

Received : 09.10.2023 | Accepted : 11.11.2023 | Online published : 20.12.2023

https://doi.org/10.54986/irjee/2023/dec_spl/20-25I
R
J
ESOCIETY OF
EXTENSION
EDUCATION

RESEARCH ARTICLE

Entrepreneurial Abilities of Ornamental Fish Producers in South 24 Paraganas District, West Bengal

Animesh Maity¹, Biswarup Saha² and S.S. Dana³

1. Ph.D. Scholar,
2. Asso. Prof.,
3. Prof., Department of
Fishery Extension, WBUAFS,
Chakgaria, Kolkata, WB, India

Corresponding author e-mail:
biswarup.ext@gmail.com

ABSTRACT

An entrepreneur makes a maximum profit from innovation through taking various risks and bringing about change through the organization of human efforts. The entrepreneurs are motivated and supported in terms of consultancy, infrastructure facility experts' guidance and training to develop technology-based business ideas and supported sustainable enterprises. Ornamental fisheries sector plays a vital role not only in the socio-economic development of the country but also in employment generator and stimulates the expansion of a variety of subsidiaries to small, medium and enormous scale industries. West Bengal is likely to provide 95 per cent of the ornamental fish from India and that's where women who are "natural nurturers". In the present study, an attempt was made to understand the entrepreneurial abilities of ornamental fish producers in West Bengal. The present study was undertaken in South 24 Paraganas, the predominant ornamental fish producing district of the state. A total of 200 ornamental fish producers were selected from the district by using a simple random sampling method. Data were collected with the help of a structured interview schedule with the observation method. Majority of ornamental fish producers (66.5%) had medium level of entrepreneurial abilities whereas, 18.5 per cent of them had high level of entrepreneurial abilities. Entrepreneurial abilities were associated significantly with age, gender and information management behaviour of the ornamental fish producers in connection with ornamental fish production.

Key words: Entrepreneur; Entrepreneurial abilities; Ornamental fisheries; Ornamental fish producers; Socio-economic development.

India as a developing country has huge potential in ornamental fishery business. Indian water can be considered a “goldmine” for traders and hobbyists of ornamental fish as India is blessed with a rich diversity of freshwater ornamental fishes both in the Western Ghats and North Eastern hills (Sinha, 2016). India is endowed with vast potential with conducive climatic conditions for the development of ornamental fisheries. However, India's share in ornamental fish export is negligible and mainly dominated by wild varieties of fish mainly from North Eastern states. The north-eastern parts of the country are the major contributor in India with 85% of the total market share (Pandey, 2017). Availability of skilled manpower, well established communication network, international airports and Export Promotion Zone (EPZ) provide vast scope for the promotion of ornamental fish trade

and export. Along with North-eastern states, West Bengal, Kerala and Tamil Nadu are also blessed with potential indigenous ornamental fish species. Presently, nearly about 100 native species are reared as aquarium fish. There is also a great demand for exotic species due to its colour, shape and appearance. More than 300 exotic species are covered in the ornamental fish trade. About 200 species are bred in India and 90 per cent of the domestic exports are initiated from Kolkata followed by 8 per cent from Mumbai and 2 per cent from Chennai (Krishi Jagran, 2020).

The domestic trade of aquarium is reported to grow at 20% annually. However, the number of households keeping an aquarium is 0.04% in the country (Jain and Jain, 2009) as compared to 10-21% in Europe and USA. Thus, there is a vast opportunity for growth of ornamental enterprise in domestic trade. There is a

great scope for aquaculture (Ornamental fish culture) by culturing imported exotic fishes locally, or tapping the resources of indigenous fishes, India not only can earn foreign exchange but also enters into the world market of ornamental fishes. The contribution of India to the world ornamental fish trade is only at a tune of US\$ 1.7 million, which is rather sparse considering the vast US\$8 billion global market growing at an average annual rate of 9% (Vinayak, 2017).

Development of entrepreneurs and of entrepreneurship can be stimulated through a set of supporting institutions and through deliberate innovative action which stimulates changes and fully supports capable individuals and groups. Considering the potentialities of ornamental fish production business in South 24 Paraganas district of West Bengal, entrepreneurship generation around ornamental fish production is needed to be explored. It is argued that education and training contribute significantly to the development of entrepreneurship. So, to design effective training programmes, estimating the current level of entrepreneurial behaviour of ornamental fish producers is essential. With this in view, the present study was undertaken to study the entrepreneurial abilities of ornamental fish producers and to identify the factors influencing it.

METHODOLOGY

The study was undertaken to assess the entrepreneurial abilities of ornamental fish producers using ex-post facto research design in the purposively selected district i.e. South 24 Paraganas of West Bengal state during February' 2021 to March' 2022. Out of 29 blocks in the South 24 Paraganas district, four blocks i.e. Bishnupur-I, Bishnupur-II, Budge Budge-II & Falta were selected purposively for the study as considering the preponderance of ornamental fish producers. From each block, two Gram Panchayats (GP) were selected with the help of simple random sampling method without replacement technique. Thus total, eight gram panchayats were selected as the representing unit for this study. Twenty-five ornamental fish producers having experience in more than 3 years were selected from each gram panchayat by simple random sampling method without replacement techniques. Thus total 200 ornamental fish producers were selected as respondents for the study.

It is measured using the "Entrepreneurial Self-Assessment Scale" developed by 'Techno net Asia'

(1981) for measuring level of aspiration. The items under each indicators were rated in three point response categories ranging from 'very true', 'true' and 'not true'. For each and every indicators there were positive and two negative items. The scoring procedure for positive items was 'very true'-3, 'true'-2 and 'not true'-1. The scoring procedure was reverse for the negative responses. By summing up the score corded; total score was computed.

Table 1. Scoring procedure for the dimensions of entrepreneurial ability

Statement	Very true	True	Not true
Positive statement	3	2	1
Negative statement	1	2	3

By summing up the score obtained in respective dimensions total score was computed and the respondents were classified under following categories taking mean and S.D. as measure of check as below-

The pre-tested structured interview schedule was administered for collection of data and analysis of data was done using multidimensional scaling technique of SPSS-15 besides Chi-square test. By using the three point scale and five statements for each of these ten dimensions, a total score of each respondent was calculated as entrepreneurial abilities. On the basis of the total score obtained the respondents were finally classified into three categories based on as below-

RESULTS AND DISCUSSION

Data regarding entrepreneurial ability of the ornamental fish producers is presented in Table 1. The finding revealed that majority of ornamental fish producers (66.5%) had medium level of entrepreneurial ability. The study conducted by *Wankhade et al. (2013)* and *Boruah et al. (2015)* also showed that medium level of entrepreneurial behavior has been found in majority of the respondents. 18.5 per cent of ornamental fish producers had high level of entrepreneurial ability whereas, 15 per cent of them possessed low level of entrepreneurial ability.

Entrepreneurial attributes of ornamental fish producers : In order to have an in-depth understanding of the entrepreneurial abilities of ornamental fish producers, the data pertaining to the distribution of ornamental fish producers according to their entrepreneurial ability is depicted in Table 2. One general conclusion can be made from table that out of 10 entrepreneurial abilities, majority of the ornamental fish producers had medium

level of risk-taking ability, hope of success, persistence, self-confidence, knowledgeability, persuasibility, innovativeness and achievement motivation. However, majority of the ornamental fish producers had high level of use of feedback and manageability.

Risk taking ability : It is evident from Table 2 that majority of the ornamental fish producers (65.5%) had medium level of risk-taking ability followed by 19 per cent of them had low level and 15.5 per cent of them had high level of risk-taking ability. It was at par with the findings reported by *Shankar et al. (2019)* who reported medium risk orientation of majority of the respondents (65%). The meaning of risk taking is learning from failure. Entrepreneurs neither take high level of risk like gamblers nor do they take no risk like a common man they should take moderate or very calculated risk.

The study conducted by *Aiyaduari (1999)* have shown that for any enterprise to succeed an entrepreneur must possess risk taking capacity but at moderate level as against the myth that entrepreneurs are high risk takers. The study conducted by *Solanki and Soni (2004)* have also shown that risk taking willingness was in positive relationship with entrepreneurial behavior because an individual could be an entrepreneur when he would like to take risk.

Hope of success : It was found that majority (62%) of the ornamental fish producers had had medium level of hope of success. The study conducted by *Palmurugan et al. (2008)* has clearly indicated that entrepreneurs have medium to high hope of success than fear of failure.

Persistence : Majority (79.5%) of the ornamental fish

Table 2. Distribution of ornamental fish producers based on entrepreneurship attributes (N=200)

Components	Category	No.	%	S.D.	Mean	Rank
Risk taking ability	Low (<7.65)	38	19	1.36	9.01	VI
	Medium (7.65-10.37)	131	65.5			
	High (>10.37)	31	15.5			
Hope of success	Low (<8.51)	50	25	1.00	9.51	V
	Medium (8.51-10.51)	124	62			
	High (>10.51)	26	13			
Persistence	Low (<6.56)	22	11	1.22	7.78	IX
	Medium (6.56-9.00)	159	79.5			
	High (>9.00)	19	9.5			
Use of feedback	Low (<7.39)	60	30	1.27	8.66	VII
	Medium (7.39-9.93)	61	30.5			
	High (>9.93)	79	39.5			
Self-confidence	Low (<8.63)	25	12.5	0.97	9.60	IV
	Medium (8.63-10.57)	131	65.5			
	High (>10.57)	44	22			
Knowledgeability	Low (<9.63)	21	10.5	0.83	10.46	III
	Medium (9.63-11.29)	156	78			
	High (>11.29)	23	11.5			
Persuasibility	Low (<7.39)	45	22.5	0.76	8.15	VIII
	Medium (7.39-8.91)	81	40.5			
	High (>8.91)	74	37			
Manageability	Low (<9.42)	51	25.5	1.23	10.65	II
	Medium (9.42-11.88)	72	36			
	High (>11.88)	77	38.5			
Innovativeness	Low (<6.22)	60	30	0.97	7.19	X
	Medium (6.22-8.16)	122	61			
	High (>8.16)	18	9			
Achievement motivation	Low (<9.25)	52	26	1.61	10.86	I
	Medium (9.25-12.47)	84	42			
	High (>12.47)	64	32			

Table 3. Association between socio-personal variables and entrepreneurial qualities of ornamental fish producers

Variable	Classes	Entrepreneurial qualities			χ^2 value
		Low	Medium	High	
Age	Young (18-35)	7 (4.5)	20 (20.0)	3 (5.6)	5.997*
	Middle (More than (36-50)	13 (18.0)	84 (79.8)	23 (22.2)	
	Old (More than 50)	10 (7.5)	29 (33.2)	11 (9.2)	
Gender	Male	13 (19.8)	96 (87.8)	23 (24.4)	9.376**
	Female	17 (10.2)	37 (45.2)	14 (12.6)	
Caste	General	7(6.6)	32 (29.3)	5 (8.1)	2.848
	OBC	5 (4.8)	19 (21.3)	8 (5.9)	
	SC	15 (15.6)	68 (69.2)	21 (19.2)	
Education	ST	3 (3.0)	14 (13.3)	3 (3.7)	3.579
	Illiterate	1 (1.5)	8 (6.6)	1(1.8)	
	Primary	6 (7.5)	35 (33.2)	9 (9.2)	
	Secondary	16 (12.3)	51 (54.5)	15 (15.2)	
	Higher Secondary (H.S.)	5 (6.6)	29 (29.3)	10 (8.1)	
Occupational status	Graduate	2 (2.1)	10 (9.3)	2 (2.6)	0.790
	Primary	23 (21.9)	98 (97.1)	25 (27.0)	
Economically active family labour	Secondary	7 (8.1)	35 (35.9)	12 (10.0)	0.340
	Low (<4.57)	5 (4.4)	18 (19.3)	6 (5.4)	
	Medium (4.57-8.63)	20 (20.4)	91 (90.4)	25 (25.2)	
Training programme attended	High (>8.63)	5 (5.2)	24 (23.3)	6 (6.5)	0.467
	Yes	21 (19.5)	86 (86.4)	23 (24.0)	
	No	9 (10.5)	47 (46.6)	14 (13.0)	
Experience in ornamental fisheries	Up to 5 years	1 (1.5)	9 (6.6)	0(1.8)	4.352
	Above 5 to 10 years	7 (8.4)	40 (37.2)	9 (10.4)	
	Above 10 years	22 (20.1)	84 (89.1)	28 (24.8)	
Information management behaviour	Low (<38.34)	1 (5.1)	30 (22.6)	3 (6.3)	10.300**
	Medium (38.34-47.06)	26 (21.2)	85 (93.8)	30 (26.1)	
	High (>47.06)	3 (3.8)	18 (16.6)	4 (4.6)	
Annual income	Low (Up to 50,000)	6 (8.1)	38 (35.9)	10 (10.0)	4.114
	Medium (50,000-1,50,000)	15 (13.2)	57 (58.5)	16 (16.3)	
	High (1,50,000-2,50,000)	5 (5.1)	25 (22.6)	4 (6.3)	
	Very high (2,50,000<)	4 (3.6)	13 (16.0)	7 (4.4)	
Access to credit	Yes	13 (12.0)	50 (53.2)	17 (14.8)	1.005
	No	17 (18.0)	83 (79.8)	20 (22.2)	

* Significant at 0.05 level of probability; ** Significant at 0.01 level of probability;

producers had medium level of persistence. While 11 per cent of them had low persistence level and 9.5 per cent of them had high persistence level. The findings are similar with the findings of *Wankhade et al. (2013)* who found that entrepreneurs had medium to high level of persistence.

Use of feedback : High level of feedback usage was found among majority of the ornamental fish producers (39.5%). The study conducted by *Wankhade et al. (2013)* has clearly indicated that entrepreneurs had medium to high level of feedback usage.

Self-confidence : It is one of the major attributes which an entrepreneur must possess for running enterprise. It could be seen from Table 5 that majority (65.5%) of the ornamental fish producers had medium level of self-confidence followed by 22 per cent ornamental fish producers had high self-confidence. These findings are at par with the findings of *Shankar et al. (2019)* and *Wankhade et al. (2013)*.

Knowledgeability: Findings with regards to knowledgeability, it was observed that majority (78%) of the ornamental fish producers were under

medium category of knowledge level about technical and management aspect of their venture. They also expressed an urge to gain a good knowledge on marketing the produce and production technology before starting the enterprise. A study done by Aiyadurai (1999) also suggested that an entrepreneur must be knowledgeable about his/her own enterprise to gain profit.

Persuasibility: The data revealed that 40.5 per cent of ornamental fish producers scored medium where as high and low level of persuasibility scored by 37 per cent and 22.5 per cent of ornamental fish producers respectively. The findings depicted that they could express themselves very convincingly to others.

Manageability: Majority (38.5%) of ornamental fish producers had high level of manageability that means they extravagance the basic managerial skills for running the enterprise. About 36 per cent of them belonged to medium and 25.5 per cent of them belonged to low manageability category. Low manageability category ornamental fish producers were required to learn to delegate some responsibilities to others also to manage their enterprise. This finding is in conformity with the findings of Aiyadurai (1999) who emphasized the management skill of entrepreneurs and stressed that training on management skills must be imparted in entrepreneurship training programme.

Innovativeness: Seethalakshmi (1999), described innovativeness as an important entrepreneurial attribute. It could be seen that majority (61%) of the ornamental fish producers belonged to medium level of innovativeness which might be due to high literacy rate followed by 30 per cent of them had low level category. Only 9 per cent of them had high level of innovativeness.

Achievement motivation: Achievement motivation is a psychological variable which differs from one individual to another. Higher motivation of the individual is the result of individual's higher effort. The Table 2 revealed that majority of the ornamental fish producers (42%) belonged to medium level of achievement motivation followed by the respondents who had higher level of motivation (32%).

Association between socio-personal variables and entrepreneurial qualities of ornamental fish producers : With a view to knowing the kind of bond that existed between different socio-economic profile and entrepreneurial qualities of ornamental fish producers,

the χ^2 (Chi-square) test of independence was used and presented in Table 3.

As depicted in the Table 3, entrepreneurial qualities was associated significantly with age, gender and information management behaviour of the ornamental fish producers in connection with ornamental fish production.

CONCLUSION

It is concluded that intensive entrepreneurial training programmes need to be conducted by Government and Non-Government agencies for developing entrepreneurial qualities among ornamental fish producers. Ornamental fish producers may be trained on identifying different viable options to start different enterprises under ornamental fisheries sectors, effective decision making, risk management, participation in the implementation of government schemes, time and financial management, which would enable for efficient utilization of their potential followed by vigorous follow-up, guidance, counseling for the sustainability of the entrepreneurial activity. The findings of the study will be used to make recommendations to the government on appropriate measures necessary for promoting aquaculture entrepreneurship in West Bengal. The youth form the largest segment of the state population are unemployed despite having attained basic education. It is envisaged that with ornamental fish production activities, there will be added economic benefits and activities related to ornamental fish productions such as demand for feed, medicine, packaging, transport and employment opportunities.

REFERENCES

- Aiyadurai, K. (1999). In: Women entrepreneurs in India: A review- *Women entrepreneurship-issues and strategies*, edited by M. Soundrapandian, Kanishka Publishers and Distributors, New Delhi, pp. 4-9.
- Boruah, R.; Borua, S.; Deka, C.R. and Borah, D. (2015). Entrepreneurial behavior of tribal winter vegetable growers in Jorhat district of Assam. *Indian Res. J. Ext. Edu.*, **15** (1):65-69.
- Jain, A. K. and Jain, A. (2009). Domestic aquarium trade in an avenue of immense opportunities and development potential. In: *Souvenir- International Livestock, Dairy Expo (ILDEX)*, India, pp. 93-100.
- Krishi Jagran. (2020). Ornamental Fish Rearing in India – Business or Hobby, available at: <https://krishijagran.com/animal-husbandry/ornamental-fish-rearing-in-indiabusiness-or-hobby/>, accessed on February 16, 2022.

- Palmurugan, M.; Jhamtani, A. and Padaria, R. N. (2008). Entrepreneurial behavior of vanilla growers of Tamil Nadu and Kerala. *Indian J. Ext.Edu.*, **44** (1&2): 58-64.
- Pandey, P. K. and Mandal, S. C. (2017). Present status, challenges and scope of ornamental fish trade in India. In *Conference: Aqua Aquaria India*, Mangalore.
- Seethalakshmi, M. (1999). In: *Women entrepreneurs in dairying : Women entrepreneurship-issues and strategies*. Vol. 1, 2nd edn., Kanishka Publishers and Distributors, New Delhi. Page 47.
- Shankar, R.; Srivastava, J. P. and Bose, D. K. (2019). A study on entrepreneurial behavior of dairy farmers in (Prayagraj) Allahabad region of Uttar Pradesh. *Indian J. Ext.Edu.* **55(2)**: 152-155.
- Sinha, A. (2016). Evolution, trend and status of ornamental fisheries in India and their commercialization. *Social Entr. Aqu.* 225240.
- Solanki, K. D. and Soni, M. C. (2004). Entrepreneurial behaviour of potato growers. *Indian. J Ext. Edu.* 40 (3-4):32 – 33.
- Techno net Asia. (1981). *Entrepreneurs' handbook*. Institute for Small Scale Industries, University of Philippines, Quezon City.
- Vinayak, A. J. (2017). Aquarium trade will be worth ₹ 1,200 cr in a decade. *Business Line (The Hindu)*, Accessed on 15th May, 2017.
- Wankhade, R. P.; Sagane, M. A. and Mankar, D. M. (2013). Entrepreneurial behavior of vegetable growers. *Agric. Sci. Dig.* **33(2)**: 85-91.

• • • • •