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A Differential Study of Environmental Attitude and Occupational Stress between Organic and Conventional Farmers (N/ 300)

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ABSTRACT: The aim of the study is to identify differences between environmental attitude and occupational stress of the organic and inorganic/conventional farmers. For this study, two instruments have been considered i.e.environmental attitude(Taj,2001) and Farmers Occupational Stress (Naik,2019)..For the present research sample has been selected by purposive sampling technique on 300 organic and inorganic farmers from Pune district of Maharashtra state, India. Results indicated that environmental attitude and occupational stress in both the groups of farmers have differ significantly.

Keywords: Environmental Attitude, Occupational Stress, Organic, Conventional Farmers

I. INTRODUCTION

Agricultural practices in the Vedic period started from c.1500 BC and ended in c.500 BC, corresponding to the last period of the Chalcolithicyears and Iron Age in India. The possible information acquired from north-western parts of India to the entire alluvial of the river Ganges(Buddha,1970).

Maharshi Parashar, grandson of Maharshi Vashista, the book encompasses two hundred and forty-three verses. Moreover, it is the theory of agriculture exhibited in such a way that the farmers would benefit by its implementation. In the Krishi Parasher, theory explores all aspects about plant life such as organic farming techniques, crop management, holistic farming, or rather sustainable use of available resources etc.(Maheshwari,2018).

The concept of stress initially intoduced by Hans Selye (1976), has several implications.Occupational stress can be noticed as a natural extension of this classical concept of human activity, namely work (Appley & Trumbull, 1986).According to Sainath (2007)"On an average, one farmer commits suicide on every 30 minutes in India," (Centre for Human Rights and Global Justice, 2011).

According to National Crime Bureau, the suicide mortality rate (SMR, suicide death for 100,000 persons) for male farmers in India increased by 12.3 during 1996 to 2004 and then reduced to 18.2 in 2005. Meanwhile, SMR for male farmers increased from 11.9 in 1996 to a peak of 14.2 in 2000 and thereafter declined to 13.4 in 2005. During 2001-05, there were 86,922 farmers' suicides, of which 86% were males. Across major states, the states where SMR for male farmers is higher that of the national average of 17.5 and SMR for male- farmers in that state are Kerala, Maharashtra, Chhattisgarh, Karnataka, Tamil Nadu and Andhra Pradesh. Among smaller states / union territories the incidence is high in Pondicherry, Dadra and Nagar Haveli, Delhi, Goa and Sikkim (NCRB, 2007).

"Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adopted to local conditions rather than the use of inputs with adverse effects. It is a combination of tradition, innovation and science to benefit the shared environment as well as promote fair relationships and a good quality of life for all of us who are involved" (IFOAM, 2008).

The impact of organic farming and conventional farming on the environment is necessary to understand by farmers because farmers work with environment and for environment. Farming involves understanding and working with nature (Molnar and Duffy, 1987).

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The personal environment (P-E) fit theory (Caplan, 1983) is commonly discussed in the literature (Edwards, 1991; Edwards & Cooper, 1988) and relates to the occupational stress and strain concepts in the occupational stress inventory revised (OSI-R). The model proposed that strain occurs in a person when the relationship between the person and the environment is out of equilibrium (Cooper et al., 2001).

As per Booth & Lloyd's (1999) research on occupational stress which was conducted in the South West of England, revealed a substantial score on the General Health Questionnaire, which visibly was more in women farmers i.e occupational stress found higher among farming women than farming men.

According to Price.L, N.,& Evans. N(2009)stress to distress: Conceptualizing the British family farming patriarchal way of life.Particularly, within the context of the patriarchal & traditionally perinea way of life which family forms of farming business activity in Britain encapsulate. A conceptual framework is outlined that attempts to shift the stress research agenda into the un-illuminated spaces of the family farming, way of life & focus instead of distress.

Moreover, farm stresses such as perceived economic problems, stress symptoms', and safety behavior were predictors of occupational farm accidents. An increased risk of injury is related to poor safety attitude and higher levels of stressors and other symptoms. The combination of high levels of stress symptoms & poor safety behaviors was associated with a particularly high accident risk. (Glassook.D. & others,2006)

HYPOTHESES

- Environmental attitude of organic farmers will be better as compared to conventional farmers.
- Occupational stress will be lower in organic farmers as compared to conventional farmers.

VARIABLES

The present research study consists of independent and dependent variables as bellow;

- Independent Variable : Farmers
- Levels of Independent Variable : Organic Farmers,Conventional Farmers
- Dependent Variables : Environmental Attitude, Occupational Stress

SAMPLE

For the present research sample has been selected by utmost possible care and based on predetermined criteria. In this research purposive sampling technique is used in sample selection. The sample of the present study consisted of 300 farmers, 150 professional organic farmers and 150 inorganic farmers from Pune district of Maharashtra state, India. Only men farmers have considered and their age range is between 30 to 60 years. All of them have minimum HSC qualification. Farmers have a minimum three years experience of the same farming method. Farmers have farmland between 3 acres to 10 acres with annual income between 3 lakhs to 10 lakhs. Present research included only those farmers who raise edible crops such as grains, vegetables and fruits.

TOOLS

For this study, the researcher has been used mentioned tools for the data collection as follows;

- Environmental Attitude Scale (Taj,2001)
- Farmer's Occupational Stress Scale (Naik,2019)

Environmental Attitude Scale- (Taj, 2001)

Present scale contains sixty-one items consisting of six areas of environment -
(i) Population explosion
(ii) Health and hygiene
(iii)Polluters
(iv)Wild life
(v) Forests
(vi) Environmental concerns.
This test is for the age group of 14 to 50 years. Present scale has reliability 0.67 by test retest method and validity satisfied. Present scale norms are based on sex, locality, and religion occupational status.

Farmer's Occupational Stress Scale

For present research, Farmer's Occupational Stress Scale has been developed by the Researcher.
The occupational stress scale with 20 items was administered to 50 farmers to determine reliability. Likert's method of summated ratings was used in this scale.The reliability analysis of data is presented in table 1.1

Table 1.1
Reliability Coefficients of Test

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Number of Subjects = 50,Number of Items = 20

Types of Reliability	Reliability Coefficients
Spearman-Brown Reliability	0.8013**
Split-half Reliability	0.8008**

**** Significant at .01 level**

All the reported reliability coefficients are statistically significant and within ideal range for a scale to be called reliable.

The validity of the scale was determined by the LawShe (1975) method and it was found to be statistically significant (0.91).

Research Design

Two Matched- groups Design:

Researcher has been matched Organic Farmers to Conventional Farmers on the following variables-

I. Age
II. Education
III. Experience of farming method
IV. Area of farmland
V. Income
VI. Crops

II. RESULTS AND INTERPRETATION

The results are shown in table 1.2

Table 1.2
Comparison of Environmental Attitude of Organic and Conventional Farmers

Groups	Environmental Attitude Mean	SD	Mean Diff.	't'
Organic Farmers (N-150)	192.46	24.66	26.75	8.96,p<.01
Conventional Farmers (N-150)	165.70	26.96		

Results presented in table 1.2 indicate that attitude towards concern for the environment was found to be significantly better in organic farmers (M=192.46) as compared to conventional farmers (M=165.70). The calculated t=8.96, is statistically significant at .01 level and also gives statistical weight age to this finding that the environmental attitude of professional organic farmers is significantly superior as compared to environmental attitude of inorganic/conventional farmers.

The results are also shown in figure 2.1

Figure 2.1

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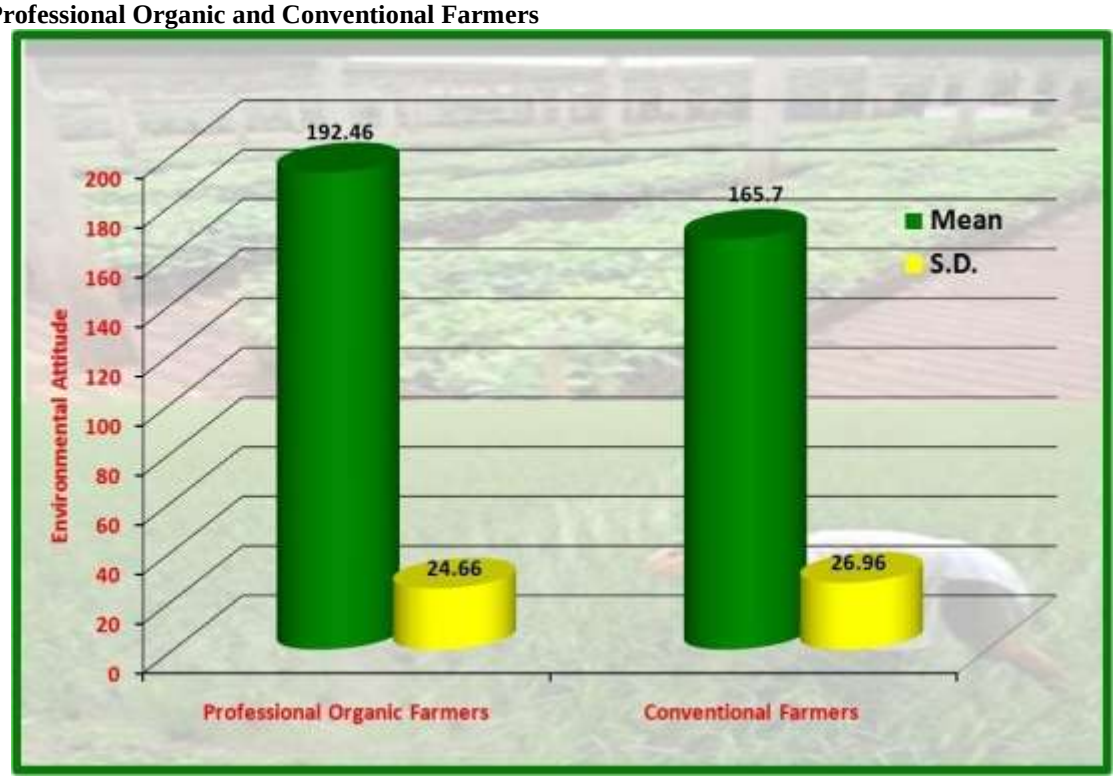
Bar Diagram Showing Comparison of Mean Scores on Environmental Attitude Scale in Groups Comprise of Professional Organic and Conventional Farmers



Since the environmental attitude of organic farmers was found to be significantly better as compared to the conventional farmers, hypothesis stands accepted.

Table 1.3
Comparison of Occupational Stress in Organic and Conventional Farmers

Groups	Occupational Stress Mean	SD	Mean Diff.	't'
Organic Farmers (N-150)	59.92	9.06	7.44	7.36,p<.01
Conventional Farmers (N-150)	67.37	8.43		

Results presented in table 1.3 indicate that occupational stress in organic farmers (M=59.92) is significantly less than inorganic/conventional farmers (M=67.37). The calculated t=7.36, is statistically significant at .01 level and also gives statistical strength to this study that occupational stress in organic farmers is considerably lower as compared to inorganic/conventional farmers. The scoring pattern of occupational stress is higher the score, higher the occupation stress and the results are interpreted accordingly.

The results are also shown in figure 2.2

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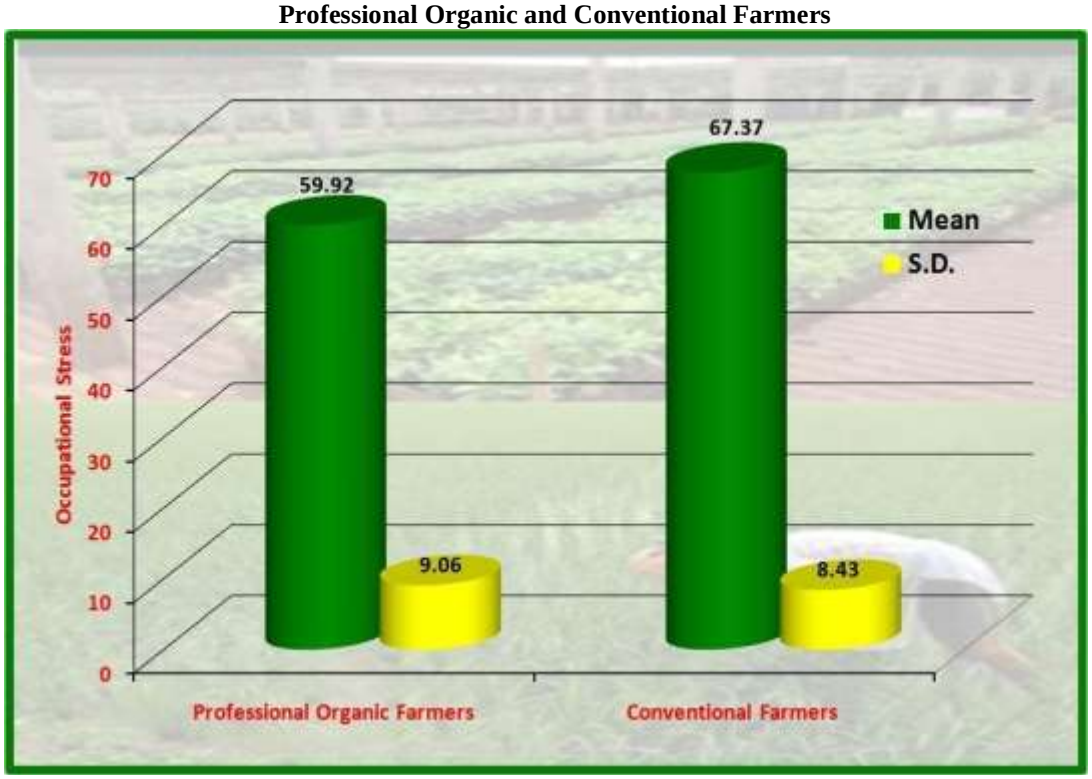
Figure 2.2
Bar Diagram Showing Comparison of Mean Scores on Occupational Stress Scale in Groups Comprise of Professional Organic and Conventional Farmers



Since occupational stress in conventional farmers was found to be significantly higher as compared to professional organic farmers.

According to Sullivan. McCann and Erikson (1992),Organic farmers have more satisfaction with their day today lives and a higher concern for living ethically and stronger perception of community. They have pointed out that organic farmer's environmental attitudes were found significantly high (33%) and conventional farmers' environmental attitudes were significantly low (15%).

III. CONCLUSION

Researcher has found that organic farmers have more magnitude over environmental attitude as compared to conventional farmers. On the other hand, conventional farmers have significantly more occupational stress found than organic farmers. According to Satoshi.N., Takahiro.T.,Satoru.O, Takeuchi.& Nishikawa.U., (2014),by comparing the attitudes, beliefs & attributes of non-certified versus certified farmers, identified key factors affecting farmers' implementation of WFF practices, certified farmers. : 1) showed a higher concern in biodiversity & the financial benefits of WFF. 2) Had a larger number of certified farmer friends. 3) Felt many more pressures & expectations from consumers in particular & 4) were not hampered by bad labor / farmland continuously when implementing WFF practices.

REFERENCES

[1]. Appley.H & Trumbull.R (1986),'Dynamics of Stress Physiological, Psychological, and Social Perspectives' Book
[2]. Booth, N.J. & Lloyd, K (1999), 'Stress in farming' International Journal of social psychiatry 46(1), 67-73
[3]. Buddha. P (1970) Haryana Through The Ages, Kurukshetra, pp. 4-6.
[4]. Cooper, D.R. and Schindler, P.S. (2001) Business Research Methods. McGraw-Hill Higher Education,https://www.scirp.org/(S(czeh2tfqyw2orz553k1w0r45))/reference/ReferencesPapers.aspx?ReferenceID=1530323
[5]. Glasscock.D, Rasmussen K. Ole C. & Ole N.(2006), ' Work and Stress' Psychosocial factors & safety behaviors as predictors of accidental work injuries in farming' 04/2006; 20(2):173-189. Dol; 10.1080/026783706000879124
[6]. Haseen, T. (2001). Manual for Taj Environmental Attitude Scale. Nandini Enterprises, Agra, India. 7-9.

[7]. IFOAM(2008),'Definition of organic agriculture ,IFOAM. General, Assembly https://www.ifoam.bio/why-organic/organic-landmarks/definition-organic

[8]. Maheshwari.V(2018), Krishi Parashara (Agriculture by Parashara), https://kupdf.net/download/krishi-parasharapdf_5bed9823e2b6f5d510c4fec5_pdf

[9]. Molnar & Duffy (1987), 'Science in Agriculture: A Reply to Molnar, Duffy, Cummins, and Van Santen and to Flora' Rural Sociology 57(1):98 – 107 https://www.researchgate.net/publication/229473838_Science_in_Agriculture_A_Reply_to_Molnar_Duffy_Cummins_and_Van_Santen_and_to_Flora

[10]. Naik D.(2019),Farmers Occupational Stress Scale, Prasad Psycho Corporation,New Delhi

[11]. National Crime Records Bureau (2007),https://ncrb.gov.in/en/crime-india-year-2007

[12]. Price, L. and Evans, N. (2009) 'Work and Worry', in J. Little and C. Morris (eds.) Critical Studies in Rural Gender Issues, 45-60,India. Social Change. 42 (2): 229–247.

[13]. Sainath.P.(2007),'Farm suicides:a12 year saga',The Hindu https://www.thehindu.com/opinion/columns/sainath/Farm-suicides-a-12-year-saga/article16811575.ece

[14]. Satoshi.N.,Takahiro.T.,Satoru.O.,Takeuchi & Nishikawa.U.,(2014), 'Exploring Factors Affecting Farmers' Implementation of Wildlife-Friendly Farming on Sado Island, Japan'Journal of Resources and Ecology 5(4):370-380DOI:10.5814/j.issn.1674-764x.2014.04.013

[15]. Sullivan.S., McCann.E. & Erikson.D. (1992), 'Farmers' Attitudes About Farming and the Environment: A Survey of Conventional and Organic Farmers'. Journal of Agriculture & Environmental Ethics 9: 123-143Journal of Agricultural and Environmental Ethics 9(2):123-143DOI:10.1007/BF03055298