



UNDERSTANDING FARMERS' PERCEPTION ON COVID-19 PANDEMIC IN RELATION TO SOCIAL AND LIVELIHOOD PERSPECTIVE: A STUDY IN JHARGRAM DISTRICT OF WEST BENGAL

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ABSTRACT

Corona Virus Disease-19 (COVID-19) is most known name to all over the world for its devastating effect. Agriculture is the one of the areas those faced problems because of this serious disease. There is a need to understand any local area wise farmers' understanding and new strategies during post covid period. , For this, a study has been carried out in the Karatshole village of Jhargram district of West Bengal. The objective of the study was to know the extent of farmers' perception about the COVID-19 pandemic and their adaptation strategies. A set of questions has prepared to record farmers' answer. Farmers' experience and perception about the consequences of COVID-19 in their daily life and livelihood activities are medium to high score range. Daily works were hampered, job scope was limited and many more difficulties were identified. The factors like educational level, mass media exposure, communication with different departments, movement, and health awareness showed their positive and significant correlation with farmers' perception about the COVID-19. Most of the respondents follow more or less adaptation strategies like use of digital media in different mode, shifting of livelihood, development of local value chain etc. Respondents stopped all social movements and the recreation. The result showed that farmers' perceived prevalence of corona virus and its pandemic effect by the facts like livelihood problems, restricted movements etc. Assistance and subsidy in critical agricultural activities and inputs, filling up the gaps in agricultural supply chains and ensuring farmer's ease are the important issues for the smooth functioning of the backbone of our economy.

Key words : Covid-19, Framers' perception, livelihood problems, Adoption strategies.

INTRODUCTION

Corona Virus Disease-19 (COVID-19) is most known name to all over the world for its devastating effect. The virus is a serious threat to the human health and ultimately it has adverse effect on food security, livelihood security, economic activities, and physical infrastructures. Agriculture is the important part of Indian economy. It is the main livelihood option for rural people of India. Impact of Covid-19 adversely affected the agriculture sector as the lockdown imposed across nationwide to control the spread of the virus. Agriculture and allied fields is the major contributor in the global economy. Agriculture has been one of the sectors most affected by the pandemic (Wang et al., 2020). The industry is essential for food security, which

means the pandemic has also affected food security more generally (Rozaki, 2020). At present time scientists across the world are focusing on the cultivation and management practices of different crops maintaining Covid-19 protocol and precautions. In developing countries like India the poor section of the society is the most vulnerable group of people who always suffer most (Bera, 2020). In this regard it is necessary to know the farmers' concept about the COVID-19 disease and its long term effects. Until they are well aware about their own safety, it will not be possible to motivate them to adopt new farm practices. Indian farmers are facing many constraints since the corona virus has started its devastating effect in India. Their production and marketing process is facing many problems like lack of labours, inputs, customers etc. Supply chain across the nation is disrupted. It is important to assess the effect of COVID-19 pandemic on the agricultural sector and food as the sustainability of human life primarily depends on it and secondarily involves the economy (Niranjan et al, 2020). Indian government is now focusing on the farmers' problem and trying to take many steps to overcome their problems. With this, it is also necessary to understand farmers' perception level about COVID-19 and its effect on their livelihood and how to overcome it.

New policies related to overcome COVID-19 crisis may only be carried out when (a) farmers perceive that COVID-19 as a serious threat that is really happening, (b) farmers are able to identify adaptation options available for coping up with COVID-19, and (c) farmers respond to COVID-19 adaptation as per their daily life activities as well as in different activities followed in agriculture and allied. Hence, a complete understanding of farmers' perception on COVID-19 is very important since it may establish farmers' readiness to adapt to post covid changes by considering some new practices to their cultivation and production practices as well as their daily life.

Thus, there is a need to understand location-specific drivers of perception and adaptation during post covid period among smallholder farmers. This helps to design appropriate policy based on the vulnerability and sensitivity level of each location as well as the accessibility of the adaptation methods.

In this background, with an objective to know the extent of farmers' perception about the COVID-19 pandemic and their adaptation strategies, the present study has been carried out among 30 farmers in the Karatshole village of Jhargram district of West Bengal.

METHODOLOGY

The significance of any change related to health management as well as farming system management can be measured by the extent to which it is perceived as important by its targeted beneficiaries. Hence, an attempt was made in this direction to assess the "Farmers' perception about the effect of Covid-19, lockdown period and what to do in post covid period. The results of perception study will be useful to the policy makers, extension planners and administrators to plan the future extension strategies.

The study was conducted in Binpur II block of Jhargram district. The village Karatshol was purposively selected as the farmers are known to scientist of RRS, BCKV, Jhargram. For selection of respondents random technique was followed. Total 30 farmers were selected as respondents who were personally interviewed for the study. Farmers' perception about the effect of Covid-19 and what to do in post covid period was studied on three point's continuum with 2, 1, and 0 scores following procedure used by Kaur and Talukdar (2007) with slight modification. The responses were collected against each of the response category. Further, the perception scores of each respondent were worked out by summing up the scores obtained on fifteen dimensions of this variable. On the basis of total scores obtained by the respondent, they were classified into three (3) categories viz. low, medium and high using the procedure followed by Das (2009). A total of 6 variables have been selected after consulting with officials of department of agriculture and allied assuming that these personal and socio-economic characteristics of respondents will affect their perception about the effect of Covid-19 and post covid situation. For finding out the relationship between farmers' perception about the effect of Covid-19 and what to do in post covid period & socio-economic characteristics of the farmers, Karl Pearson's Product Moment Correlation Co-efficient was used.

Questionnaire was prepared to collect the data from the respondents on different adaptation strategies to overcome the Covid-19 issue in different fields.

RESULTS AND DISCUSSION

Farmers' perception about the Covid-19: The data presented in Table 1 reveal that most of the respondents (more than 86%) has already perceived that the Covid-19 and Corona virus is a life threatening cause. 76.67% respondents agreed that wearing mask is most important precaution to prevent spreading of virus. 73.33% respondents perceived that frequent hand wash with soap is important to prevent disease infection whereas 20% respondents perceived it to some extent. 70% respondents strongly believe that Social distancing can prevent the spread of Covid disease whereas 20% respondents agree it to some extent. 50%

of total respondents understand that vaccination is very important to prevent the disease attack, where as 16.66% respondents don't faith on vaccination. Half of total respondents are in support of lockdown to prevent the spreading of disease.83.34% respondents know to some extent that how the disease is spread where as only 16.66% respondents know very well about how the disease is spread.23.33% respondents have very well knowledge about what to do if diagnosed with covid positive whereas most of the respondents (73.33%) have knowledge to some extent about what to do if diagnosed with covid positive. It is evident that daily works were hampered more or less for 86.67% of respondents where as rest percentages of respondents don't think that there was any problem in daily work during lock down.70% of respondents perceived very much that job scope was limited because of corona virus and lock down. 60% of the respondents told that subsidy from different line departments were not available at all where as 16.67% respondents didn't face such problem at all. 73.33% respondents agreed very much that they face problems regarding regular marketing of produce. 56.67% respondents told that they did not face serious problem in availability of inputs materials where as 33.33% respondents faced problem to some extent in this matter.50% of respondents agreed that they face problem to some extent to get daily labours as per their requirement. 53.33 % of respondents agreed very much that availability of animal feeds was insufficient where as 13.34% of respondents did not have any problem in this matter.

Table1: Distribution of respondents on the basis of responses on Farmers' perception about the COVID-19

Sl. No.	Dimension	Response category	Freq.	%
1	Corona is a life threatening infectious disease.	Perceived very much	26	86.66
		To some extent	3	10.00
		Not at all	1	3.34
2	Wearing mask is most important precaution to prevent spreading of virus	Perceived very much	23	76.67
		To some extent	5	16.66
		Not at all	2	6.67
3	Frequent hand wash with soap is important to prevent disease infection	Perceived very much	22	73.33
		To some extent	6	20.00
		Not at all	2	6.67
4	Social distancing can prevent the spread of Covid disease.	Understand very much	21	70.00
		To some extent	6	20.00
		Not at all	3	10.00
5	Vaccination is very important to prevent the disease attack	Understand very much	15	50.00
		To some extent	10	33.34
		Not at all	5	16.66
6	Lockdown is necessary to stop the spreading of disease.	Agree very much	10	33.34
		To some extent	15	50.00
		Not at all	5	16.66
7	Know how the disease spread	Know very well	5	16.66
		To some extent	25	83.34
		Not at all	0	0.00
8	Have knowledge about what to do if diagnosed with covid positive.	Have very well	7	23.33
		To some extent	22	73.33
		Not at all	1	3.34
9	Daily works were hampered	Perceived very much	22	73.34
		To some extent	4	13.33
		Not at all	4	13.33
10	Job scope was limited	Perceived very much	21	70.00
		To some extent	8	26.66
		Not at all	1	03.34
11	Subsidy from different line departments were available	Available very much	05	16.67
		To some extent	7	23.33
		Not at all	18	60.00
12	Regular marketing of produce was not possible	Agreed very much	22	73.33
		Agreed to some extent	05	16.67
		Agreed not at all	03	10.00
13	Availability of inputs materials was insufficient	Agreed very much	17	56.67
		Agreed to some extent	10	33.33
		Agreed not at all	03	10.00
14	Availability of daily labours was insufficient	Agreed very much	09	30.00
		Agreed to some extent	15	50.00
		Agreed not at all	06	20.00
15	Availability of animal feeds was insufficient	Agreed very much	16	53.33
		Agreed to some extent	10	33.33
		Agreed not at all all	04	13.34

Table2: Distribution of respondents depending on various perception levels about the COVID-19

Category	Score range	Frequency of respondents	Mean	S.D.
Low	9-15.0	4(13.34)	20.90	4.45
Medium	15.1-22.5	16(53.33)		
High	22.6-28.0	10(33.33)		

(Figures in the parentheses indicate percentage)

The results show that the scores obtained by the respondent farmers ranges from minimum of 9.00 to maximum of 28.00 with mean 20.90 & S.D. 4.45. Again, 13.34, 53.33 & 33.33 percent of the respondents have to low, medium & high levels of perception respectively for the Covid-19. The findings show that the farmers' perception about the COVID-19 is mostly of medium level (Table 2). This is because the farmers faced problems in their daily life and livelihood related activities during lockdown and covid affected period but they were able to overcome those problems because their daily activities and livelihood are mainly dependent on local area.

Table3: Relationship between Farmers' perceptions about the COVID-19 and socio-economic characteristics of the respondents

Sl. No.	Variables	'r' value
1	Age	-0.779*
2	Education level	0.460*
3	Mass-media exposure	0.341*
4	Communication with different departments	0.121
5	Movement	0.397*
6	Health awareness	0.644*

*Significant at 0.05 percent level

The data presented in Table 3 show a positive & significant correlation of educational level, mass media exposure, communication with different departments, movement, and health awareness with farmers' perception about the COVID-19. Findings further reveal that age is negatively but significantly correlated with farmers' perception about the COVID-19. It indicates that education and age plays significant role to determine farmers' perception about the COVID-19. Those criteria which are either positively or negatively but significantly correlated with the farmers' perception about the COVID-19, should be taken into consideration during future course of action.

FARMERS' ADAPTATION STRATEGIES:

Adaptation Strategies		Frequency(N=30)	Percentage
Applied adaptation strategies	Yes	22	74.00
	No	08	26.00
Different adaptation measures taken	Use of digital media in different mode for agriculture and allied.	12	40.00
	Shifting of livelihood	06	20.00
	Development of local value chain	25	83.33
	Take care of improved hygienic procedure for food production and allied sector	28	93.33
	Other coop up mechanism		
Other coop up mechanism	Expectation for government aid	30	100.00
	Reduction of consumption amount and items	21	70.00
	Use of credit services	24	80.00
	Selling assets like livestock	12	40.00
	Restricted movement	30	100.00
	Stop all social function	30	100.00
	Stop all recreation	26	86.66
Who to solve covid issues problem	Government	30	100.00
	God	12	40.00
	Farmers with Government assistance	15	50.00
Heard about Government's plans	Yes	20	66.66
	No	10	33.33
Got assistance from Government	Yes	30	100.00
	No	00	00.00
Got assistance from NGOs or other charity	Yes	12	40.00
	No	18	60.00
Can we have capacity to solve the problems	Yes	08	26.66
	No	22	73.33

Regarding the adaptation strategies, 74 percent of respondents follow more or less strategies to overcome or adjust the situation. Farmers follow different adaptation measures such as Use of digital media in different mode for agriculture and allied (40% respondents), Shifting of livelihood (20% respondents), development of local value chain (83.33% respondents), take care of improved hygienic procedure for food production and allied sector(83.33%) . Further coop up mechanisms played important parts for poor farmers to survive during covid and post covid periods. 70 percent of the total respondents tried to cope up the economic loss during the covid and post covid periods by reducing household consumption. Reduction in the household consumption goods especially quantity and variety of food items could affect human health and their productivity, which in turn affects food security. 80 percent of the respondents opted credit services to coop up the earning loss during covid and post covid periods. This practice may increase further increase vicious cycle of poverty and vulnerability. About 40 percent respondents told that they had to sell household assets such as cattle to earn extra income and to reduce household cost during those lockdown days. All the respondents stopped all social movements and the recreation during covid period and even for few months after lock down was over. Bostan et al (2020) also found that pandemic like Covid-19 disrupt the natural flow of the life, and everybody has a particular experience regarding the pandemic. All the respondents expressed the need for government support to cope up the devastating effect of corona. They all got different subsidies under government's covid special packages through bank and rationing system. In addition to get government support 40 percent respondents also got different grocery and sanitization items from different charity organizations. 50 percent respondents are optimistic with the idea that farmers themselves can coop up the bad effect of covid situation if get proper government assistance. About 66.66 percent respondents heard about Government's plans to help the farmers to overcome the covid situation. 26.66 percent respondents opined that they have capacity to solve the covid problems, if they adopt different measures.

CONCLUSION

The result showed that farmers' perceived prevalence of corona virus and it's pandemic effect, which is manifested by the facts like livelihood problems, restricted movements and many others mentioned in the study. The study also identified that farmers in the considered agro-ecological areas are trying to adapt the post covid socio economic lifestyle by implementing available and affordable techniques and technologies. But it is necessary to assist them with all possible opportunities by allowing critical agricultural activity, filling in gaps in agricultural supply chains and ensuring farmer's ease is imperative for the smooth functioning of the backbone of our economy.

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YEAR	NO. OF TRAINING	FUNDING			
2017-18					
2018-19					
2019-20					
2020-21					
2021-22					
2022-23					