52.50 per cent victims belong to open category, 65.00 per cent victims were from nuclear family, 60.00 per cent suicide were concentrated in medium size family, more than half 57.50 per cent victims had farming experience between 11 to 33 year, 47.50 per cent victims were possessing small (1.01 to 2.00 ha) land holding, 60.00 per cent were found to be engaged in agriculture / labour as subsidiary occupation, 55.00 per cent were had medium annual income between Rs. 31589 to 74747, 75.00 per cent victims had low socio-economic status, 50.00 per cent victims had light soil type of land, 87.50 per cent victims had no source of irrigation, 67.50 per cent victims had high agriculture.

Keywords: victim, suicide

1. Introduction

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 suicide rate of 11 per lakh people is roughly the 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) and the UK (11.8). Total of 319026 have committed suicide in India since 1995 to 2016. Suicide incidence were reported from Maharashtra, Telangana, Andhra Pradesh, Panjab, kerala, Chhattisgarh, M.P., west Bengal and also other but Maharashtra is leading state according to NCRB report. The highest suicide cases was noted (18241) in year 2004, lowest suicide cases was noted (8295) in year 1995.

In Maharashtra the number of farmers who committed suicide in various districts is not same. Despite of Raigad, Ratnagiri and Sindhudurg districts of Konkan region, all other districts of Maharashtra are facing issue of farmers suicide.

According to NCRB in Maharashtra state during last twenty one years period the incidences of suicide of farmers were increased tremendously.

Since from January 1995 to December 2016 total 69053 farmers committed suicide. It is also observed that in total number of suicides figure there is slight variation was noted. Below table of farmers suicide of Maharashtra, shows an increasing trend. The highest (4453) suicide cases were noted in year 2006, where as lowest (1083) suicide cases noted in year 1995.

Table 1: No of farmers' suicides in India between 1995-2016

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

Source: ncrb.nic.in (2017)

Table 2: Number of farmer's suicide in Maharashtra 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. In the year 2018 (221) farmers committed suicide between 1 January to 25 March. The highest suicide cases were noted (1133) in year 2015, lowest suicide cases noted (169) in year 2011. Maximum suicide incidence were reported from Beed district it contribute 27.30 percent out of total suicide in Marathwada. Brief profile of farmer's suicide in Marathwada is given below;

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 commissioner office, Aurangabad.

A largest number of farmers had committed suicide in Nanded district. Out of total suicide in Marathwada, Nanded district contributing 18.02 per cent (814) suicide. The highest

suicide cases were noted (190) in year 2015, lowest suicide cases were noted (33) in year 2011. Maximum suicide incidences were reported from Kinvat, Kandhar, Loha, and Mukhed talukas. Brief profile of farmer suicide in Nanded district given below;

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

Year	Eligible cases	Ineligible cases	Total
2010	32	23	55
2011	20	13	33
2012	19	20	39
2013	20	26	46
2014	78	40	118
2015	146	44	190
2016	118	62	180
2017	116	37	153
Total	549	265	814

Source: Divisional commissioner office, Aurangabad

2. Material and methods

2.1 Sample and sampling plan

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

2.2 Selection of district

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

2.3 Selection of talukas

The present study was conducted in four tahsils namely Kandhar, Loha, Mukhed, and Kinvat were selected randomly from Nanded district of Marathwada region.

2.4 Selection of Villages

Twenty seven villages were selected from four tahsils of Nanded district based on considerable suicide cases of the farmers. The list of villages along with no. of victims is presented in Annexure –II.

2.5 Selection of Respondents

In this study respondents were the households of selected victim those who committed suicide during 2015 to 2017 and had declared as a legal victims by district level committee headed by Collector of the Nanded district. The time period 2015 to 2017 was selected purposively as in this period maximum numbers of suicides were occurred in Nanded districts of Marathwada.

Before sampling researcher had contacted personally to the Collector Office of Nanded district and obtained the complete list of farmers those who committed suicide during 2015 to 2017. In all, there were 523 total suicide cases in Nanded district. From the list of 523 suicide cases, researcher had selected 40 victims by proportionate method of random sampling. Name of selected victims along with their village and tahsils presented in Annexure III.

2.6 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.

2.7 Pre testing of interview schedule

The interview schedule developed was pre-tested for accuracy, simplicity and predictability. Considering all aspect of objective, interview schedule was pre- tested with household who lost their family member and who were belonging to other than selected sample. The data were observed and the difficult questions were modified for interview schedule as per experience of pre-test. In this way after pre-testing interview schedule was finalized.

2.8 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 respected 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.

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 21 January to 29 January 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 27 villages of Four tehsil in Nanded district.

3. Results and Discussion

3.1 Relationship between selected characteristics of suicide farmer with their identified risk factor of suicide

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;

Table 5: Coefficient of Correlation of selected characteristics of the Victims with their identified number of Socio-psycho Risk Factors of Suicides

S. No.	Characteristics	"r" value
A. Personal		
1	Age	-0.046 ^{NS}
2	Education	0.064 ^{NS}
3	Caste	0.175 ^{NS}
4	Family size	-0.163 ^{NS}
5	Family type	0.010 ^{NS}
6	Farming experience	-0.050 ^{NS}
B. Socio-economic		
7	Land holding	-0.153 ^{NS}
8	Subsidiary occupation	0.219 ^{NS}
9	Annual income	-0.324*
10	Socio-economic status	0.187 ^{NS}
C. Situational		
11	Type of land	0.109 ^{NS}
12	Irrigation facilities	-0.319*
13	Agriculture infrastructure	0.076 ^{NS}
14	Cropping pattern	-0.027 ^{NS}
15	Indebtedness	0.471**
16	Livelihood pattern	-0.077 ^{NS}
17	Extent of family responsibility fulfilled	0.107 ^{NS}
D. Socio-psychological		
18	Victim's habits	0.104 ^{NS}
19	Victim's health	0.085 ^{NS}
20	Family health	0.268 ^{NS}
21	Family disputes	0.335*

** P<0.01 (r = 0.393), * P<0.05 (r = 0.304) and NS = Non Significant

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 5.

A closer look at the values of correlation coefficient Table 5 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, subsidiary occupation and socio-economic status were found to have non significant relationship with the identified number of risk factors of suicide, where as 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 prominent 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. Every thing 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.

In the group of situational characteristics the type of land, agriculture infrastructure, cropping pattern, livelihood pattern and extent of family responsibility fulfilled were non-significantly 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 has shown positive significant relationship with identified number of risk factors of suicide. This shows that with increasing the indebtedness 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, victim's health, family health's were observed non-significant relationship with identified number of risk factors of suicide of the victims. Where as family disputes has shown positive and significant relationship. This indicates that family disputes increases in family there is increasing the risk factors of suicides with the victims. Hence the hypothesis that there is no relation between variables and identified number of risk factors of suicide with victim is therefore rejected for all selected socio-psychological variables. These finding coincide with findings of Mishra (2006)^[4], kale (2008)^[2], Bhise and Behere (2016)^[1] and Merriot (2016)^[3].

4. Conclusions

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

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.

Socio-economic variables, the land holding, subsidiary occupation and socio-economic status were found to have non significant relationship with the identified number of risk factors of suicide. where as annual income is observed to have negative significant relationship with the identified number of risk factors of suicide.

In the group of situational characteristics the type of land, agriculture infrastructure, cropping pattern, livelihood pattern

and extent of family responsibility fulfilled were non-significantly 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. Indebtedness has shown positive significant relationship with identified number of risk factors of suicide.

In group of socio-psychological characteristics the victim's habit, victim's health, family health's were observed non-significant relationship with identified number of risk factors of suicide of the victims. Where as family a dispute has shown positive and significant relationship.

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