

EVALUATING THE ROLE OF EDUCATION IN AWARENESS LEVEL OF THE FARMERS REGARDING CLIMATE CHANGE

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Abstract

Climate change is feasibly the utmost encounter plaster our sphere currently. Some of these dares obvious themselves in the form of famine, drowning and marine of seaside manors, squat agrarian production, modification of superficial and crushed aquatic and misery of ecologies between others. As climatic float disturbing farming in positions of low-slung harvest, deterioration in natural possessions, anomalies in shower, rise in malaise, and bluntness in endure, overflows, warm and stony airstreams. All these dynamics eventually demonstration consequences in plead off domiciliary revenue. Pastoral societies are extra in risk and at the hazard as each as they are complicated in husbandry unswervingly or circuitously and stab to gross out such sort of susceptibilities. Therefore, farmers need to be aware of the changing climate. The present study was conducted in the rural areas of Disrict Faisalabad. The multistage sampling technique was used for data collection. At the first stage Tehsil Faisalabad was selected randomly. At the second stage 2 union councils were selected randomly. At the third stage 6 villages (Dholmahjra, SarShameer, Lilan, Javadi, Suman and Mulanpur were selected randomly. In last stage 30 respondents from each selected village were selected for data collection systematically. Results showed significant association between education and awareness level of farmers regarding climate change.

Keywords: Agriculture, Climate change, Awareness

Introduction

Climate change is repeatedly recycled to term several generous of modification in temperature that may be usual or human-induced (Pradhan, 2002). There is substantial alteration in weather actions and obvious cumulative in drizzle, breezes hurricanes and storms, penetrating warmth surfs and lengthier scarcities. Eventually these variations consequence in squat harvest and hominid reserve is unfavorably exaggerated. In preceding era usual upsurge in heat is beyond 0.74 c. In squat there is a vibrant weather float meanwhile preceding 50 years and rustic societies have to aspect certain stern contests in forthcoming. There were fourteen fieriest eons in last 20 years of 20th era and augmentation in heat is predictable from 2 to 4 notches Celsius in 21st era which eventually will consequence in stern penalties in cultivation manufacture. It is radical to deliberate that Maldives Landmass will have to agonize foremost hurricane and numerous of landmasses will vanish by intensifying oceanic flat (IPCC, 2007). It besides state to as an alteration in climate that perseveres for eras or lengthier, ascending from humanoid bustle that modify the structure of troposphere i.e. greenhouse gas releases (Oxfam, 2009).

Climate change is feasibly the utmost encounter plaster our sphere currently. Some of these dares obvious themselves in the form of famine, drowning and marine of seaside manors, squat agrarian production, modification of superficial and crushed aquatic and misery of ecologies between others (Adebayo and Oruonye, 2013). Diminutive stint weather variations and cumulative in malaise are nonstop realizing the agronomy segment unpleasantly in Pakistan. The scattering and picking length of yields constantly exaggerated by disparity in heat because the harvest tumor rotation is unswervingly associated to malaise. As it has been demonstrate that ascending malaise hustles up the progression of yield and abbreviate the stint length of dissimilar phases of yield. The harvest of crops diminutions owed to curtail of yield rotation. Worldwide heating is implementation hydrological rotation universally. Cultivation division is unswervingly comparative to obtainability of aquatic. There are a ration of version stratagems to accomplish the irrigation supplies. These approaches obligation be amended inappropriately formation and supremacy zone produce restraints for development of farming region by week strategies (Boyd *et al.*, 2009). Climate variation effects on farming contain organic upshot on yield, the subsequent influence on costs, manufacture, ingesting and the influence on each investment calorie ingesting and malnourishment (Adebayo, 2012).

These regulate the resonant bulk of the earth to harvest sufficient nutrition for the humanoid populace and trained creatures (Kemausuoret *al.*, 2011). Explanations of local and periodic disparity at dissimilar portion of the nation resulted great shower states and terms are footage upsurges in rainfall and flattering drizzlier, while stumpy drizzle states and terms are footage reductions in rainfall and flattering thirstier (GON, 2004). Change in climate can be exaggerated by social persuaded activities such as the widespread consumption of acreage, the extensive gage deforestation, the foremost industrial and socioeconomic swings with abridged dependence on animate oil, and the quicker acceptance of relic oils (Millennium Ecosystem Assessment, 2005). Change in climate or global roasting has come to be a novel realism, by toxic belongings: cyclical series are interrupted, as are bionetworks; and husbandry, marine requirements and stock, and nourishment manufacture are all harmfully exaggerated. It also clues to sea-level upsurge by its associated penalties, and comprises severer endure, augmented incidence and strength of tempests, deluges, storms, famines, augmented incidence of passions, scarcity, undernourishment and sequence of fitness and socio-economic significances. It has an accumulative result on usual capitals and the equilibrium of flora (Houghton, 2001). Farming is meaningfully connected to the association among the ordinary situation and mortal civilization and the notch to which climatic proceedings canister move farming classifications be contingent on a broad diversity of features with conservational and socio-economic. Considering the rapid population growth, identifying the social, economic, and environmental vulnerability of agricultural systems seems unavoidable as far as sustainable development is concerned (Fischer *et al.*, 2002).

As climatic float disturbing farming in positions of low-slung harvest, deterioration in natural possessions, anomalies in shower, rise in malaise, and bluntness in endure, overflows, warm and stony airstreams. All these dynamics eventually demonstration consequences in plead off domiciliary revenue. Pastoral societies are extra in risk and at the hazard as each as they are complicated in husbandry unswervingly or circuitously and stab to gross out such sort of susceptibilities. Therefore, farmers need to be aware of the changing climate. Fischer *et al.* (2005) studied the socio-economic and climate change impacts on agriculture. They concluded that temperature socio-economic constructions significantly distress construction slit among feasting and manufacture equally in emerging and industrialized realms. They recommended acceptance to newest farming practices will noticeably diminish the indemnities of weather modification by creation a basic reflection on the impending farmed desires will help to rally lengthy stretch sustainability of nutriment organism. Patzet *al.* (2005) calculated the influence of local weather alteration on mortal fitness. They contended that numerous predominant mortal ailments are related to temperature changeability, breathing disease owed to warmth surfs and conduction of catching virus's malnourishment from reap letdowns. It is correspondingly originate that a temperature condition association stances growing fitness dangers beneath upcoming forecasts of weather transformation. Challinoret *al.* (2007) considered that Africa is the greatest susceptible to climatic transformation and erraticism. Cultivation frolicked a vital role in subsidiary maintenance and monetary evolution of the most of the Africa. Weather alternation has postured a selfsame undesirable upshot on the pick production in this district. The acquaintance and evidence associated to temperature modification and inconsistency is the crucial aptitude of agriculturalists to handle with this experiment. So it is essential for direction to sustenance and enable alteration and flexibility to weather alteration at native and state level.

Methodology

The universe of present study comprised of farmers (male) from rural areas of District Faisalabad. The present study was conducted in the rural areas of Disrict Faisalabad. The multistage sampling technique was used for data collection. At

the first stage Tehsil Faisalabad was selected randomly. At the second stage 2 union councils were selected randomly. At the third stage 6 villages (Dholmahjra, SarShameer, Lilan, Javadi, Suman and Mulanpur were selected randomly. In last stage 30 respondents from each selected village systematically. The data was collected by using the questionnaire.

Results and Discussion

Age of Respondents: Age is the vital element which distresses the espousal compartment of the defendants (Talebi and Tajeddin, 2011). The defendants were enquired about their particular age, the age of their partner and that of further household masculine and feminine associates comprising broods, comrades and sisters and on the base of their replies they were confidential in to three types. Age could affect willingness to adopt new technologies. Since the project aims to promote climate smart, small-scale agriculture technologies in the project areas, it is important to take age into consideration when designing strategies. The statistics concerning age of the defendants is assumed in table 1.

Table: 1 Presentation of data according to respondent’s Age

Age	Frequency	Percentage
21-30	46	25.6
31-40	45	25.0
41-50	33	18.3
51-60	31	17.2
61-70	25	13.9
Total	180	100.0
Mean	40.63	
St. Deviation	13.626	

In the present study respondents were asked about their age on the basis of their responses they were classified into different categories table 1 showed that 25.6% respondents had 21-30 years which is maximum percentage of respondents followed by 25.0% respondents had 31-40 years, 18.3% respondents had 41-50 years, 17.2% respondents had 51-60 years, 13.9% respondents had 61-70 and 8.5% respondents had up to 20 years age group.

Marital Status: The married rank can impact the level of the family’s agribusiness and can distress the flat of weather alteration consciousness finish the information of the domestic skull. The extra conversant the domiciliary bean, the supplementary well-versed and alert the respite of the homes would be. Rendering to Mandleni (2011), matrimonial livestock agriculturalists were supplementary conscious of weather alteration and modified to weather alteration; the thinkable motive presence that they had remained in the zone of training for a sensible retro of period that allowed them to detect weather alteration which they might permit on to the respite of the domestic

Table: 2 Presentation of data according to respondent’s marital status

Marital Status	Frequency	Percentage
Married	150	83.3
Unmarried	30	16.7
Total	180	100.0
Mean	1.17	
St. Deviation	.374	

The data in table 2 depicted that a large majority of respondents (83.3%)were married while 16.7% respondents were unmarried.

Family Size: Respondents were asked to rate their family size. Following table shows the data in this regard.

Table: 3 Presentation of data according to respondent's Family Size

Family Size	Frequency	Percentage
1-4	22	12.2
5-8	106	58.8
9-11	42	23.4
12-15	10	5.6
Total	180	100.0
Mean	7.25	
St. Deviation	2.65	

Table 3 indicated that family size classified into four categories majority 58.8% respondents had 4-8 children, 23.4% respondents had 9-11 children, 12.2% respondents had 1-4 children and 5.6% respondents had 11-15 children.

Family Types: Family is the rudimentary component of the society and subsequently it inhabits a best imperative dwelling in the communal assembly. Family states to a cluster of persons united by nuptial, affinity or acceptance and interrelating parts of spouse and companion, dad and mom, son and daughter and brother and sister. It is a communal assembly branded by shared dwelling, financial collaboration and imitation. It also delivers expressive, communal and monetary safety to its associates. The capitals of the complete domestic are accountable for assembly all wants.

Table: 4 Presentation of data according to respondent's Family Type

Family type	Frequency	Percentage
Nuclear	87	48.3
Extended	9	5.0
Joint	80	44.4
One man family	4	2.2
Total	180	100.0
Mean	2.01	
St. Deviation	1.01	

Table 4 indicated that 48.3% respondents had nuclear, 44.4% respondents had joint system, 5.0% respondents had extended family and 2.2% respondents had one man family type.

Education: Educations shows a vital part in entity's temperament expansion and also have an energetic part in realms structure as there is robust association among tutoring and monetary expansion (Khan,2010). Thus, the defendants were enquired around their tutoring glassy and facts in this respect are obtainable in table 5.

Table: 5 Presentation of data according to respondent's Education

Education	Frequency	Percentage
Illiterate	11	6.1
Under metric	34	18.9
Metric	51	28.3
F.A	32	17.8
Graduation	36	20.0
Post-graduation	16	8.9
Total	180	100.0
Mean	10.19	
St. deviation	4.104	

Education is also an important socioeconomic variable. More educated people had more aware about climate change and its effect on agriculture. Table 5 showed that 28.3% respondents had metric that was maximum respondents followed by 20.0% had Graduation, 18.9% respondents had under metric, 17.8% respondents had F.A, 8.9% respondents had postgraduate and 6.1% respondents had Illiterate.

Climate Change: Climate terminated a distinct stint retro. Endure is a systematic perception. It contracts through indicators such as the usual of all-season proceedings, or concluded an extended retro of stint (normally 30 years). Endure has a definite partial expectedness result and might be unswervingly apparent by individuals whereas weather cannot (Kropp and Scholze, 2009).

Table: 6 Presentation of data according to respondent’s information that what Climate change

What is climate change	Frequency	Percentage
Change in rainfall	21	11.7
Change in wind pattern	8	4.4
Change in cloud condition	4	2.2
Change in temperature	39	21.7
All above	108	60.0
Total	180	100.0
Mean	4.14	
St. Deviation	1.36	

Table 6 presented that 21.7% respondents had change in temperature, 11.7% respondents had change in rainfall, 4.4% respondents had change in wind pattern, 2.2% respondents had change in cloud condition and majority 60.0% respondents had said climate change is all above.

Bi-variate Analysis

Hypotheses 1: Association between education and level of awareness

Education	Level of awareness			Total
	Low	Medium	High	
Illiterate	1	4	6	11
	7.1%	5.8%	6.2%	6.1%
Under metric	5	14	15	34
	35.7%	20.3%	15.5%	18.9%
Metric	6	30	15	51
	42.9%	43.5%	15.5%	28.3%
F.A	0	10	22	32
	.0%	14.5%	22.7%	17.8%
Graduation	2	9	25	36
	14.3%	13.0%	25.8%	20.0%
Post-graduation	0	2	14	16
	.0%	2.9%	14.4%	8.9%
Total	14	69	97	180
	100.0%	100.0%	100.0%	100.0%

Chi Square = 30.225, df = 10, P-Value = .000, Gamma = .382

The chi-square value 30.225 shows significant association (p=.000) between education and level of awareness of farmers towards climate change. The gamma value (Gamma = .382) shows that there is positive relationship between variables (i.e. with education of farmers). The data in table 2 clearly shows that 24.6% great extent and 38.5% some extent

students were taking part in extra curriculum at high level and 36.9% students were not taking part. The calculated value of chi-square is greater than the table values. So, the hypothesis “higher education of farmers has a significant impact on and level of awareness of farmers towards climate change” is accepted at 5% level of significance.

Conclusions

Keeping in view the results of the study it can be concluded that average age of the respondents was 40.63 years. Large majority of respondents (83.3%) were married. majority 58.8% respondents had 4-8 children. 48.3% respondents had nuclear type of family. 28.3% respondents had completed ten years of schooling. 21.7% respondents had change in climate related to change in temperature. Well-educated farmers had high level of awareness regarding climate change.

Suggestions

It is necessary to provide education as there are no adequate facilities of education and people have to go far away for this. There is need to implement the environmental laws to cope out the vulnerabilities of climate change. There is need to provide awareness to the people about the climate change and how to cope against the changing climate through agri. extension services, radio and other awareness campaigns. There is need to activate the agri. extension department to play its vital role in assisting farmers to conserve their agriculture in the scenario of climate change to sustain their livelihood.

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