

Stress Attributes and their Association with Self-Efficacy of Farmers: An Exploratory Study

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ABSTRACT

The occurrence of stress is becoming a common characteristic among all professions, including farming. Stress being a “double-edged sword” influences the behavior, performance capabilities, and competencies of every individual. Measurement of stress among white and blue-collar jobs has been extensively studied. However, the examination of stress among the farming community of developing countries, especially at the regional levels, has remained largely unexplored. Further, there is a dearth of studies analyzing stress parameters among farming communities viz-a-viz psychological constructs such as self-efficacy. The study used a well-structured questionnaire having statements of stress parameters and self-efficacy for measuring the association and influence of stress parameters on self-efficacy. The results revealed a negative relationship between the dependent variable (self-efficacy) and independent variables (stress). Result outcomes demonstrate that stress affects self-efficacy levels among the farmers and thus increase their vulnerability. The study provides insightful cues towards understanding farmers and the farming profession on the psychological pattern. Therefore, it provides a strategic perspective to the policymakers and practitioners for creating various interventions that can make farming an embellished and lucrative profession, particularly at the regional levels where resource constraints and inequitable development is common phenomena. Moreover, it can also contribute towards developing sustainability in the agriculture/horticulture sectors.

Keywords: Stress, depression, anxiety, tenseness, frustration-fatigue, self-efficacy, farmers

Stress has become a universal phenomenon across the globe spreading among all major age groups and professions. It acts as a “double-edged sword” that can either make or break an individual, especially his/her performance (Goldberg *et al.*, 1988). Essentially, stress reflects an individual’s response to demanding situations. With complexities in the organization, both in terms of competition and changing nature of jobs, stress is becoming a common phenomenon associated with almost every job. Also,

research thrust towards stress & its related areas is increasing, mainly due to its strong linkages with an individual’s performance and behavioral constructs such as motivation, personality, attitude, etc. Stress being a subjective psychological dimension has led

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to the proliferation of multiple research views and has been defined differently by various researchers depending upon the context and objectives of their studies. However, most of the studies converge to a common point while defining stress i.e., it is a psychological state derived mainly from external cues; these cues define mental & physical responses of an individual based on their perception about their abilities & the challenging nature of the cues (Cox, 1993). World Health Organization (WHO) advocated that a state of mental well-being is crucial for sustaining and increasing the performance and productivity of an individual. State of mental imbalance/disorders are mainly demonstrated through or combination of abnormal thoughts, emotions, behavior, loss of interest, loss of performance, loss of productivity, and edgy social & professional relationships. The economic losses arising from the stress are highly intangible and difficult to measure due to the intrinsic complexities involved.

Stress essentially creates an environment that exceeds a 'person's adaptive capacity, resulting in the psychological and biological alterations that may expose him/her to the various risks & medical disorders with high prominence of fatigue, tension, irritability, anxiety, cynicism, etc. From an organizational behavior perspective, a certain amount of stress is required in every job to infuse competitive spirit and performance race. However, continuous & increasing exposure to stress can create disastrous consequences in three ways, i.e., psychological, physiological, and behavioral. With growing competition and increasing workloads, responsibilities, economic complexities, occupational stress is increasing. Occupational stress is defined as a condition arising from the interaction of people at their jobs and is characterized by changes within people that force them to change from their normal functioning (Beehr and Newman, 1978).

Occupational stress is not restricted to the office-going jobs only but has its prominence in every profession across the world, including the farming profession (Williams, 2001; Yazd *et al.*, 2019; Ramesh & Madhavi, 2009). Occupational stress limits the professional competencies of an individual due to its impact on the psychological and behavioral constructs. Thus, creating an environment whereby people feel

restrained in their decision-making competencies or self-efficacy. The severity of this reduced self-efficacy is more detrimental in those professions which are having high risks and uncertainties associated with them, such as agricultural farming. Agriculture is a noble profession with high economic and social significance both at a nation's micro and macro levels. It has been extensively researched on the economic front for its growth potential & revenue potential. But little focus has been placed on understanding psychological and behavioral constructs associated with the people related to this profession, resulting in a gap in the existing literature, especially at regional economic levels, which are highly constrained. Studying stress and self-efficacy of the farmers in the contemporary competitive business world is highly demanding mainly due to the increase in sustainability and potentiality of agriculture among the future generation. Within this background, the present study has been conducted to study the interaction between the two critical psychological constructs i.e., self-efficacy and stress. The paper ahead deliberates upon the relevant literature about these two constructs, methodology & inferences of the study.

LITERATURE REVIEW

The theory of self-efficacy represents one of the core aspects of social-cognitive theory (Bandura, 1977). It reflects the decision-making competencies having strong linkages with motivation & performance levels of a person (Bandura, 1977, 1982; Schwarzer, 1992). Self-efficacy significantly depends upon the psychological/mental equilibrium of an individual. Lazarus and Folkman (1984) advocated that personal beliefs such as self-efficacy are crucial in evaluating demands from the challenging environment. Persons with firm self-efficacy beliefs are more likely to evaluate the demands as a challenge to the extent that a person feels confident about his or her competence to handle a given situation & is persistent at managing the task. Vega *et al.*, (1985) observed that psychological/mental equilibrium has a significant linkage with the age, experience, and profession. Similar observations were highlighted by Virk *et al.*, (2001). They observed psychological/mental equilibrium is highly dependent upon stress levels an individual faces in his/her profession/job/occupation.

Fetsch (1984) highlighted the prevalence of stress among farmers and attributed it to the nature of the farming profession involving long working hours, bad weather, social isolation, etc. Levels of farming stress are further intensified with the changing farming practice, volume & quality of the produce, rising input costs, environmental and economic situations. Exaggeration in these factors has the potential to cause severe psychological imbalances, which at times lead to the prevalence of suicide among the farmers (Thomas *et al.*, 2003; Gunderson *et al.*, 1993; Booth and Lloyd, 2000; Stallones 1990). Swisher *et al.*, (1998), in their study, observed that farming communities experience high rates of financial losses, cuts in wages or salary, increases in debt, and poor accessibility to financial inputs, which contribute significantly towards stress among them ultimately leading to the psychological imbalance. Sanne *et al.*, (2004) observed that the farmers' psychological imbalance is high compared to the non-farming profession. The main reason for this high dominance is the prominence of uncontrollable events and situations arising out of the dynamism and interdependence of the different farming operational decisions and the environmental parameters like rainfall, soil nutrient, pest infection, etc.

Forstadt and Jackson (2014) stated that farm occupational stress is mainly observed through anxiety, depression, frustration, etc. Jones-Bitton *et al.*, (2020) estimated the prevalence of stress among Canadian farmers through dimensions like anxiety, depression, tenseness, etc. Karademas & Azizi-Kalantzi (2003), in their study, highlighted the relationship between stress process and appraisal variables, such as self-efficacy, a relevant cognitive schema, coping strategies, and psychological health while challenging the environmental situations. They observed that the appraisal variables play an essential role in creating an up coping mechanism for sustaining effective & efficient decision-making competencies (self-efficacy). Gebrehiwot & Veen (2015), in their research, observed that self-efficacy is a necessary construct that helps an individual to mitigate risks and uncertainties, thereby helping people to sail through a rough and challenging situation. Rizeanu *et al.*, (2018) observed in their research that during challenging times, levels of stress increase and damage the self-efficacy levels

of an individual. The recent Covid19 pandemic crisis highlighted the sensitivity & complexities associated with the farming profession and how they interfered with the sustenance levels of the farmers. Jambor *et al.*, (2020), while studying the impact of challenging environmental situations such as Covid-19 on horticultural and food markets, highlighted the significant impact areas i.e., supply chain disruptions, demand levels, labor availability, food security, food safety, trade volumes, etc. These commotions resulted in a high level of stress among the farmers and were observed with high depression, anxiety, fatigue, frustrations. Thomas and Xavier (2020) measured the relationship between stress (depression & anxiety) and self-efficacy among people during COVID lockdown. They pointed out a significant correlation between stress and self-efficacy.

The prevalence of stress parameters is quite evident among the farmers, especially from developing countries like India. This has been evident due to the high suicide rate among the farming community of India, around 11.2 percent (Mishra, 2014). This makes it more pertinent to understand the stress among the horticultural community, especially at the regional level & among the hill economies like the Union Territory of Jammu & Kashmir, India.

METHODOLOGY

The current study has been conducted to fill the gap in the existing literature concerning the understanding of stress relationships with the self-efficacy (cognitive dimension) among the regional farmers of developing countries like India (Kashmir region). The broad objective of the study is to understand the impact of various stress dimensions i.e. depression, anxiety, tenseness, and frustration fatigue, on the self-efficacy of the studied sample farmers. The study is based upon the area sampling method, one of the types of probability-based random sampling techniques. In the present study, three districts of the Union Territory of Jammu & Kashmir have been selected, within each district, two tehsils have been randomly picked, and within each tehsil, two random villages have been chosen for the present study (Table 1). The present study targeted 300 respondents, out of which 182 questionnaires were found to be filled appropriately without having

Table 1: Studied Sample Areas of the Study

Sl. No.	District	Tehsil	Village	Total Questionnaires Distributed	Complete Questionnaires Received
1	Baramulla	Sopore	Sangrama	25	18
			Wadura	25	16
		Baramulla	Sherwani Abad	25	17
			Delina	25	18
2	Bandipora	Sonawari	Ajas	25	15
			Asham	25	14
		Bandipora	Ajar	25	19
			Ahmi Sharief	25	17
3	Kupwara	Kupwara	Kral Pora	25	12
			Trehgam	25	14
		Handwara	Amargarh	25	10
			Athratoo	25	12
Total				300	182

Source: Author’s calculation based on primary survey.

any missing values and thus suitable for further analysis.

To meet the objectives of the present study, both primary and secondary data sources have been used. Secondary data related to the farming occupation in J&K concerning the studied three districts of Kashmir region was collected from various secondary databases such as Digest of Economics and Statistics, Economic Survey J&K, reports of various Ministries, reports of various financial institutions like RBI, NABARD, National Horticulture Board, FAO database, etc. Primary data has been collected by constructing a well-structured questionnaire having statements about various stress dimensions such as anxiety, frustration & fatigue, depression, and tenseness. These statements were based on the five-point Likert scale having scores as 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4=Agree, and 5= Strongly Agree. The questionnaire also included statements regarding self-efficacy. These statements were also based on a five-point Likert scale having scores as 1=Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree, and 5=Strongly agree.

To further understand the influence of stress & its dimensions on the self-efficacy of the sample farmers, regression analysis was performed with self-efficacy as endogenous and stress dimensions as exogenous variables with the help of the following mathematical equation;

$$Y = c + aX_1 + e \quad \dots(1)$$

Where

Y = Self-efficacy (Dependent Variable)

c = Intercept

a = Coefficient

X₁ = Stress Dimensions (Independent variable)

e = error term

The present study measured the interaction between self-efficacy and various identified stress dimensions based on the following prepositions:

Proposition 1:

P₀₁: Depression does not have an association with self-efficacy

P_{01A}: Depression does have an association with self-efficacy

Proposition 2:

P₀₂: Anxiety does not have an association with self-efficacy

P_{02A}: Anxiety does have an association with self-efficacy

Proposition 3:

P₀₃: Tenseness does not have an association with self-efficacy

P_{03A}: Tenseness does have an association with self-efficacy

Proposition 4:

P_{04} : Frustration-Fatigue does not have an association with self-efficacy

P_{04A} : Frustration-Fatigue does have an association with self-efficacy

Proposition 5:

P_{04} : Total Stress does not have an association with self-efficacy

P_{04A} : Total Stress does have an association with self-efficacy

RESULTS AND DISCUSSION**Socio-economic profile**

The study measured two psychological constructs from the farming communities of the Kashmir region of Union Territory of Jammu & Kashmir. During the survey, it was observed farming is a highly male-dominated activity in the surveyed areas, and female contribution to horticulture is significant but not much recognized (refer to table 2).

Table 2: Socio-Economic Profile of the Sample

Gender		
	Number of farmers	
Male	182	
Female	0	
Age profile of the sample		
Age Groups	Frequency	Percentage
35-45	29	15.8
45-55	46	25.1
55-65	80	43.7
65-75	25	13.7
>75	2	1.1
Total	182	100.0
Education qualification profile of the sample		
Qualification	Frequency	Percentage
No formal education qualification	52	28.6
Undergraduate	58	31.9
Graduate	56	30.8
Postgraduate	16	8.8
Total	182	100.0
Family Size profile of the sample		
Family Size	Frequency	Percentage
2-5	36	19.8
5-10	131	72.0

10-15	12	6.6
>15	3	1.6
Total	182	100.0

Income from farm profile of the sample

Income from Farm	Frequency	Percentage
50,000-1,00,000	22	12.1
1,00,000-1,50,000	34	18.7
1,50,000-2,00,000	40	22.0
2,00,000-2,50,000	43	23.6
2,50,000-3,00,000	29	15.9
>3,00,000	14	7.7
Total	182	100.0

Source: Author's calculation based on primary survey

Maximum respondents were found in 55-65, followed by 45-55 and 35-45. Education parameter was divided into 04 categories i.e., no formal education, undergraduates, graduates, and postgraduates. Maximum respondents were undergraduates (31.9 %) followed by graduates (30.8 %), and respondents having no formal education were around 28.9 percent. Family size is defined as the total number of members in each family of an individual under a common roof having blood relations and sharing common food. This parameter was divided into 4 groups i.e., 2-5; 5-10; 10-15 and above 15. Maximum respondents had 5 to 10 members in their family (72 %), followed by respondents having 2 to 5 members in their family. On income parameter, sample was divided into six categories i.e. 50000-100000; 100000-150000, 150000-200000, 200000-250000, 250000-300000 and above 300000. Maximum respondents mostly fall under category 04, followed by 03 and 02.

Association between self-efficacy and stress dimensions

Self-efficacy is an 'individual's belief about his/her likelihood of success in his/her profession. 'It's a cognitive construct involving complex psychological processes, which depend upon the state of mental health of a person. It may also be defined as an individual's confidence in his ability to accomplish a particular task or achieve a specific goal. The literature strongly advocates the linkages between self-efficacy and other mental processes such as stress. Self-efficacy predominantly affects the efforts an individual applies into his/her task, especially efficiency & effectiveness in the decisional areas. Individuals with high levels of self-efficacy

are resilient and persistent in the face of obstacles, while individuals with low levels of self-efficacy feel discouraged and pull out from a particular situation. The present study views self-efficacy as a significant psychological construct that helps an individual to leverage his/her intellectuality, knowledge, and experience. Thus, this leverage building may be influenced by various other psychological constructs such as stress. In the present study, self-efficacy has been measured through four statements i.e., I can find the means and the ways to get what I want; I stick to my aims and accomplish my goals on time; I remain calm when facing difficulties because I rely on my coping abilities and I usually find several solutions to difficult problems. These statements have been based upon a five-point Likert scale. The scale reliability of these statements has been measured using Cronbach's coefficient alpha score, estimated as 0.654. The response collected from the respondents on these statements was used to construct self-efficacy as a dependent variable.

Depression is broadly defined as a mood disorder that can impact an individual's day-to-day life, both professional and social. It is considered as a primary parameter or reflection of a stressful life. Currently, it has been described using four statements, i.e., Feeling low on energy most of the time, Loose confidence in myself most of the time, Feeling sleepless, and Feeling less attracted to the work. Scale reliability of these statements has been measured using Cronbach's coefficient alpha score, which was estimated as 0.60. The association between the dependent variable (self-efficacy) and independent variable (depression) was measured using regression analysis at a one percent level of significance. The regression analysis showed a negative association between depression and self-efficacy, with R as 0.65. The value of R-square was observed as 0.43. The model explains 43 percent variability in the dependent variable i.e., self-efficacy. Results reveal a negative relationship between the dependent and independent variable; with every one unit increase in depression, the self-efficacy gets reduced by 0.59 units (Table 3).

Anxiety is one of the recurrent psychological stress reactions among farmers. It has been measured using statements i.e., Feel easily irritable on small things, Feeling emotional anxiety, Feeling difficulty in relaxing, Having frequent headaches, Having

frequent dizziness & Having frequent sweating. Scale reliability of the statements has been measured using Cronbach's Coefficient Alpha Score, which was observed to be 0.75. To test the relationship between anxiety and self-efficacy, regression analysis was performed at a one percent level of significance. The regression analysis showed a negative association between anxiety and self-efficacy. The value of R-square was observed as 0.36. The variability in the dependent variable was explained 36.5 percent. Regression reveals a negative relationship between endogenous & exogenous variables, and with every one unit increase in anxiety among the respondent's self-efficacy gets reduced by 0.53 (Table 3).

The results revealed that tenseness and self-efficacy are negatively associated. Tenseness has been measured using statements, i.e., Have health-related nervousness, Feel too much burdened with work, and Feel in a hurry all the time. Scale reliability of the statements has been measured using Cronbach's coefficient alpha Score, which was observed as 0.64. To test the relationship between tenseness and self-efficacy, regression analysis was performed at a one percent level of significance. The regression analysis showed a negative association between tenseness and self-efficacy, with the value of R-square as 0.33. Thus, the model explained 33 percent variability in the dependent variable by the independent variable. Regression analysis results were statistically significant at a one percent level of significance. Thus, the null proposition was rejected and an alternate was accepted i.e., tenseness does have an association with the self-efficacy of the farmers; with every one unit increase in tenseness, self-efficacy gets reduced by 0.51 units (Table 3).

Frustration-Fatigue has been measured using statements i.e., Fear of failure is high, Feeling uneasy calm, Feeling unsafe, Becoming judgmental about people, Feeling low on work vigor, Feeling poor information processing, and Feeling the urge to take frequent rest for longer durations. Scale Reliability of the statements has been measured using Cronbach's Coefficient Alpha Score, which was observed as 0.67. The regression analysis showed a negative association between Frustration Fatigue and self-efficacy with an R-square value of 0.30. Therefore, around 30.5 percent variability in the dependent variable is being explained by the independent

Table 3: Regression of Self-efficacy with identified stress dimensions

Sl. No.	Dimension	R	R-Square	Sig	Constant	Coefficient (β)	Preposition
1	Depression	0.657	0.431	0.000	0.662	(-) 0.599	Accepted
2	Anxiety	0.604	0.365	0.001	0.644	(-) 0.538	Accepted
3	Tenseness	0.575	0.330	0.000	0.632	(-) 0.519	Accepted
4	Frustration-Fatigue	0.552	0.305	0.003	0.678	(-) 0.643	Accepted
5	Total Stress	0.701	0.491	0.000	0.739	(-) 0.196	Accepted

Source: Author's calculation based on primary survey.

variable. Regression results were found statistically significant at a one percent level of significance with every one unit increase in frustration fatigue; self-efficacy gets reduced by 0.64 units (Table 3).

To further understand the aggregate effect of the various stress dimensions, an index was constructed by aggregation of individual stress parameters, i.e., depression, anxiety, tenseness, and frustration fatigue. Results revealed a negative association between stress and self-efficacy with R-square as 0.49 at a one percent level of significance. Thus, 49 percent variability in the dependent variable is being explained by the independent variable. Further, regression results were statistically significant at a one percent level of significance. With every one unit change in stress level, the self-efficacy gets reduced by 0.49 units (Table 3).

CONCLUSION

The current study examined the impact of stress on self-efficacy among the farming community in the northern region of UT0JK and is spread over three districts. Based on the existing literature, the four major stress dimensions, i.e., depression, anxiety, tenseness, frustration & fatigue, were highly representative of stress. In the present study, depression, anxiety, tenseness, and frustration-fatigue as a stress dimension was found to be negatively correlated with self-efficacy at a one percent level of significance. High-stress levels lead to low efficiency and farm injuries, accidents, low productivity, demotivation, self-isolation, and various other issues and challenges faced by the farming community. For strategic growth and development of the horticultural sector at the grass-root levels, it is quite essential to understand the perspective of the farmers, particularly understanding these challenges faced by the farmers in their farming profession.

The study offers a beneficial understanding of stress among farmers and its influence on the self-efficacy levels among the studied sample, thereby developing appropriate stress coping strategies and developing constructive interventions that can mitigate the impact of stress among the farmers. The results of the present study can also provide insightful cues to the policymakers in the making farming a less stressful occupation and attracting young professionally educated youth towards this profession. The results can also be beneficial to the people involved in entrepreneurship development. They can help them change the youth's perception towards farming, and re-positioning farming as an entrepreneurial activity.

REFERENCES

- Bandura, A. 1977. Self-Efficacy: Toward A Unifying Theory Of Behavioral Change. *Psychol. Rev.*, **84**(2): 191-215.
- Bandura, A. 1982. Self-Efficacy Mechanism In Human Agency. *Am. Psychol.*, **37**(2): 122-147.
- Beehr, T.A. and Newman, J.E. 1978. Job Stress, Employee Health, And Organizational Effectiveness: A Facet Analysis, Model, And Literature Review. *Pers. Psychol.*, **31**(4): 665-699.
- Booth, N.J. and Lloyd, K. 2000. Stress In Farmers. *Int. J. Soc. Psychiatr.*, **46**(1): 67-73.
- Cox, T. 1993. Stress Research and Stress Management. Putting Theory to Work. *London: HMSO.*
- Fetsch, R. 1984. Stress And Coping On The Farm: A Comparison Of Farmers With Nonfarmers. *Sociological Abstracts (No. S16214):* 53-54.
- Forstadt, L. and Jackson, T. 2014. Recognizing The Signs Of Farm Family. *University of Maine Extension, Orono.*
- Goldberg, D., Bridges, K., Duncan-Jones, P. and Grayson, D. 1988. Detecting Anxiety And Depression In General Medical Settings. *Brit. Med. J.*, **297**(6653): 897-899.
- Gunderson, Paul, Doris Donner, Raymond Nashold, and Linda Salko. 1993. The Epidemiology of Suicide among

- Farm Residents or Workers in Five North-Central States, 1980-1988. *Am. J. Prevent. Med.*, **9**(3): 26-32.
- Gebrehiwot Tagel, and Veen Anne van der. 2015. Farmers Prone to Drought Risk: Why Some Farmers Undertake Farm-Level Risk-Reduction Measures While Others Not?. *Environ. Manag.*, **55**(3): 588-602
- Jambor, A., Czine, P. and Balogh, P. 2020. The Impact of the Coronavirus on Agriculture: First Evidence-Based on Global Newspapers. *Sustain*, **12**(11): 4535-4545.
- Jones-Bitton, A., Best, C., MacTavish, J., Fleming, S. and Hoy, S. 2020. Stress, Anxiety, Depression, And Resilience In Canadian Farmers. *Soc. Psychiatry Psychiatr. Epidemiol.*, **55**(2): 229-236.
- Karademas, E.C. and Azizi-Kalantzi, A. 2003. The Stress Process, Self-Efficacy Expectations, Psychological Health. *Pers. Individ. Differ.*, **37**(5): 1033-1043.
- Lazarus, R.S. and Folkman, S. 1984. *Stress, Appraisal, and Coping*. London: Springer Publishing Company.
- Mishra, S. 2014. 'Farmers' Suicides in India, 1995-2012: Measurement and Interpretation. London: Asia Research Centre.
- Ramesh, A. and Madhavi, S. 2009. Occupational Stress Among Farming People. *J. Agric. Sci.*, **4**(3): 114-125.
- Rizeanu, S., Bubulac, L. and Popa-Vel, O. 2018. Anxiety, Perceived Stress, and Self-Efficacy of Elderly. *Am. Res. J. Geriatr. Ag.*, **1**(1): 1-7.
- Stallones, L. 1990. Suicide Mortality Among Kentucky Farmers, *Suicide and Life-Threat Behav.*, **20**(2): 156-163.
- Sanne, B., Mykletun, A, Moen, B.E., Dahl, A.A. and Tell. 2004. Farmers are at Risk for Anxiety and Depression: The Hordaland Health Study. *Occup. Med.*, **54**(2): 92-100.
- Schwarzer, R. 1999. Self-Regulatory Processes in the Adoption and Maintenance of Health Behaviors. *J. Health Psychol.*, **4**(2): 115-127.
- Swisher, R.R., Elder Jr, G.H., Lorenz, F.O. and Conger, R.D. 1998. The Long Arm of the Farm: How an Occupation Structures Exposure and Vulnerability to Stressors Across Role Domains. *J. Health Soc. Behav.*, pp. 72-89.
- Thomas, S. and Xavier, M.E. 2020. Depression, Anxiety, Stress, and Self-Efficacy Among People, **9**(8): 575-585.
- Thomas, H., Lewis, G., Thomas, D.R., Salmon, R.L., Chalmers, R.M., Coleman, T.J. et al., 2003. Mental Health of British Farmers. *Occup. Environ. Med.*, **60**: 181-186.
- Vega, W., Warheit, G. and Palacio, R. 1985. Psychiatric Symptomatology among Mexican American Farmworkers. *Soc. Sci. Med.*, **20**: 39-45.
- Virk, J., Chhabra, J. and Kumar, R. 2001. Occupational Stress and Work Motivation in Relation to Age, Job Level, and Type-A Behavior in Nursing Professionals. *J. Indian Acad. Appl. Psychol.*, **27**(1-2): 51-55.
- Williams, R. 2001. The Ongoing Farm Crisis: Health, Mental Health and Safety Issues in Wisconsin. *Rur. Ment. Health*, **26**: 15-17.
- Yazd, S.D., Wheeler, S.A. and Zuo, A. 2019. Key Risk Factors Affecting Farmer's Mental Health: A Systematic Review. *Int. J. Environ. Res. Public Health*, **16**(23): 4849-4872.