

EXPLORING THE SOLASTALGIA: PREDICTING THE COGNITIVE FAILURES AMONG DROUGHT PRONE FARMERS

Madhu Pandey

Department of Liberal Arts and Sciences

Era's Lucknow Medical College & Hospital, Era University, Sarfarazganj, Lucknow, U.P., India-226003.

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Abstract

The climatic changes mainly effect the farming profession as, India is regarded as an agricultural portion of the globe because many of its regions are perfect for agrarian production; Due to this shift in climate various types of natural disasters are taking place. One such calamity among several disasters is drought. The present paper focuses on the cognitive failures experienced by the farmers suffering with drought. This paper attempts to study the psychological turmoil experienced by the farmers which is termed as, Solastalgia. It is a novel concept that has evolved to make environmental distress more meaningful and clearer. Unlike nostalgia — the morose or anxiousness encountered by individuals who get separated from their home — Solastalgia is the havoc caused by changes in the environment, as it affects people while they are attached to their home settings. The results manifested that the grief observed among the farmers due to the change in their environment hits the mental health and psycho-social status of the agriculturalists. The most important indicator for intellectual failures in the pandemic circumstances is constant substance abuse done by the farmers due to the crop failures they have experienced.

Address for correspondence

Dr. Madhu Pandey

Department of Liberal Arts and Sciences
Era's Lucknow Medical College &
Hospital, Era University, Lucknow-226003.
Email: madhu.psychologist3@gmail.com
Contact no: +91-9651611956

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INTRODUCTION

India is known as agricultural country as many parts of it are suitable for the farming. In India, agriculture has incessantly venerated as the primary sphere of influence, in fact being an agrarian country, agriculture bequeaths in the growth of the Indian economy. It can be better illustrated that despite the globalization of the Indian economy, almost 70% of the gentry in the entire population are still depended upon the agriculture for its earnings and livelihood. With this information, it can be inferred that the agriculture is such an imperative component of the country that it cannot be separated with large number of inhabitants living in it. The community which belongs to this segment is even particularly of more significance for the nation's growth. Despite this in recent years the contribution of the farming and its associated divisions is falling off in its growth which has become the major concern these days. One of the causes is natural disaster, for the continuous degeneration of the contribution in the economy from this sector. This natural disaster is accompanied by numerous things like, changes in climates, floods, drought, earthquakes, etc.

Agriculture is affected by so many naturally occurring calamities leading to pandemic situation. A notable number of crises can be observed with the psychological perspective in farmer's life due to crop failures, financial losses and many more.

The crises are accompanied by humans' loss, property damage, animals' loss, crop failures and many other losses. Moreover there will be other hazards like hails, dust storms and sleets. In so many natural hazards, one such tragedy which has affected the year 2016 is drought. It is equally catastrophic like other disasters as well, it is very life threatening and affects a massive population. Drought can be defined as the state when there is intensity of precipitation at the substandard level in the specific region which follows the difficulties of long-drawn-out water shortage to the extent where the life gets into jeopardy for its survival. There is a substantial effect of drought in the agriculture sector which in turn harms the economy of the country at the broader level. Drought chances and consequent bush fires radically get augmented in the annual dry seasons in the tropics. Drought state gets exacerbated in periods of heat by stepping up water vapor evaporations.

Agriculture and Drought in India

Farming, the profession acquired in the genre of agriculture in real sense defines the economy of a country in a bigger sense. The gross domestic income in India is mainly contributed by this sector due to which India is called an agrarian country. Farming is exclusively an occupation which enables the world's population to feed beside the contribution in the economy. Despite its benefits farming as an occupation is an exclusive set of multiple stressors both physical and psychological. Farming as a profession relies on a lot of usual and perverted factors, which includes the dependency on changeable ecological conditions, economy's pressure or else on numerous monetary factors. Farming in a way affects the entire population whether rural or urban (6).

In India, there has been drastic demolishment in the agriculture sector due to the continuous climatic changes experienced in the recent years. Since centuries droughts have taken so many lives in India. To focus the agriculture, it mainly depends upon the water supply and rainfall, but when the scarcity and dearth of the water is encountered it affects the agriculture and the entire economy fatally. The consequences which are witnessed include the crop failures, increase in death rates, famine, and so on. There are certain explanations for the occurrences of the drought. Various causes of droughts include inadequate rainfall, lack of water vapor in the atmosphere due to unpredictable monsoons, misusing the available surface water (3). Due to less amount of rainfall, the water in the soils gets evaporated leaving the lands bleak and barren. Third reason is the climatic change accompanied by burning of fossils, in this case maximum water gets evaporated causing less amount of rain to occur which leads to the droughts on the cards. Fourth indicator is the ocean temperature in which the low pressure created by El-Nino which evacuates desiccated air from Central Asia and in return dehydrates the Indian lands. Fifth point is the alterations in the neighboring landscapes, due to deforestations and in addition to the variations in the types of vegetation issues in drainage systems in the landscapes are potent causes that lead to the situation of drought. These factors diminish the capacity of soil for water retention and hence causing the droughts. Further explaining the sixth factor, the depletion of the man-made reservoirs and other natural reservoirs leads to increase in temperature. Seventh factor can be explained as reprehensible agricultural practice, which

involves the rainwater harvesting and man-made reservoirs are important but when they are not followed it pretenses the coercion to agriculture and associated genres (7).

Mental Health and Drought

Mental health is essential for healthy living. Drought which is a life threatening hazard can create a negative mental health in various ways, causing diverse symptoms. Climatic changes are the condition which has an adverse impact on the mental health of the people who are depended upon the agriculture as a profession. In the condition of drought, the psychological perspective of the people gets disrupted and gets very highly affected (4). The problems like indebtedness, crop failures and economic hardships which get arise due to drought which ultimately leads to mental health problems as well. Hence, the long term subsistence of droughts is associated with the cognitive failures of the farmers which lead to the condition of demoralization, solastalgia, self-destructive behavior and pessimism (5).

Solastalgia

Solastalgia is the new-fangled notion developed to put in plain words to the environmentally fueled distress. This term wrings with two different words, a comprehensive and neologistic term which expounds the changes triggered by environment which forges psychic or else existential agony. The term "solastalgia" is contrived by using Latin word "Solacium" means comfort and the Greek word "Algia" which expounds pain. The distress created on the people by the changes in their surroundings knocks the mental health of the individuals which includes their psychosocial status too. Solastalgia is the anguish, grief or the miseries that is originated from the alterations in the environment in a more precise sense, explanation of this term of natural disaster is alterations in the natural atmosphere around the mankind but for the "worse", this literally means Solastalgia (1, 4).

Medical Journal of Lancet's 2015 Health and Climate Change report discussed in relation to the way solastalgia is associated to the term dis-ease. In additional it explains the solastalgia is the "lack of ease due to a hostile environment in which a person is powerless to do anything about." Such transformations in the landscapes arrive from the natural course of actions like the droughts, bushfires, cloud burst, earthquakes, etc or else from the man-made course of actions like climate change or urbanizations. Few researchers like Sri Warsini, at James Cook University, Australia has expounded

the phenomenon of Solastalgia which took place in the developing countries which is accompanied by the natural hazards such as earthquakes, volcanic eruptions and cloud burst. He came up with the losses confronted by the natives of those regions like loss of houses, loss of farmlands and especially the feeling of survival in the hazard prone area which is a very big distress in itself. This survival feeling challenges the people's sagacity of their living in that area and their identity as well which can lead them to anxiety, hopelessness, depression, self-destructive behavior and many other related mental health issues (10).

Life orientation and self-destructive behavior

In order to have a positive mental health, it is essential to have a positive orientation towards once life. Life orientation is the state of being well, where an individual can cope with their life hassles by being optimistic and contented. Self-destructive behavior is one of the examples of cognitive failures. It is basically an act which focuses on the death instinct leading to destruction of self. It is noticeable self-inflicted acts like abusing one and deliberate harming to oneself are congregated together, and consequently forming a particular pattern of a behavior. This term figures out the acts like "social suicide", literal "suicide" or maybe the self-destruction notwithstanding the idea of madness. In more general terms, self-destruction acts maybe premeditated, intentional, or evoked out of impulse, or maybe developed as pattern in the behavior. This term is functional to habit formation pertaining harming self which is a serious concern. The self-harming behavior is accompanied by self-injury, suicide, substance abuse and many more. It can be also used as coping mechanism, when the problems dig up to a certain heights. A vital characteristic of this kind of behavior is there lessened knack to deal and manage the stress twiggled from the lower level of self-confidence.

There have been many researches in the agricultural perspective related to climatic changes and natural hazards. A research on 'Drought Readiness and Anxiety' of new and experienced Indian Farmers found that anxiety and readiness was found in both type of farmers whether they were experienced or else non-experienced (9). Rate of recurrence, rigorousness, and affected region, the financial loss, social and environmental impacts experienced by the people due to drought is comparatively very fatal in comparison to other disasters. Researchers made an attempt to study the phenomenon that water quality also has a negative impact because of the climatic changes (7). A climatic change increases the rate of

severity and intensity of many natural hazards (8). Drought is the most eminent concern which hampers the economic, environmental and social aspects of the people in society (6). The non-attenuation and sublimation of Solastalgia in a situation of distress can take place on different paradigms of social, physical, and mental health related issues emerging from different substances abuse to severe psychiatric disorders, which can sometimes lead to the fatal consequences like committing the suicide. Solastalgia leads to the substance abuse, violence, suicide, self-destructive behavior, stress related disorders, depression, anxiety, public trauma and many other mental health related issues (5). Few people in a study reported in an interview that climatic changes leads to the condition of solastalgia which includes the feeling of desolation, wretchedness, apprehension, distress, fear, anxiousness, loosing of sense of self, belongingness and familiarity (4). Drought leads damage to the assets, livestock, crop failures, life-threatening situation for the farmers. This condition has overwhelming effects engagement in self-harm behavior and therefore leading to the condition of Solastalgia (10).

OBJECTIVES

1. Point out the cognitive failures.
2. Gauge the common ways opted for self-destruction.
3. Indicating the reasons of deliberate self-harm behaviors in farmers.

METHODOLOGY

Tools

1. The survey method and semi-structured interview were opted to acquire the farmers' demographic details. "Farmer survey questionnaire" was employed to gather the data. The questionnaire was constructed by Lokniti, Centre for the study of developing societies.
2. To study the cognitive failures of farmers the inventory of statements about Self-Injury was used. Inventory Of Statements About Self-Injury (ISAS)
3. To study the psychological symptoms experienced by the farmers, a semi-structured questionnaire was used.

SAMPLE

Sample of 332 farmers of Uttar Pradesh state were surveyed with a purposive sampling method. Primary data is used in the present research.

RESULT

| S. no. | Self-destructive behaviors | frequency of farmers | % Age of farmers |
|--------|-----------------------------------|----------------------|------------------|
| 1 | Banging or Hitting self | 300 | 93.16770186 |
| 2 | Severe scratches | 230 | 71.42857143 |
| 3 | Cutting | 257 | 79.8136646 |
| 4 | Rubbing skin against ruff surface | 203 | 63.04347826 |
| 5 | Biting | 183 | 56.83229814 |
| 6 | Sticking self with needles | 147 | 45.65217391 |
| 7 | Burning | 305 | 94.72049689 |
| 8 | Swallowing Dangerous Substance | 318 | 98.75776398 |
| 9 | Carving | 282 | 87.57763975 |
| 10 | Pinching | 57 | 17.70186335 |
| 11 | Pulling Hairs | 80 | 24.8447205 |
| 12 | Interfering wound healing | 236 | 73.29192547 |

Table 1: Elicits the Percentage of the Farmers Using the Self-destructive Behavior

| S. no. | Psychological symptoms experienced | frequency of farmers | % Age of farmers |
|--------|------------------------------------|----------------------|------------------|
| 1 | Depression | 319 | 99.06832298 |
| 2 | Anxiety | 298 | 92.54658385 |
| 3 | Hopelessness | 320 | 99.37888199 |
| 4 | Panic Attacks | 196 | 60.86956522 |
| 5 | Distress | 243 | 75.46583851 |
| 6 | Low self-Esteem | 300 | 93.16770186 |
| 7 | Suicidal ideation | 300 | 93.16770186 |
| 8 | Feeling of loss of control | 320 | 99.37888199 |
| 9 | Fear | 309 | 95.96273292 |
| 10 | Learned Helplessness | 316 | 98.13664596 |
| 11 | Loss of Interest in work | 184 | 57.14285714 |
| 12 | Insomnia | 301 | 93.47826087 |
| 13 | Aggression | 210 | 65.2173913 |
| 14 | Loss of Appetite | 297 | 92.23602484 |

Table 2: Elicits the Psychological Symptoms Experienced by the Farmers

| S. no. | Reasons | frequency of farmers | % Age of farmers |
|--------|-----------------------------------|----------------------|------------------|
| 1 | Indebtedness (credits or loans) | 296 | 91.92546584 |
| 2 | Crop failures | 305 | 94.72049689 |
| 3 | Substance abuse/ Bad habit | 265 | 82.29813665 |
| 4 | Family/Domestic problems | 300 | 93.16770186 |
| 5 | Insecurity due to climatic change | 314 | 97.51552795 |
| 6 | Frequency of drought | 294 | 91.30434783 |
| 7 | Irrigation area | 237 | 73.60248447 |
| 8 | others | 288 | 89.44099379 |

Table 3: Elicits the Conditions which Lead to Cognitive Failures Among Farmers

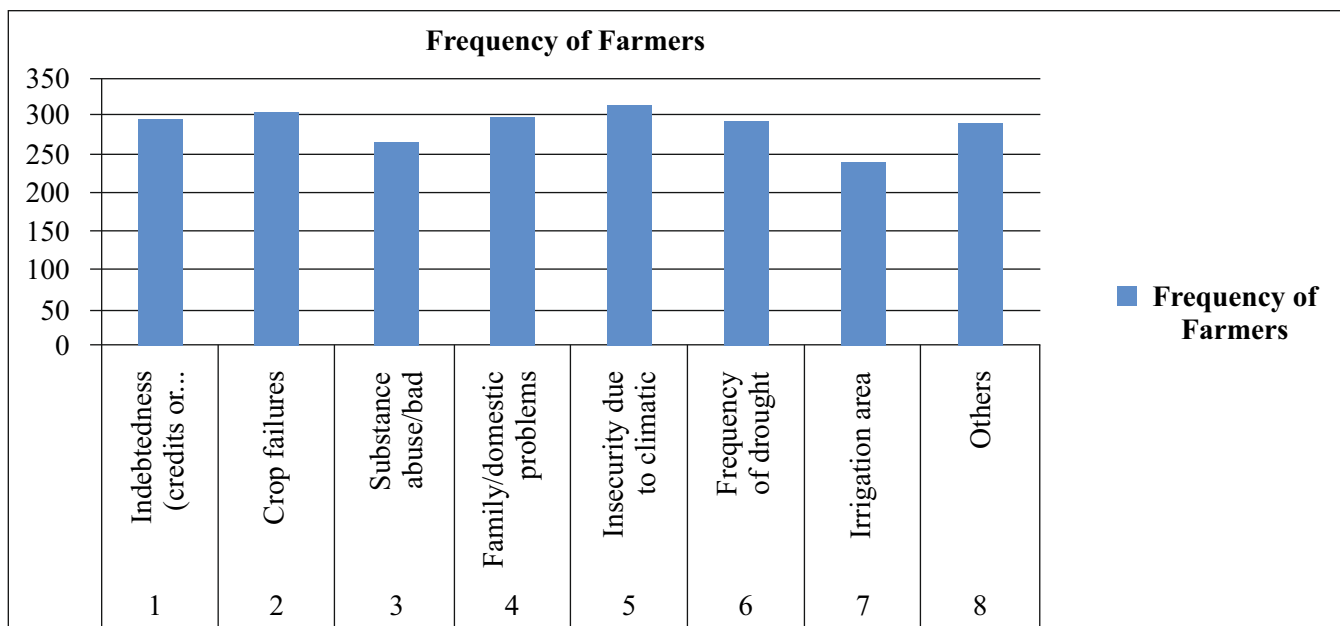


Fig. 1: Graphical Representation to Point out the Indicators of the Self-harm Behavior Among the Farmers

DISCUSSION

The present study found the farmer's experienced solastalgia during the condition of drought. Out of 322 farmers, 207 farmers reported that they have harmed themselves very severely. Most alarming fact is that 295 farmers out of 322 farmers said they have urge to self-harm themselves in almost every 15 days. 278 farmers do not want to stop the self-harming activity because the situation is getting worse for them with every passing day. With due consideration to the inventories administered and the semi-structured interviews, 198 farmers reported that they committed self-harm behavior while responding to their suicidal thoughts with means that they actually attempted suicides. 319 farmers reported that they performed self-harm activities in order to lower down their anxiety, frustrations, avoid their miseries and other overwhelming situations. 308 farmers expressed the view on that they attempt self-harm behavior to release the emotional pressure that has built up inside them. Table 1, represents the ways which are commonly employed by the farmers in order to perform self-destructive behavior. Few most commonly used methods are swallowing dangerous substance, banging or hitting self, attempt to burn themselves, starving, making severe scratches or maybe interfering wound healings or try to cut themselves in their different body parts. Please refer the table 1, to know the frequencies or percentages of farmers using the particular method.

Table 2 represents, the psychological symptoms experienced by the farmers which are depression,

anxiety, hopelessness, panic attacks, distress, low self-esteem, suicidal ideations, feeling loss of control, fear, insomnia, learned helplessness, aggression, loss of interest in work and loss of appetite. Please refer the table to have a glance for the percentages and frequencies of the farmers experienced these symptoms out of 322 farmers. Table 3 elicits the reasons of the cognitive failures. The list begins with indebtedness, crop failures, continued use of substance abuse, family problem, insecurities due to climatic changes, frequency of drought, irrigation area acquired by the farmers were the few major reasons derived by doing the surveys on the farmers.

CONCLUSION

The distress created on the people with the changes in their surroundings knocks the mental health of the individuals which also includes their psychosocial status too. Herein the research paper, attempt has been made to study the phenomenon of solastalgia on the farmers affected by the importunate condition of drought, a natural calamity. This phenomenon is studied by assessing farmer's life orientation accompanied with their self-destructive behavior. The result in this research divulges the major indicator for cognitive failures in the pandemic condition is continuous substance abuse which farmers do due to the crop failures. Considering other factors which are obtained by the semi-structured interviews, it incorporates household income, education level, and lack of awareness in Government policies. Some of the indicators for self-destructive behavior were their irrigation area, frequency of drought and their

indebtedness. The self-destructive behavior included the other cognitive failures like panic attacks, difficulty in sleeping, hopelessness, and learned helplessness, obsessive behavior, and feeling of anxiousness for future, unemployment, malnutrition and conflicts in the society for water. It was also scrutinized that farmers irrespective of their economic state had experienced the feeling of solastalgia. Accomplishing such a study would give a panorama that how state policies can perk up and shore up community pliability and resilience accompanied by their mental health status that ushered due to the drought, the natural calamity.

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Orcid ID:

Madhu Pandey - <https://orcid.org/0000-0001-6928-7597?lang=en>

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