Original Article

Assessment of Farming and Mental Health Problems of Farmers, Selected Rural Community, Chengalpattu, Tamil Nadu, India

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Abstract

Background: Mental health is an important issue for the agricultural community. As someone who struggles with their own mental health, it is a big problem that affects people in many ways. Farmers, and those working in the agricultural industry, are considered a vulnerable group when it comes to mental health. Long hours, working in isolation, unpredictable weather that affects the quality of the crop, animal disease and trade concerns are only some of the issues that can impact the mental stability of farmers and their families.

Objectives: To assess the farming and mental health problems of farmers and to find the association between farming and mental health problems of farmers with their selected demographic variable.

Method and materials: Cross sectional survey approach and descriptive design were adopted to collect the data from 200 farmers at the age of above 18 years. The structured interview was conducted by using General Health Questionnaires (GHQ-28) to assess the mental health status of farmers.

Results: About 21% of farmers were affected with mental health problems. There was statistically significant association between age, gender, occupational status, number of children, marital status and annual income and mental health problems of farmers. It concluded that Farming families experience higher rates of mental health problems It is clear, however, that farming is associated with a unique set of characteristics that is potentially hazardous to mental health and requires further research.

Keywords: Mental health problems, Farming, Farmers

Introduction

India's official farmer population, is anywhere between 100 million and 150 million and also India is the no.1 in agriculture 2021 in the world. Agriculture in India is the essence of livelihood for around 58%of the population. According to the agriculture census 2015-16, Uttar Pradesh has 2.382 crore Agriculture and holdings. The highest in the country, followed by Bihar– 1.641 crore, Maharashtra

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1.529 crore, Madhya Pradesh 1.0 crore, Karnataka–0.8 crore, Andhra Pradesh– 0.852 core, Tamilnadu 0.794 core of the remaining in other States. According to agriculture department policy note demand no.5, Tamilnadu is the 11th largest state in India by area and the 6th most populous state. Stressful life event was strongest contributor for developing mental problems experienced by farmers. The analysis revealed that poor socio economic factors, size of land, labor, shortage, climate condition, institutional loan and non-institutional loan as a significant predictor of mental distress among farmers.(J Agromed 2016) (Lalitha Malusare, 2021) to assessment of mental health status among farmers in Maharashtra, India. The result revealed that more than half 58% of farmers have reported distress of mental health in the last two weeks. The most reported symptoms of mental health relate to anxiety and insomnia, with 55%of farmers suffering from these symptoms. The second highest ranking prevalence of symptoms is somatic problems (34.7%).Twenty-four percent of the farmers who reported symptoms of severe depression and only 7.3% of the farmers reported social dysfunction symptom of mental health. Farmers and agriculture workers are uniquely among the main occupational group that lives in the works almost exclusively in rural areas. Fifty-two papers were identifying with majority focusing on stress and coping styles farming. It is clear, however that farming is associated with a unique set of characteristics that is potentially hazardous to mental health and requires further research.

In 2016-2017 drought in Tamilnadu created the worst agriculture crisis in the state, where more than 40% of people earn a living from agriculture. The major reason for distress of farmers in India are a) unviable agriculture, b) ineffective minimum support prices (MSP) system, c)adverse terms of trade, d) rural indebtedness, and e) inefficient value in agriculture.

Recently, concern has increased globally over farmers' mental health issues. We present a systematic review of the outcomes, locations, study designs, and methods of current studies on farmers' mental health. In particular, this review aims to fill an important gap in understanding of the potential key risk factors affecting farmers' mental health around the world. In this research researcher have identified a number of occupational health risk through studies of farming communities, and some have specified farming as an especially stressful occupation. Farming is associated with a range of physical and mental health risks because of their hard work under challenging conditions. It has been shown that chronic stressors have a major influence on well-being and health. Particularly, stress is associated with an increased prevalence of mental disorders such as depression and anxiety. If farmers experience problems with their mental health at the same rates as the general population this would mean that approximately 25% of farmers worldwide are struggling with their mental health every year. As of 2015, a global level, over 322.48 million people worldwide suffer from some form of depressive disorder and as of 2017, more than 14 percent of the total population in India suffer from variations of mental disorder.

Objectives

To assess the farming and mental health problems of farmers.

To find the association between mental health problems of farmers with their selected demographic variables

Materials and Methods

The cross sectional survey approach and descriptive design were adopted to conduct the study in selected rural community. The 200 farmers above 18 years were selected by convenient sampling technique and excluded the farmers with known case of mental illness. The interview schedule consists of demographic variables, farming questionnaire and General Health Questionnaire (GHQ-28) to assess the mental health problems of farmers Demographic variables consists of 13 items such as age, gender, occupational status, types of family, educational status, number of children, marital status, yearly income, agriculture loan availed, land status, health insurance status, experience injury during past 12 months and took a vacation away from farm. Second tool was farming questionnaires it includes 15 questions and has two options, for yes(score=1),and no (score=0). General Health Questionnaire (GHQ) consists of 28 questions to assess the mental health problem among farmers. Each question has four options, not at all (score=0), no more than usual (score=1), rather more than usual (score=2), much more than usual (score=3).

Result and Finding

Frequency and percentage distribution of demographic variables of farmers

Table 1: Distribution of demographic variables of mental health status among farmers:

S. NO	Demographic Variable	Categories	Frequency	Percentage
1	AGE	19 -20	3	1.5
		21-30	43	21.5
		31-40	48	24.0
		41-50	46	23.0
		Above 51	60	30.0
2	GENDER	Male	129	65.0
		Female	71	35.0
3	OCCUPATIONAL STATUS	home maker	78	39.0
		Business	52	26.0
		full time farmers	70	35.0
4	TYPE OF FAMILY	Nuclear	157	78.5
		Joint	43	21.5
5	EDUCATIONAL STATUS	No formal education	74	37.0
		Primary education	77	38.5
		Secondary education	29	14.5
		degree and above	20	10.0
6	NO. OF CHILDREN	One	30	15.0
		Two	103	51.5
		Three and above	63	31.5
		Nil	3	1.5
7	MARITAL STATUS	Married	190	95.0
		unmarried	9	4.5
		Single	1	0.5
8	ANNUAL INCOME	60000	25	12.5
		20000	77	38.5
		above 25000	98	49.0
9	AGRICULTURE LOAN	< 1 lakh	123	61.5
		1-5 lakh	11	5.5
		Above 5 lakh	14	7.0
		Nil	52	26.0
10	LAND STATUS	< 5 acres	139	69.5
		>5 acres	61	30.5
11	HEALTH INSURANCE	Yes	151	75.5
		No	49	24.5
12	EXPERIENCE OF INJURY	Yes	9	4.5
		No	191	95.5
13	TOOK ANY VACATION	Yes	6	3.0
		No	194	97.0

Nearly 1.5% of samples were between the age group of 19-20 years, while 21.5% of samples were between the age group of 21-30 years, and 24% of samples were between the age group of 31-40 years, and 23% of samples were between the age group of 41-50 years, and 30% of samples were at the age group of above 51 years. Most of the samples were male (65%) and 35% of samples were female. Based on occupational status of farmers 39% of samples were homemakers and 26% of samples were in business and 35% of samples were involved in full time farming. Most of the samples were nuclear family (78.5%) and 21.5% of samples were joint family. Based on educational status 37% of samples had no formal education and 38.5% of samples had primary education and 14.5% of samples had secondary education and only 10% of samples had completed their graduation. Based on number of children 15% of samples have only one child, and 51.5% of samples have two children, and 31.5% of samples have three children, and only 1.5% of sample had no children. Based on the marital status of the farmers 95%of samples were married and 4.5%of samples were unmarried and only 5% of samples were single. Based on the annual income 12.5% of samples were 60,000 and 38.5% of samples were 20,000 and 49% of samples were above 25,000. Based on agricultural loans 61.5% of samples had lesser than 1 lakh and 5.5% of samples had 1-5 lakh and 7% of samples had above 5 lakh and 26% of samples had no agricultural loan. In land status of farmers 69.5% of sample have lesser than 5 acres and only 30.5% of sample have greater than 5 acres. Based on the health insurance of farmers 75.5% of samples have insurance and only 24.5% of samples had no any agricultural insurance. In the experience of injury during past 12 months that prevented working, only 4.5% of samples had experienced injury and most of the samples (95.5%) had no experience of injury during past 12 months. Based on the vacation that took farmers away from the farm during past 2 years, only 3% of sample took a vacation as way from the farm during past 2 years and most of the samples(97%) haven't took a vacation away from the farm during past 2 years.

Frequency and percentage distribution of farming among farmers.

Table 2: Frequency and percentage of farming of farmers

S.No	QUESTIONS	FREQUENCY		PERCENTAGE	
		Yes	No	Yes	No
1	Do you like farming?	115	85	57.5	42.5
2	Do you want to do some work other than farming?	79	121	39.5	60.5
3	Are you doing farming as your main occupation?	178	22	89.0	11.0
4	Are you the only member of your family Engaged in farming?	84	116	42.0	58.0
5	In the last six months, have you employed any labor in your farm land?	136	64	68.0	32.0
6	Have you purchased any land in the last 5 years?	34	166	17.0	83.0
7	Would you like your children to do farming after you?	127	73	63.5	36.5
8	Have you introduced new crops in the last 5 years?	34	166	17.0	83.0
9	Do you get seeds and fertilizers in time?	129	71	64.5	35.5
10	Do you have storage place for your yield?	30	170	15.0	85.0
11	Do you have market to sale your yield?	186	14	93.0	7.0
12	Did you allow seed drill in farming?	51	149	25.5	74.5
13	Do you determine the price you get for Your crop?	11	189	5.5	94.5
14	Do you use any specific type of irrigation For your farming?	17	183	8.5	91.5
15	Have you ever faced problems while practicing farming?	178	22	89.0	11.0

Nearly 115 samples (57.5%) were involved in full day farming and only 85 samples (42.5%) were not involved in full day farming. Only 79 samples (39.5%) were apart from farming and involved in some other work for farming and most of the samples,121 samples(60.5%) were not involved in some other work for farming. Almost 178 samples (89%) were affected due to the weather and seasonal changes and only 22 samples (11%) admit that they were not affected due to the weather and seasonal changes. Only 84 samples (42%) were only member of their family engaged in farming and the other 116 samples (58%) were involved in farming with their family members. Nearly 136samples(68%) were employed a labour in their farm in past 6 month and only 64 samples(32%) were not employed any labors in their farm. Only 34 samples (17%) were purchased land in last 5 years and most of the samples,166 samples(83%) were not purchased any land in last 5 years. Almost 127 samples(63.5%) want their children to do farming after them and remain 73 samples (36.5%) did not want their children to do farming after them. only 34 samples (17%) had introduced new crops in the last 5 years and 166 samples (83%) have not introduced new crops in last 5 years. Nearly 129 samples (64.5%) agreed that they got seeds and fertilizers in time and 71 samples (35.5%) were not getting seeds and fertilizers at right time. Only 30 samples (15%) had storage place and market for their yields and 170 samples (85%) did not have any storage place and market for their yields. Almost 186 samples (93%) were using pesticides, herbicides and spray in their farm and only 14 samples (7%) were not using pesticides, herbicides and spray in their farm. Only 11 samples (5.5%) allowed seed drill in their farm and 189 samples (94.5%) were not allowed the seed drill in their farm. Only 51 samples (25.5%) decides the price for themselves for the crops they get and 149 samples(74.5%) did not decide the price for the crops they get. Only 17 samples(8.5%) were used specific type of irrigation for their farm and 183 samples(91. 5%) were not used any specific type of irrigation in their farm. Nearly 178 samples (89%) had faced problems while practicing farming and only 22 samples (11%) were not faced any problems while practicing farming.

Frequency and percentage of mental health problems among farmers.

Table 3: Frequency and percentage of mental health problem among farmers

S.No	MENTAL HEALTH PROBLEM	SCORE	FREQUENCY	PERCENTAGE
1	Affected with mental Illness	≤23	42	21
2	Not affected with mental Illness	≥24	158	79

A most of the farmers were not affected with mental illness (n=158) is 79% and affected with mental illness (n=42) is 21%. The most commonly reported symptoms of mental health relate to anxiety and insomnia, with 55% of farmers suffering from this symptoms. The second highest ranking prevalence of symptoms is somatic problems (34.7%). Priyanka Bomblet (2020)

Association of mental health problems among farmers with their selected demographic variables

Table 4: Association of selected demographic variables with mental health status of farmers:

S. No	DEMOGRAPHIC VARIABLE	MENTAL ILLNESS		df	X2	P value
		Affected	Not affected			
1	AGE			4	11.376	0.023 S
	a)9-20	2	1			
	b)1-30	10	33			
	c)1-40	15	33			
	d)1-50	9	37			
	e) Above 51	6	54			
2	GENDER			1	6.616	0.01 S
	a) Male	20	109			
	b)Female	22	49			

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3	OCCUPATIONALSTATUS			2	10.432	0.005 S
	a)homemaker	25	53			
	b)Business	5	47			
	c)Full time farmers	12	58			
4	TYPE OFFAMILY			1	0.189	0.663 NS
	a) Nuclear	34	123			
	b) Joint	8	35			
5	EDUCATIONAL STATUS			3	6.325	0.097 NS
	a) No formal education	14	59			
	b) Primary education	15	61			
	c) Secondary education	11	19			
	d) degree and above	2	19			
6	NUMBER OF CHILDREN			3	24.40	0 S
	a) One	4	26			
	b) Two	32	71			
	c) three and above	3	60			
	d) Nil	3	1			
7	MARITAL STATUS			2	10.722	0.005 S
	a)Married	36	154			
	b)Unmarried	5	4			
	c)Single	1	0			
8	ANNUAL INCOME			2	12.774	0.002 S
	a) 60000	2	23			
	b) 20000	26	51			
	c) above 25000	14	84			
9	AGRICULTURE LOAN AVAILED			3	0.297	0.961 NS
	a) Less than 1lakh	25	98			
	b) 1-5 lakh	3	8			
	c) above 5 lakh	3	11			
	d) Nil	11	41			
10	LAND STATUS			1	0.005	0.943 NS
	a) less than 5 acres	29	110			
	b) greater than 5 acres	13	48			
11	HEALTH INSURANCE			1	1.197	0.274 NS
	a) Yes	29	122			
	b) No	13	36			
12	EXPERIENCE OF INJURY			1	0.864	0.353 NS
	a) Yes	3	6			
	b) No	39	152			
13	TOOK ANY VACATION			1	0.070	0.791 NS
	a) Yes	1	5			
	b) No	41	153			

Showed that there was statistically significant association between age, gender, occupational status, number of children, marital status and annual income and mental health problems of farmers and other demographic variables are not statistically significant.

(**NS -**Non Significant, **S-** Significant)

Discussion

Farmers experience one of the highest rates of suicide of any industry and there is growing evidence that those involved in farming are at higher risk of developing mental health problems. Therefore the present study identify the mental health among farmers, for analysing mental health of farmers used general health questionnaire (GHQ-28). The study finding indicated that less than half (21%) of farmers only affected with mental health problem. There is a high prevalence of mental health problem including anxiety & insomnia and somatic symptoms in the farmer. Now the current suicidal rate of farmers were decreased in India. Stressful life event were strongest contributor for developing mental problems experiencing by farmers. The analysis revealed that farmers age,gender, occupational status,no.of children, marital status, annual income are as a significant predictor of mental health among farmers. Previous study found that More than half 58% of farmers were reported distress of mental health. The most commonly reported symptoms of mental health related to anxiety and insomnia with 55% of farmers suffering from this symptoms. The second highest ranking prevalence of symptoms is somatic problems (34.7%) Priyanka bomblet (2020). A study on farmers household suggested that farmers faced psychiatric problem and it is a significant risk factor for farmers suicide. Before the suicide victim had the behaviour changes that is observed by the victim family. The another study results that prevalence of mild to moderate anxiety was 27.7% and mild to moderate depression was (8.5%) Leonard.Jh (2013). The current study evident that the farmers borrow a agriculture loan and less land surface area sources are more likely to suffer from somatic problems, anxiety & insomnia, depression symptoms of mental health.

Conclusion

The present study determined the mental health of the farmers by using GHQ-28 questioner. There is a high prevalence of mental problems including anxiety and insomnia, somatic problems among the farmers.The collected data from the farmers is considered as the main part in the assessment of mental health problem among farmers. In this study, the researchers conclude that 21% of farmers have a mental illness. Approach involving increased awareness, access to mental health services, financial support, and community initiatives to create a supportive environment for farmer's well-being.

Ethical Clearence: Chettinad academy of research and education, Institutional Human Ethics Committee on 25/01/2022.

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Conflict of interest: Nil

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