



Entrepreneurial Behaviour of Farmer Producer Organization Members: An Empirical Investigation

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Authors' contributions

This work was carried out in collaboration among all authors. Author AEJ designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript under the guidance of author GJ. Authors AHL and RK managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

In the context of Farmer Producer Organizations (FPOs), there is an imperative requirement for meticulous scholarly inquiry in the field of entrepreneurship due to the knowledge gap in comprehensive understanding of the psychological methodologies for quantitatively assessing

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entrepreneurship. Therefore, this research paper aims to assess the entrepreneurial behavior of FPO members, aiming to contribute to the existing body of knowledge in this field. An ex-post facto research design was used in the study. The study was conducted in Kerala. Districts from Northern, Central, and Southern Kerala having the maximum number of FPOs were selected for the study. Wayanad from Northern Kerala, Idukki from Central Kerala, and Trivandrum from Southern Kerala were purposively selected for the study. Purposive sampling technique was used for the selection of the FPOs based on discussion with National Bank for Agriculture and Rural Development (NABARD), Small Farmers Agribusiness Consortium (SFAC), and Krishi Vigyan Kendra (KVK). Two functioning FPOs were purposively selected from the three districts. From each selected FPO, 20 farmer members were randomly selected. A total of 40 farmers were surveyed from each district. Thus, from six FPOs in three districts 120 farmer members were selected. Random sampling technique was used for the selection of the farmer members from each FPOs. Entrepreneurial behaviour was measured using Entrepreneurial Behaviour Index. The assessment of various dimensions of entrepreneurial behaviour such as risk taking, hope of success, persuasibility, feedback usage, persistence, self-confidence, knowledgeability, manageability, innovativeness and achievement motivation helped to gain a deeper understanding of the entrepreneurial characteristics within the FPO community. The findings of this study indicate that the majority of FPO members exhibit moderate levels of entrepreneurial behavior across different dimensions. Majority of the FPO members belonged to medium level of as risk taking, hope of success, persuasibility, feedback usage, persistence, self-confidence, knowledgeability, manageability, innovativeness and achievement motivation. This suggests that FPO members possess a balanced blend of entrepreneurial traits, demonstrating a proactive and enterprising approach towards their agricultural activities.

Keywords: *Entrepreneurial behaviour; farmer producer organization; risk taking; achievement motivation; persistence.*

1. INTRODUCTION

Agriculture and allied sectors play a crucial and pivotal role in the Indian economy, contributing 18.30% to the Gross Domestic Product (GDP) [1]. These sectors also provide significant employment opportunities, accounting for 45.60% of the total workforce [2]. In rural areas, agriculture plays a major role in poverty reduction and achieving livelihood security, as it serves as the dominant source of livelihood. Moreover, in countries heavily reliant on agriculture, it can serve as the primary driver of overall economic growth [3]. However, it is important to note that within the farming population of India, a significant proportion comprises small and marginal farmers, constituting 86.00% of the total. These farmers typically possess land holdings ranging from 1.00 to 2.00 hectares or less than 1.00 hectare, with an average landholding size of 1.16 hectares [1,4,5]. Despite the recognized importance of smallholder agriculture in fostering economic development and alleviating poverty in developing nations, its advancement remains impeded by the imperative for institutional innovations to surmount market failures [3,6]. Mangnus and Piters [7] contend that smallholder farmers encounter arduous barriers in accessing critical determinants

necessary for delivering market-congruent products. Institutions such as cooperatives, farmer organizations, and contract farming present viable avenues to enable smallholder farmers to exploit burgeoning market prospects and forge close interlinkages between farmers and diverse stakeholders within value chains, thereby facilitating essential supply-demand coordination [8]. Nevertheless, it is worth noting that collectives of farmers arising from their intrinsic endeavors to address their own pressing needs are more apt to be efficacious than groups artificially orchestrated to serve the prerogatives of external entities [9].

In compliance with the Alagh Committee's (1999) recommendations, which sought to establish legislation that would blend the cooperative ethos with the operational adaptability of private enterprises, Farmer Producer Organizations (FPOs) have emerged as a viable alternative to state-driven or state-sponsored cooperatives since 2003 [10]. Consequently, the Department of Agriculture & Cooperation, under the aegis of the Ministry of Agriculture, Government of India, initiated a pilot program in collaboration with state governments to promote member-based Farmer Producer Organizations during the 2011-12 period. Analysis conducted by Prasad [11]

encompassing a sample from seven Indian states (Maharashtra, Madhya Pradesh, Uttar Pradesh, Rajasthan, Gujarat, Karnataka, and Telangana) revealed that 84 percent of the FPOs eventually acquired registration as Farmer Producer Companies (FPCs). FPOs facilitate the active engagement of small-scale farmers in the market, thus augmenting agricultural production, productivity, and profitability [12]. Furthermore, FPOs empower small farmers with enhanced negotiation capabilities through the collective procurement of produce and inputs, enabling them to wield greater leverage [13]. Despite the considerable presence of Farmer Producer Organizations (FPOs), the majority of these entities are still in the early stages of their functioning. The primary reason behind the failure of FPOs can be attributed to the limited entrepreneurial and managerial expertise among their farmer members, who often have lower educational qualifications.

Numerous investigations have been carried out pertaining to the individual characteristics and conduct of agricultural entrepreneurs and Self Help Groups. However, there is a pressing need for rigorous scholarly exploration in the domain of entrepreneurship to gain profound understanding of psychological methodologies for quantitatively assessing entrepreneurship. The existing body of knowledge merely scratches the surface, offering a glimpse into the subject matter while leaving room for both consensus and deliberation. It is in light of this situation that the current study focused on the objective of assessing the entrepreneurial behavior of members of Farmer Producer Organizations (FPOs).

The outcomes of this research could establish a strong groundwork for policymakers, practitioners, and stakeholders to formulate data-driven initiatives, policies, and interventions that can be customized to suit the distinct requirements and attributes of FPO members. By recognizing the varied profiles present within FPOs, focused assistance can be extended to bolster entrepreneurship, income generation, social integration, and the adoption of sustainable agricultural methodologies. Consequently, this may facilitate the comprehensive advancement and expansion of the agricultural sector.

2. METHODOLOGY

2.1 Research Design

Ex-post facto research design was used in the study. This design was used because the study

aimed at measuring the phenomenon which has already occurred and is continuing. Simon [14] stated that the ex-post facto research design can be utilized to elucidate the outcomes resulting from preceding circumstances. Kerlinger [15] reported that ex-post facto research design can be used when the researcher has no control over independent variable and manipulation is not possible because variables are inherently constant. Ex-post facto research design was used in similar studies on entrepreneurial behaviour by Chandrashekhar [7], Jha [16], and Kiran [17].

2.2 Locale of the Study

The study was conducted at Kerala. Districts from Northern, Central, and Southern Kerala having maximum number of FPOs were selected for the study. Wayanad from northern Kerala, Idukki from central Kerala, and Trivandrum from southern Kerala were purposively selected for the study. Ajith [18] reported that Idukki district have the highest number of FPOs in Kerala. Purposive sampling technique was used for the selection of the FPOs.

2.3 Selection of the FPOs

Two functioning FPOs were purposively selected from the three districts based on discussion with National Bank for Agriculture and Rural Development (NABARD), Small Farmers Agribusiness Consortium (SFAC), and Krishi Vigyan Kendra (KVK). Wayanad Agriculture Spices Producer Company and Bana Agro & allied Producer Company were selected from Wayanad district. Neyyasseri Agro. Producer Company and Thodupuzha farmer Agro producer company were selected from Idukki district. Sangamaitri Farmer Producer Organization and Sabarmati Agro. & Livestock Farmer Producer Company were selected from Trivandrum district.

2.4 Selection the Respondent

From each selected FPOs, 20 farmer members were randomly selected. A total of 40 farmers were surveyed from each district. Thus, from six FPOs in three districts 120 farmer members were selected. These 120 farmer members were considered as the respondents for the study. Purposive sampling technique was used for the selection of the FPOs whereas random sampling technique was used for the selection of the farmer members from each FPOs.

2.5 Selection of the Variables

A list of 35 variables which were associated with entrepreneurial behaviour was selected based on the review of literature and informal discussion with subject experts. The list of variables along with their operational definition were sent to 30 judges for rating. The rating was done on a five-point continuum ranging from 'most relevant', 'more relevant', 'relevant', 'less relevant' and 'least relevant' with scores 5, 4, 3, 2 and 1 respectively. The variables were selected based on mean relevancy score. The score obtained for each variable from 30 judges were added and divided by total number of judges. Average of the total score obtained for all the variables were calculated. The variables that scored more than the mean relevancy score were selected for the study. Thus, the entrepreneurial behaviour variables selected through judges rating were risk taking, hope of success, persuasibility, feedback usage, persistence, self-confidence, knowledgeable, manageability, innovativeness and achievement motivation.

2.5.1 Computing of entrepreneurial behaviour

Each component of entrepreneurial behaviour consisted of 5 statements, thus making a total of 50 statements. The statements were measured on a five-point continuum ranging from 'strongly agree', 'agree', 'undecided', 'disagree' and 'strongly disagree' with weightage of 5, 4, 3, 2 and 1 respectively. The weightage was given in the reverse order for negative statements. Thus, for each component the minimum score was 5 and maximum score was 25. There were equal number of statements for each component. So, every component had equal range of scores and there was no need of standardization. The total entrepreneurial behaviour (TEB) obtained for each respondent was calculated by adding the scores obtained by the respondent in each component. Entrepreneurial behaviour index (EBI) was obtained by calculating the ratio of the difference between total entrepreneurial behaviour of the respondent and the minimum score obtained for the entrepreneurial behaviour to the range of the total entrepreneurial behaviour.

$$TEB = \sum y_{ij}$$

y_{ij} = value of the i^{th} respondent on j^{th} component
 $(i = 1 \dots 120)$
 $(j = 1 \dots 10)$

$$EBI = \frac{TEB \text{ of the respondent} - \text{Minimum obtained score on TEB}}{\text{Maximum obtained score on TEB} - \text{Minimum obtained score on TEB}} \times 100$$

Further, EBI values of the respondents obtained was categorized to low, medium, and high by using mean \pm standard deviation. EBI values below the subtracted mean and standard deviation were classified as low, while EBI values above the added mean and standard deviation were classified as high. EBI values falling between the added and subtracted mean and standard deviation were categorized as medium.

2.6 Statistical Tools and Techniques Used

Well-structured interview schedule was used for data collection which was prepared after discussion with experts in order to meet the objective of the study. Master table was prepared in excel sheet using the data collected and basic statistical tools like frequency, percentage, mean and standard deviation were used for data analysis.

3. RESULTS AND DISCUSSION

3.1 Entrepreneurial Behaviour Index (EBI) of FPO Members

The result given in the Table 1 shows that almost two third of the respondents (65.83%) had medium entrepreneurial behaviour followed by 17.50 and 16.67 per cent of respondents with high and low entrepreneurial behaviour respectively.

The findings reveal that approximately 65.83 per cent of the FPO members exhibited a medium level of entrepreneurial behavior. This means that they demonstrated a moderate inclination towards engaging in entrepreneurial activities, showing a balance between risk-taking and cautious decision-making. The possible reason for the majority of the FPO members had medium level of entrepreneurial behaviour might be due to the fact that majority of respondents had medium level of creativity, annual income, credit orientation, education, social participation and group cohesiveness. However, all the components of entrepreneurial behaviour together have a direct reflection towards medium level of entrepreneurial behaviour [19-21]. This suggests a stronger inclination towards entrepreneurial traits and actions, such as being

proactive, seeking opportunities, and taking calculated risks [19]. These individuals may exhibit a greater willingness to innovate and drive change within their agricultural enterprises. On the other hand, 16.67 per cent of the FPO members exhibited a low level of entrepreneurial behavior. This indicates a lower tendency to engage in entrepreneurial activities and may reflect a more cautious approach or a lack of interest in taking risks and pursuing innovative strategies.

Understanding the varying levels of entrepreneurial behavior can help policymakers, practitioners, and stakeholders in designing targeted interventions and support mechanisms tailored to the specific needs and characteristics of FPO members. The study is in agreement with Barman [19] based on his study on Farmer Producer Organization members in Assam, Kumar et al. [21] based on their study on entrepreneurial behaviour of cooperative members, Dwarka et al. [20] based on their study on entrepreneurial behaviour of dairy cooperative farmers in Rajasthan. In all these studies majority of the respondents belonged to medium level of entrepreneurial behaviour and reported that it might have been due to medium level of innovativeness, achievement motivation, decision making ability, information seeking behaviour and cosmopolitanism among the respondents. Similar observations were reported by Lawrence [22], and Singh et al. [23] in the study on entrepreneurial behaviour of dairy cooperative farmers in Tamil Nadu, and Rajasthan respectively.

3.2 Risk Taking Ability

Table 1 clearly shows that majority of respondents (71.67%) had medium risk-taking ability followed by 17.50 per cent and 10.83 per cent of respondents with high and low risk taking ability respectively. Risk taking ability of an individual is related to his or her personal and socio-economic characters.

The findings indicate that a significant majority of Farmer Producer Organization members, comprising 71.67 per cent, demonstrated a medium level of risk-taking ability. This suggests that these individuals possess a balanced approach towards risk, displaying a moderate inclination to take calculated risks and make decisions that involve a certain degree of uncertainty. Suresh [24] reported that participation in training programs could bolster self-confidence and foster an improved capacity

for risk-taking. Porcheziyan [25] reported that the thorough evaluation of the cost-benefit ratio and observations of successful outcomes among fellow farmers contributes to the moderate level of risk orientation. Furthermore, 17.50 per cent of the Farmer Producer Organization members exhibited a high level of risk-taking ability. This subset of individuals displayed a greater propensity to engage in ventures that involved higher degrees of uncertainty, indicating a willingness to take substantial risks in pursuit of potential gains. Anthony [26] based on his study on analysis of entrepreneurial behavior among cassava farmers in Nigeria reported that educational attainment could also be a contributory factor towards the high risk taking ability of the farmers. Conversely, 10.83 per cent of the Farmer Producer Organization members displayed a low level of risk-taking ability. This group exhibited a more cautious approach and a limited inclination to undertake ventures with higher levels of uncertainty. They may prefer to opt for safer and more predictable options to mitigate potential losses.

Understanding the varying levels of risk tolerance can assist policymakers, practitioners, and stakeholders in devising appropriate strategies, interventions, and support mechanisms tailored to the specific risk profiles and preferences of FPO members. The result is in line with the findings of Kumar et al. [21] and, Lawrence [22] based on their study on entrepreneurial behaviour of cooperative members in Uttar Pradesh and Tamil Nadu respectively. In all these studies majority of the respondents belonged to medium level of risk taking ability and reported that it might be due to the financial instability of the small and marginal farmers.

3.3 Hope of Success of FPO Members

Table 1 clearly shows that majority of respondents (65%) had medium hope of success followed by 20.83 per cent and 14.17 per cent of respondents with high and low hope of success respectively.

The presence of a significant number of FPO members with medium hope of success suggests a balanced and realistic approach towards their agricultural endeavors. Such individuals may exhibit a sense of optimism tempered by a pragmatic understanding of the challenges and uncertainties inherent in farming activities. This moderate level of hope can be beneficial, as it may motivate FPO members to persist in their efforts, persevere through setbacks, and actively

seek opportunities for growth and improvement. On the other hand, the presence of FPO members with high hope of success highlights a subgroup characterized by an elevated sense of optimism and confidence in their ability to achieve desired outcomes. Raj [27] reported that these individuals may possess a strong belief in their own capabilities and exhibit a proactive approach towards pursuing success in their agricultural enterprises. Vijayakumar [28] based on his study on entrepreneurial behaviour of silk worm seed producers revealed that hope orientation may contribute to greater resilience, perseverance, and innovative thinking. Conversely, the presence of FPO members with low hope of success indicates a subgroup that may experience a lack of confidence, motivation, or belief in their ability to attain favorable outcomes in their farming endeavors. These individuals may exhibit a more pessimistic outlook and be more susceptible to discouragement and reduced effort. Understanding the factors underlying their low hope orientation can inform interventions and support mechanisms aimed at bolstering their confidence, self-efficacy, and optimism.

Tailoring interventions and support services to the specific hope orientations of FPO members can enhance their overall well-being, productivity, and contribution to the agricultural sector. FPOs receive financial and technical support from NABARD and SFAC which increases the self confidence of the members of the FPO which thereby increases the hope of success. The result is in line with the findings of Raj [21] in the study on entrepreneurial behaviour of the farmers where the results coincided as the majority of the respondents belonged to medium hope of success category.

3.4 Persistence of FPO Members

The result in Table 1 revealed the valuable insight that majority of respondents (65%) had medium persistence followed by 20.83 per cent and 14.17 per cent of respondents with high and low persistence respectively.

This might also be due to the fact that majority of the respondents belonged to medium creativity and self confidence. The prevalence of FPO members with a moderate level of persistence suggested a balanced and steady approach towards their agricultural pursuits. These individuals demonstrated a reasonable amount of determination and resilience, allowing them to navigate challenges and setbacks with a

measured level of persistence. Pal [29] reported that the ability of the farmers to sustain efforts and adapt to changing circumstances contributed to their overall progress and success in the agricultural domain. On the other hand, the presence of FPO members with a high level of persistence underscored a subgroup characterized by an elevated sense of determination and perseverance. These individuals exhibited unwavering commitment and tenacity in pursuing their goals, and they were less likely to be deterred by obstacles or setbacks. Their high level of persistence enabled them to persistently strive towards their objectives, overcome difficulties, and maintain a strong sense of purpose in their agricultural endeavors. Conversely, the existence of FPO members with a low level of persistence indicated a subgroup that may have experienced challenges in maintaining consistent effort and motivation in their farming activities. These individuals may have been more susceptible to discouragement and may have struggled to sustain their commitment and resolve over time. Identifying the factors contributing to their low persistence could inform interventions and support mechanisms aimed at bolstering their resilience, perseverance, and motivation. Understanding the dynamics of persistence among FPO members was crucial for the development of targeted strategies and interventions. By recognizing the diversity of persistence levels, policymakers, practitioners, and stakeholders could tailor their initiatives to meet the specific needs and characteristics of FPO members. Enhancing persistence traits among FPO members could lead to increased productivity, improved outcomes, and sustainable growth in the agricultural sector.

Overall, the findings emphasized the significance of fostering and cultivating persistence as a key attribute among FPO members. By promoting a culture of determination, resilience, and perseverance, FPOs could create an enabling environment that supported the long-term success and well-being of their members. This, in turn, contributed to the overall development and growth of the agricultural sector, ultimately benefiting both the FPO members and the broader agricultural community. The result is in line with the findings of Amareliya [18] in the study on entrepreneurial behaviour of dairy women farmers and Shah [30] based on his study on entrepreneurial behaviour and their correlates among dairy entrepreneurs where majority of the respondents belonged to medium

persistence category due to their perseverance to try new solutions to address the problems.

3.5 Feedback Usage of FPO Members

The analysis of feedback usage among Farmer Producer Organization (FPO) members yielded insightful findings, shedding light on the extent to which FPO members employed feedback in their agricultural practices. Results in Table 1 shows that majority of respondents (57.50%) had medium feedback usage followed by 25.83 per cent and 16.67 per cent of respondents with high and low feedback usage respectively.

The prevalence of FPO members with a moderate level of feedback usage indicated that a substantial portion of the participants actively incorporated feedback into their agricultural activities. The possible reason might be due to the medium level of achievement motivation for majority of respondents. This creates a need in them to improve the quality of their product by collecting feedback and use it for further improvement which help them to fetch higher price for the product. Dewangan [31] reported the balanced approach, where the FPO members embraced feedback to a reasonable extent while also exercising their own judgment and expertise in decision-making. The presence of FPO members with a high level of feedback usage highlighted a subgroup characterized by a pronounced inclination towards leveraging feedback for continuous improvement. These individuals actively sought out feedback, whether from agricultural experts, fellow FPO members, or other stakeholders, and actively integrated it into their decision-making processes. Their high level of feedback usage reflected their commitment to learning, adaptation, and refinement in their agricultural endeavors, ultimately contributing to enhanced productivity and performance. Conversely, the existence of FPO members with a low level of feedback usage indicated a subgroup that may have underutilized feedback in their farming practices. These individuals may have had limited exposure to feedback mechanisms or may have been less receptive to external input. Understanding the factors contributing to their low feedback usage could inform strategies to promote a more feedback-oriented culture within FPOs, encouraging these members to embrace feedback as a valuable tool for growth and improvement.

Integration of feedback within the FPO framework could facilitate knowledge sharing,

collaboration, and continuous learning among members, fostering an environment of collective growth and improvement. In conclusion, the findings highlighted the significance of feedback usage among FPO members in shaping their agricultural practices and outcomes. The prevalence of moderate feedback usage indicated a substantial engagement with feedback, while the presence of both high and low feedback usage groups demonstrated the heterogeneity within the FPO community. By promoting a feedback-driven approach, FPOs can harness the potential of feedback as a tool for continuous improvement, knowledge exchange, and sustainable agricultural development. The result is in line with the findings of Shah [30] based on his study on entrepreneurial behaviour and their correlates among dairy entrepreneurs where majority of the respondents belonged to medium feedback usage category and reported that those who receive and utilize feedback are likely to improve their performance and productively by efficient management of resources.

3.6 Self Confidence of FPO Members

The examination of self-confidence levels among Farmer Producer Organization (FPO) members revealed intriguing insights into the degree of self-assurance exhibited by individuals engaged in agricultural practices. Table 1 clearly shows that majority of respondents (71.67%) had medium self confidence followed by 15.00 per cent and 13.33 percent of respondents with high and low self confidence respectively.

The prevalence of FPO members with a moderate level of self-confidence suggested a significant proportion of individuals who displayed a balanced sense of belief in their abilities and competencies. The possible reason might be due to the medium group cohesiveness among FPO members. Rameshchandran [32] reported that self confidence could be improved by training due to increase in the knowledge of the farmers about scientific methods of farming, latest technology and skill to manage the activities. Their moderate self-confidence implied that they recognized their strengths while also acknowledging areas for improvement, striking a harmonious equilibrium between self-assuredness and humility. The existence of FPO members with a high level of self-confidence pointed to a subgroup characterized by an elevated level of belief in their capabilities. These individuals exuded a strong sense of self-assurance, which likely facilitated their decision-

making, risk-taking, and proactive engagement in agricultural activities. Their high self-confidence indicated a deep-rooted belief in their knowledge, skills, and capacity to achieve desired outcomes, potentially fostering a positive mindset, resilience, and perseverance in the face of challenges. Conversely, the presence of FPO members with a low level of self-confidence highlighted a subgroup that may have experienced a diminished sense of belief in their abilities. These individuals may have exhibited self-doubt or perceived limitations that hindered their confidence in pursuing agricultural ventures. Understanding the factors contributing to their low self-confidence could inform targeted interventions aimed at bolstering their self-belief, nurturing their potential, and fostering a supportive environment within FPOs.

In conclusion, the findings underscored the significance of self-confidence among FPO members in shaping their agricultural pursuits. The prevalence of moderate self-confidence indicated a substantial engagement with self-assurance, while the presence of both high and low self-confidence groups highlighted the diverse psychological profiles within the FPO community. By fostering self-confidence, FPOs can foster an environment that nurtures the personal growth, entrepreneurial spirit, and agricultural success of their members. The result is in line with the findings of Jha [16] in his study on entrepreneur behaviour of pineapple farmers, Shah [30] based on his study on entrepreneurial behaviour and their correlates among dairy entrepreneurs where majority of the respondents belonged to medium self confidence category.

3.7 Knowledgeability

The examination of knowledgeability levels among Farmer Producer Organization (FPO) members revealed intriguing insights into the depth of understanding exhibited by individuals engaged in agricultural practices. Result depicted in Table 1 clearly shows that majority of respondents (71.67%) had medium knowledgeability followed by 15.00 per cent and 13.33 per cent of respondents with high and low knowledgeability respectively. The prevalence of FPO members with a moderate level of knowledgeability suggested a substantial proportion of individuals who displayed a balanced understanding of agricultural concepts and practices. The result clearly reflects the impact of training attended by the members of the FPO. They were given training on crop production, protection and value addition aspects

of agriculture. Board of Director members and CEOs were given training on professional business skills. These members possessed a reasonable depth of knowledge, enabling them to effectively engage in various agricultural activities. Their moderate knowledgeability implied that they had a grasp of fundamental principles and techniques while recognizing the potential for further learning and growth.

The existence of FPO members with a high level of knowledgeability pointed to a subgroup characterized by an extensive understanding of agricultural aspects. These individuals demonstrated a strong command of agricultural knowledge, likely acquired through education, training, or experience (Chandra [33]). Their high knowledgeability indicated a depth of expertise that could empower them to make informed decisions, implement advanced practices, and contribute to the agricultural community through innovative approaches. Conversely, the presence of FPO members with a low level of knowledgeability highlighted a subgroup that may have experienced limited exposure to agricultural knowledge and practices. These individuals may have demonstrated gaps in their understanding or lacked access to formal education or training opportunities. Addressing the factors contributing to their low knowledgeability could inform targeted interventions aimed at enhancing their agricultural literacy and equipping them with the necessary skills and information.

In conclusion, the findings highlighted the diverse knowledgeability levels among FPO members, with a significant majority demonstrating a moderate understanding of agricultural concepts and practices. The presence of both high and low knowledgeability groups underscored the need for targeted interventions to address knowledge gaps and foster continuous learning within the FPO community. By promoting knowledgeability, FPOs can create an environment that nurtures informed decision-making, technological advancements, and the adoption of sustainable agricultural practices, ultimately leading to the growth and development of the agricultural sector. The result is in line with the findings of Shah [30] and Anthony [26] where majority of the respondents belonged to medium knowledgeability category.

3.8 Persuasibility

The examination of persuasibility levels among Farmer Producer Organization (FPO) members in Table 1 shed light on the receptiveness and

susceptibility of individuals within the agricultural community. The findings revealed that a significant majority of FPO members, comprising 57.50 per cent of the participants, exhibited a moderate level of persuasibility. In contrast, 22.50 per cent of FPO members demonstrated a high level of persuasibility, while 20.00 per cent displayed a low level of persuasibility.

This might be due to the fact that majority of the respondents belonged to medium level of social participation and group cohesiveness. These members are receptive to new ideas, suggestions, and information, yet maintain a critical mindset when evaluating different perspectives. Their moderate persuasibility indicates an ability to weigh various factors, consider alternatives, and make informed decisions based on their assessment of the available evidence. The presence of FPO members with a high level of persuasibility points to a subgroup characterized by a heightened openness to external influence. These individuals are more readily swayed by persuasive arguments, opinions, and recommendations. Their high persuasibility suggests a greater propensity to embrace new practices, adopt innovative technologies, and explore alternative approaches based on persuasive communication. Nagarve [34] reported that this subgroup may serve as early adopters of novel ideas and play a crucial role in disseminating information and influencing their peers within the agricultural community. Conversely, the existence of FPO members with a low level of persuasibility highlights a subgroup that is less inclined to be influenced by external factors. These individuals exhibit a higher resistance to persuasive tactics and may approach decision-making with a more independent and self-directed mindset.

The findings highlighted the varying persuasibility levels among FPO members, with a significant majority demonstrating a moderate inclination to be influenced. Nagarve [34] reported the importance of communication strategies due to presence of both high and low persuasibility groups. By leveraging persuasive techniques and understanding the persuasibility profiles of individuals, stakeholders can enhance the adoption of recommended practices, improve decision-making processes, and drive positive change within the agricultural sector. The result is in line with the findings of Shah [30], Murali [35] on his study on entrepreneurial behaviour of floriculture farmers where majority of the

respondents belonged to medium persuasibility category.

3.9 Manageability

The investigation into the manageability levels among Farmer Producer Organization (FPO) members in Table 1 provided valuable insights into their capacity to effectively manage tasks and responsibilities within the agricultural sector. The study revealed that a significant majority of FPO members, accounting for 69.17 per cent of the participants, exhibited a moderate level of manageability. In contrast, 18.33 per cent of FPO members demonstrated a high level of manageability, while 12.50 per cent displayed a low level of manageability.

The prevalence of FPO members with a moderate level of manageability suggests a substantial proportion of individuals who possess a balanced ability to handle and oversee various aspects of their agricultural operations. These members demonstrate a level of competence and proficiency in managing tasks, resources, and processes within their respective farming enterprises. Their moderate manageability indicates a capacity to effectively plan, organize, and execute activities, contributing to the overall efficiency and productivity of their agricultural endeavors. The presence of FPO members with a high level of manageability indicates a subgroup characterized by exceptional skill in organizing and controlling agricultural activities. These individuals exhibit a strong aptitude for coordinating tasks, allocating resources, and implementing effective management strategies. Their high manageability suggests a heightened ability to navigate challenges, adapt to changing circumstances, and optimize outcomes. This subgroup can serve as role models and sources of inspiration for their peers, providing valuable insights and guidance on effective management practices within the FPO community. Conversely, the existence of FPO members with a low level of manageability highlights a subgroup that faces challenges in effectively organizing and overseeing their agricultural operations. These individuals may struggle with task prioritization, resource allocation, or implementing effective management techniques. Their low manageability suggests a need for targeted support and capacity-building initiatives to enhance their skills and capabilities in managing their farming activities. Identifying the specific barriers or areas of improvement for this subgroup can guide the development of

interventions aimed at improving their manageability and overall agricultural performance.

In conclusion, the findings highlighted the varying manageability levels among FPO members, with a significant majority demonstrating a moderate ability to manage agricultural tasks and responsibilities. The presence of both high and low manageability groups emphasizes the importance of targeted interventions to enhance manageability skills and address challenges faced by specific subgroups. By tailoring capacity-building programs and support systems to the manageability profiles of FPO members, stakeholders can promote effective farm management practices, enhance productivity, and contribute to the overall development of the agricultural sector. The result is in line with the findings of Shah [30], Murali [35] on his study on entrepreneurial behaviour of floriculture farmers where majority of the respondents belonged to medium manageability category.

3.10 Innovativeness

The examination of innovativeness levels among Farmer Producer Organization (FPO) members in Table 1 provides valuable insights into their capacity to embrace and implement novel ideas, techniques, and practices within the agricultural sector. The findings indicated that a substantial majority of FPO members, comprising 76.67 per cent of the participants, exhibited a moderate level of innovativeness. In contrast, 12.50 per cent of FPO members demonstrated a high level of innovativeness, while 10.83 per cent displayed a low level of innovativeness.

The prevalence of FPO members with a moderate level of innovativeness suggests a significant portion of individuals who possess a balanced inclination towards adopting and integrating new concepts, methods, and technologies within their agricultural operations. The possible reason might be that the majority of respondents belonged to medium creativity and annual income level. Shah [30] and Bheemappa [36] reported that training plays an important role in increasing the innovativeness and thereby helps in entrepreneurship development. Porcheziyan [25] revealed that favourable attitude with medium level of knowledgeability might lead to medium level of innovativeness among respondent. These members demonstrate a willingness to explore innovative approaches, adapt to changing circumstances,

and seek opportunities for improvement. Their moderate innovativeness reflects a capacity to assess the viability and potential benefits of innovative practices, leading to incremental enhancements in their farming processes and outcomes. Sadashive [37] reported that middle level education, small and marginal land holding and medium information seeking behaviour may lead to medium level of innovativeness for majority of the respondents. The presence of FPO members with a high level of innovativeness indicates a subgroup characterized by a strong propensity for embracing and championing innovative ideas and practices. These individuals exhibit a proactive attitude towards experimentation, a willingness to take calculated risks, and an openness to adopting cutting-edge technologies and approaches. Their high innovativeness signifies their potential to be catalysts for change within the FPO community, driving advancements in agricultural practices, productivity, and sustainability. This subgroup can serve as drivers of innovation, inspiring their peers and contributing to the overall progress and competitiveness of the agricultural sector. Conversely, the existence of FPO members with a low level of innovativeness highlights a subgroup that may be more hesitant or resistant to embracing novel ideas and practices. These individuals may display a preference for traditional methods or exhibit limited awareness of innovative approaches and their potential benefits. Their low innovativeness suggests a need for targeted interventions to foster a culture of innovation, raise awareness about emerging trends, and provide the necessary support and resources to overcome barriers to adoption. By addressing the specific challenges faced by this subgroup, stakeholders can facilitate their transition towards a more innovative mindset and enhance their ability to leverage new opportunities for growth and development.

In conclusion, the findings reveal diverse levels of innovativeness among FPO members, with a significant majority exhibiting a moderate inclination towards embracing and implementing innovative ideas and practices. The presence of both high and low innovativeness groups highlights the need for tailored interventions that address the specific challenges and opportunities faced by different subgroups. By nurturing a culture of innovation, providing the necessary support, and leveraging the expertise of high innovativeness members, stakeholders can foster agricultural innovation, drive sustainable

growth, and contribute to the overall development of the agricultural sector. The result is in line with the findings of Porcheziyan [25], Shah [30], Merity [33] based on her study on entrepreneurial behaviour of women farmers where majority of the respondents belonged to medium innovativeness category.

3.11 Achievement Motivation

The analysis of achievement motivation levels among Farmer Producer Organization (FPO) members offers valuable insights into their drive, ambition, and determination to attain goals and succeed in their agricultural endeavors. The findings in Table 1 indicated that a significant majority of FPO members, comprising 72.50 per cent of the participants, displayed a moderate

level of achievement motivation. In contrast, 15.00 per cent of FPO members demonstrated a high level of achievement motivation, while 12.50 per cent exhibited a low level of achievement motivation.

The prevalence of FPO members with a moderate level of achievement motivation suggests a substantial portion of individuals who possess a balanced inclination towards setting and pursuing challenging goals, striving for excellence, and seeking personal and professional growth. Achievement motivation is a psychological character which motivates individual to do anything to achieve success. Lawrence [22] and Sadashive [37] reported that the inner desire of small and marginal farmers to increase the economic level can to rise in

Table 1. Distribution of respondents according to their entrepreneurial behaviour and its components (n=120)

SI. No	Variable	Category	Frequency	Percentage (%)
1	Entrepreneurial Behaviour Index	Low	20	16.67
		Medium	79	65.83
		High	21	17.50
2	Risk taking ability	Low	13	10.83
		Medium	86	71.67
		High	21	17.50
3	Hope of success	Low	17	14.17
		Medium	78	65.00
		High	25	20.83
4	Persistence	Low	17	14.17
		Medium	78	65.00
		High	25	20.83
5	Feedback usage	Low	20	16.67
		Medium	69	57.50
		High	31	25.83
6	Self confidence	Low	18	15.00
		Medium	86	71.67
		High	16	13.33
7	Knowledgeability	Low	14	11.67
		Medium	77	64.17
		High	29	24.17
8	Persuasibility	Low	24	20.00
		Medium	69	57.50
		High	27	22.50
9	Manageability	Low	15	12.50
		Medium	83	69.17
		High	22	18.33
10	Innovativeness	Low	13	10.83
		Medium	92	76.67
		High	15	12.50
11	Achievement motivation	Low	15	12.50
		Medium	87	72.50
		High	18	15.00

achievement motivation. It helps the individual to aspire for higher level of earning and living. These members exhibit a proactive attitude towards their agricultural activities, displaying a consistent drive to improve their performance, increase productivity, and attain desirable outcomes. Their moderate achievement motivation reflects their ability to set realistic and attainable goals, persist in the face of challenges, and derive satisfaction from their accomplishments. The presence of FPO members with a high level of achievement motivation indicates a subgroup characterized by a strong desire for success, continuous improvement, and the pursuit of ambitious targets. These individuals demonstrate a high degree of self-motivation, setting challenging goals, and taking calculated risks to achieve exceptional results. Their high achievement motivation signifies their potential as high achievers within the FPO community, striving for excellence, embracing innovation, and driving positive change. This subgroup can serve as inspirational figures, motivating their peers and contributing to the overall progress and advancement of the agricultural sector. Conversely, the existence of FPO members with a low level of achievement motivation highlights a subgroup that may exhibit a lower drive and aspiration for success and personal growth. These individuals may display limited ambition or be content with maintaining the status quo without actively seeking improvement or advancement. Their low achievement motivation indicates a need for targeted interventions to stimulate their motivation, instill a sense of purpose, and empower them to set and pursue meaningful goals. By addressing the specific challenges faced by this subgroup, stakeholders can help cultivate a stronger sense of ambition, self-belief, and achievement orientation among these members.

In conclusion, the findings reveal diverse levels of achievement motivation among FPO members, with a significant majority displaying a moderate inclination towards setting and pursuing challenging goals. The presence of both high and low achievement motivation subgroups highlights the need for tailored interventions that address the specific motivational dynamics and aspirations within different segments of the FPO community. By nurturing a culture of achievement, providing the necessary support, and leveraging the expertise of high achievers, stakeholders can foster motivation, drive positive change, and contribute to the overall

development and success of the agricultural sector. The result is in line with the findings of Lawrence [22], Sadashive [37] Chandra [38] and Nagesha [39] based on her entrepreneurial behaviour study on vegetable seed producing farmers where majority of the respondents belonged to medium achievement motivation category. The reason reported was that it might be due to the enthusiasm of the farmers to become economically sound [40,41].

4. CONCLUSION

In conclusion, this research paper has provided valuable insights into the entrepreneurial behavior of Farmer Producer Organization (FPO) members. The assessment of various dimensions of entrepreneurial behaviour such as risk taking, hope of success, persuasibility, feedback usage, persistence, self-confidence, knowledgeability, manageability, innovativeness and achievement motivation helped to gain a deeper understanding of the entrepreneurial characteristics within the FPO community. The findings of this study indicate that the majority of FPO members exhibit moderate levels of entrepreneurial behavior across different dimensions. This suggests that FPO members possess a balanced blend of entrepreneurial traits, demonstrating a proactive and enterprising approach towards their agricultural activities. Majority of the FPO members belonged to medium level of as risk taking, hope of success, persuasibility, feedback usage, persistence, self-confidence, knowledgeability, manageability, innovativeness and achievement motivation. The implications of this research are significant for policymakers, practitioners, and stakeholders involved in the development of FPOs and the agricultural sector. By recognizing the diverse profiles and entrepreneurial behavior of FPO members, targeted support programs, policies, and interventions can be designed to enhance entrepreneurial capabilities, income generation, social integration, and the adoption of sustainable agricultural practices. Providing training and resources tailored to the specific needs and characteristics of FPO members can facilitate their transition into successful entrepreneurs, enabling them to thrive in a competitive market environment and contribute to the overall development and growth of the agricultural sector. It is important to acknowledge the limitations of this study. The research was conducted within a specific context and focused on a particular group of FPO members. Therefore, the findings may not be fully

generalizable to all FPOs or agricultural communities. Future research should explore a wider range of FPOs across different regions and assess the entrepreneurial behavior of members in various contexts to provide a more comprehensive understanding of the subject.

CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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