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FACTORS SHAPING THE ENTREPRENEURIAL MINDSET OF ARYA YOUTHS IN ODISHA INDIA: A COMPREHENSIVE STUDY

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ABSTRACT

The current study is conducted to assess the improvements made under ARYA project during the year 2017 to 2024. ARYA is a flagship project led by Indian Council of Agriculture Research, New Delhi with a vision to curb labour migration and retain youth in agriculture for income generation and employment creation through skill-oriented activities. ARYA provides an opportunity for entrepreneurial activities of youths of 18-35 years' age through capacity building, hands on training, demonstration, practical exposure, learning by doing, detailed project formulation, market liasoning and bank financing etc. This systematic study focuses to evaluate the extent of improvement have achieved by training ARYA youths over a period of time. Improvements were categories as Technological, socio-physical, economic and marketing aspects. Structured schedule is prepared and responses were collected from 50 respondents on different aspects of improvements. The finding suggest ARYA youths have achieved more technical & marketing improvement in compared to socio-physical and economic aspect. Knowledge enhancement in poultry management, information flow and decision-making ability has enhanced whereas mean score value represents establishment of better linkage with experts (3.22), change in social identity (3.66), minimizing dependency (2.94) & access to market network information (3.38) has enhanced in post-ARYA. Further to evaluate the influence of socio-economic parameters with extent of improvement, it was found that Education ($r = 0.504$, $p < 0.05$), farming experience ($r = 0.528$, $p < 0.05$) & mass media ($r = 0.563$, $p < 0.05$) exposure is found to have significant positive correlation with technical improvements while parameters such as education and farming experience tends to have better significant correlation with economic improvement. The finding therefore underscore education, farming experience & mass media exposure have significant positive correlation with the overall improvement of ARYA trainees.

Keywords : Youth, ARYA, entrepreneurship development, technological improvement, marketing strategy, business upscale.

Introduction

Youth account for a large percentage of the rural population. They are the present & future of nation and most importantly backbone of rural community. At present, 35 per cent of the total population is in the age group of 15-35 years, out of which 75 per cent of them live in rural areas. The migration of rural youth to the cities is around 45 per cent, which is quite alarming. Rural youth face many hurdles and difficulties in trying to earn a livelihood in their surroundings which

compels for migration to other places for employment. The major reason behind migration is rural youths do not perceive agriculture as remunerative or prestigious profession, provides a meaningful economic opportunities and sustainable environments which compels them to continue to migrate to cities/towns in search of occupation opportunities. Migration is a global phenomenon and has been both a boon and a bane to humans (Krishna *et al.*, 2022). This trend not only contributes to the emerging phenomenon of over-urbanization and growing unemployment in urban

areas, but is also affect global food production and mishandling of agriculture resources. Recent demographic trends indicate increased levels of migration among younger segments of society from many small towns and villages across the country in search of better educational and economic opportunities to sustain their livelihood which make them vulnerable to feel disconnected from their own communities (Pal *et al.*, 2022). India is the youngest nation in the world and has a massive youth force to offer to the agriculture sector but youth participation in agriculture is declining. The Indian Council of Agricultural Research (ICAR) along with agricultural departments are acknowledging young farmers for their innovative and diversified farming initiatives. Notably, ICAR's recent ARYA (Attracting and Retaining Youth in Agriculture) program focuses squarely on addressing the concerning trend of declining youth engagement in agriculture (Singh *et al.* 2019). Since a large number of rural youths are migrating to cities in search of work, agriculture-based entrepreneurship development is an important approach to minimize outward migration (Sahoo *et al.*, 2023). Migration is a part of active livelihood strategies but is also determined by social context, social norms and structures, household composition, gender ideologies, social contacts, and profit-making opportunities (Panigrahi *et al.*, 2006).

To overcome these challenges and unlock the immense potential in the agriculture sector. It is essential to invest in modern farming techniques, provide access to capital and credit, promote research and development, and strengthen agricultural training programs. By cultivating a culture of innovation and entrepreneurship in agricultural sector, we can attract more young individuals to engage in farming as a career/business and simultaneously enhance productivity and farm profitability. Investing young people in lucrative agriculture enterprises and business activities is the key to boosting rural economy and ensuring food security. Youth of this present era will never approve to be identified as so-called farmer or cultivator rather to be as farm-promoter or entrepreneur. Skill development of youth will help them create self-confidence to take up agriculture not only as a livelihood opportunity rather than an agri-business or business-oriented enterprise. Rural-to-urban migration is a common phenomenon as far as social, economic, and demographic changes are concerned. There are various causes regarding massive rural-to-urban migration which create a subsequent impact on urban population imbalance and extreme urban decay in India (Chakraborty *et al.*, 2021).

Agri-entrepreneurship has the prospect of social and economic development. In the face of growing unemployment and poverty in rural areas, there is urgency of entrepreneurship in agriculture for more productivity and profitability. Agri-entrepreneurship can be used as foremost remedy for the solution of this difficulty such as lower the burden of agriculture, employment opportunities for rural youth, control migration to urban areas, boost income, sustain development and cut down the pressure for job opportunity in urban areas. Self-employment through agricultural enterprises is gaining attraction, especially in rural areas with technical and financial support (Purnima *et al.*, 2022). The youth groups may function as role models for other youths by demonstrating the potentiality of agri-based enterprises and also by imparting training to others (Singh *et al.*, 2019) & (Acharya *et al.*, 2024). Owing to the importance of youth power in agriculture, ICAR came out with a policy plan to enhance the production ability, reliability and sustainability of youths in agriculture through 'Attracting and Retaining of Youth in Agriculture' (ARYA) project in the year 2015-16. In the ARYA project, the youths below 35 years of age are trained with the twin objective of empowering the younger generation in terms of their livelihood, income and socio-economic status and to attracting the youths to take up secondary agriculture as a main source of income. Project ARYA encourages the youth in India to participate in various kinds of agricultural activities and entrepreneurial ventures related to the allied sectors. Project ARYA focuses on generating and creating employment in the agriculture sector to have a steady flow of income in rural households, resulting in agricultural development and strengthening the rural areas. The government-initiated Project ARYA aims to create enough job opportunities for the youth in the agricultural sector so they will not have to migrate from villages to cities or urban areas in search of jobs and steady income. Successful entrepreneurship promotion has the possibility for attracting and retaining youth in rural areas through technology-supported agribusiness development (Gowda *et al.*, 2023)

Materials and Methods

The study was carried out in the Nayagarh district of odisha as the project ARYA was operational in the district since 2016-17. The project covers detailed technical aspect of the enterprises through hands in training and exposure visit to successful firms for practical exposure, besides marketing liasoning, bank financing and Detailed Project Report (DPR) formulation along with start-up incentive is rendered

for handholding support. The focus of the study was restricted to the backyard poultry rearing enterprise for the period 2017–2024 only. The methodology for this research paper involved a systematic approach. The ex-post facto design was used as the research design. From a population of 140 trained youth, 50 respondents were randomly selected using a multi-stage random sampling technique across all blocks. The purpose of the study is to evaluate the extent of improvements made so far by the ARYA trainees, identify factors contributing for their improvement and to measure overall livelihood improvement of youths under ARYA project. Interview schedule was prepared on socio-economic attributes of the respondents along with livelihood improvements which were categorized into technological, socio-physical, economical & marketing aspects. A structured interview schedule was used, incorporating a 5-point Likert scale (5 = Strongly Agree to 1 = Strongly Disagree). For statistical analysis Pearson's correlation coefficient (r) was used to measure the relationship between socio-economic attributes and improvement scores. Livelihood improvements were categorized into poor, average, and better based on mean and half-standard deviation.

Results and Discussion

Improvement in technological aspect by ARYA trainees

ARYA played a vital role in transforming traditional poultry farming into a semi-commercial, technology-driven enterprise. The training primarily focuses on enhancement of technical knowledge i.e. improved backyard poultry breeds, scientific housing management, balanced feeding practices, vaccination schedule, disease identification biosecurity measures, brooding and chick management etc with adoption of scientific practices, use of locally available resources for production improvement is the major aspects of the training programme.

To study the technological improvements of trainees 09 statements have been recorded and responses were collected in Likert 5-point scale & further analysed for a meaningful inference. The data shows affirmative changes have occurred in linkage developed with experts followed by technical knowledge gained by the trainees and permanency in information flow which surely shows a positive improvement on part of ARYA trainees as they are more technically sound on scientific management of backyard poultry. Moreover, the mean score depicts decision making ability of the trainees has increased over the period of time whereas risk bearing ability remains a critical gap, which is often attributed to the

high volatility of the poultry sector and a lack of formalized insurance or financial safety nets. The finding of the study was similar with the findings of Rajesh *et al.* (2024) who reported ARYA training programme improved the knowledge, skill and managerial ability of the trainees while risk bearing ability was measured low among youths. Similarly, the finding Supports Babu S.C. and Shishodia S. (2024) on the impact of mass media and digital information flow on technical improvement among youths. However, risk-bearing ability remains a critical gap among youth which is in sync with the findings of Meena and Singh (2020)

Table 1 : Improvements in technical aspect by ARYA trainees

Statements	Mean score	Rank	Gap (%)
Knowledge gained after ARYA training	3.72	I	25.6
Skillfully managing the enterprise	3.02	V	39.6
Risk bearing ability has increased	2.54	VIII	49.2
Decision making ability has increased	3.2	III	36
Adoption of recommended practices	2.94	VI	41.2
Permanency in information flow	3.3	II	34
Linkage developed with experts	3.22	III	36
Better use of resources	2.78	VII	44.4
Able to run the firm in case of any epidemic/ unpredictable situation	3.19	IV	36.2

Improvements in socio-physical aspects by ARYA trainees

The socio-physical improvements of ARYA trainees were assessed in terms of social empowerment, asset creation, infrastructure development & improved standard of living etc. Social recognition builds up confidence which is truly evident from the data that 73.2% of the respondents have revealed that their social identity has increases post – ARYA training. We can somehow assure that ARYA training had brought socio-physical change among the respondents as the mean score reflects affirmative response in Purchase of new farm implements/ machinery/tool and enabling children education. The findings of the study are in line with Shireesha *et al.* (2016). As poultry enterprise is highly volatile in nature trainees need incubation period to full-fledged establish of their firm by which affordability in terms of spending on recreation is still a major concern among youth.

Table 2 : Improvements in socio-physical aspects by ARYA trainees

Statements	Mean score	Rank	Gap (%)
Purchasing power has increased	2.6	IV	48
Spending more on recreation	2.08	VI	58.4

Social identity increased	3.66	I	26.8
Purchased new farm implements/ machinery/tool	2.7	III	46
Afford to purchase any vehicle/ household article	2.2	V	56
Enable to educate children	2.76	II	44.8

Improvements in economic aspects by ARYA trainees

The underlying objective of the project is self-employment and creating job opportunities which is directly related to economic development of ARYA. The economic improvements were assessed in terms of income generation, profitability, employment creation, asset accumulation, and financial stability of ARYA trainees were recorded. Data shows encouraging remarks on minimizing dependability from other sources followed by firm is making reasonable profit & financial position is increased by 2.94, 2.92 & 2.80 respectively. The core objectivity of the ARYA was to minimise the dependency from other sources and to run the enterprise effectively & scientifically without any hassle. As mentioned earlier about the high volatility nature of the enterprise, it is quite challenging for a youth to run a scalable unit for employment generation. While individual income levels have stabilized, employment generation (mean 1.84) scored the lowest, suggesting that these units are currently self-sustaining rather than job-creating. As the study supports enhanced income, profitability, and financial security of the trainees depicts poultry farming is a viable micro-enterprise contributing to sustainable rural livelihoods and youth empowerment. The results are in line with the findings of Jayapuria (2015)

Table 3 : Improvements in economic aspects by ARYA trainees

Statements	Mean score	Rank	Gap (%)
Firm is making reasonable profit	2.92	II	41.6
Firm is expanded/upscale in due course of time	2.32	IV	53.6
Employment generation	1.84	V	63.2
Financial position is increased	2.80	III	44
Dependability from other sources has minimized	2.94	I	41.2

Improvements in marketing aspects by ARYA trainees

The crux of the ARYA is project formulation and market liasoning which provides a building ground for youth. The marketing improvements were assessed in terms of market linkage, networking development, price realization and liaoing with finance institutions etc. Due to constructive approach of the project respondents have agreed on improvement on better

access to marketing network information (67.6%) and financial institutions (57.6%). Whereas timely disposing of the produce and getting remunerative price remains low due to competition with established broiler systems and unstable market fluctuations. The findings of the study are in line with Shireesha et.al.(2016)

Table 4 : Improvements in marketing aspects by ARYA trainees

Statements	Mean score	Rank	Gap (%)
Access to marketing network information	3.38	I	32.4
Access to financial institutions	2.88	III	42.4
Timely disposal of produce	2.6	VI	48
Getting remunerative price of the produce	2.72	V	45.6
Assured payment of the produce	2.76	IV	44.8
Timely payment of the produce	3.04	II	39.2

Further a comparative analysis is done to signify the major aspect of improvement has occurred in post-ARYA tenure and simultaneously to focus on the least scored parameters which need to be strengthened. Mean score value depicts improvement on technical & marketing aspects among youth as the project concentrate on building- up technical and skill-oriented mindset with strong market network for economic development. While profitability, employment creation, assets building and improvements in socio-physical aspects will take due course of time to establish.

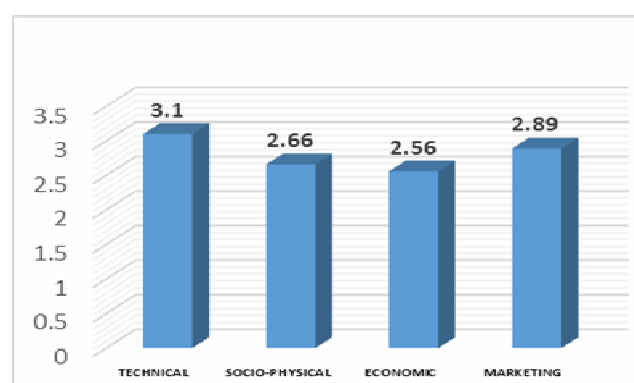


Fig. 1 : Comparative analysis of different aspects of improvements by ARYA

Table-5 illustrate the overall livelihood improvement of the respondents. A majority of the respondents (56%) achieved an average level of socio-economic improvement, indicating that the ARYA project's interventions in poultry farming are effectively reaching most trainees. One-fifth (20%) of the youth have successfully transitioned into the "Better" improvement category, representing the model

entrepreneurs for the district. ARYA project is empowering youths in terms of knowledge and skill acquisition, making profits from small scale farming, minimizing dependency, social and marketing network building etc. Roughly 24% of trainees fall into the "Poor" category. This group likely requires additional handholding, particularly in areas like risk-bearing ability and market linkages etc. The results are in line with the findings of Harshitha D. and Madhu Prasad V.L.(2018)

Table 5 : Overall socio- economic improvement of ARYA youths (n=50)

Socio-economic level	Category	No.	Percentage
Mean =77.74	Poor (<71.26)	12	24
SD=12.96	Average (71.26 to 84.22)	28	56
	Better (>84.22)	10	20

Attempt have been made to ascertain the influence of socio-economic attributes of the respondents facilitating various aspects of improvement through ARYA activities. The responses obtained from the analysis of data through pearson's correlation co-efficient have been presented in Table -6.

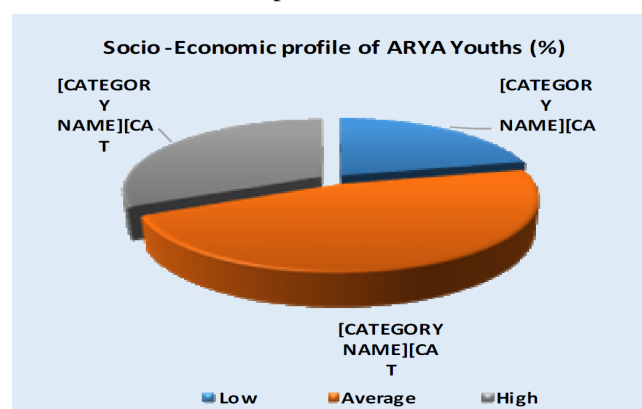


Fig. 1 : Socio-economic profile of ARYA youths

Mass media exposure showed the strongest positive correlation with technical improvements ($r = 0.563$, $p < 0.05$) and overall improvement ($r = 0.559$, $p < 0.05$). This suggests that trainees who actively seek information through diverse channels are better equipped to adopt complex scientific poultry management practices. Both education ($r = 0.538$, $p < 0.05$) and farming experience ($r = 0.500$, $p < 0.05$) are significant predictors of economic improvement. This indicates that a foundational understanding of agricultural systems, paired with formal literacy, allows trainees to manage their firms as profitable businesses rather than mere subsistence units. Interestingly, socio-physical and marketing

improvements showed no significant correlation with these individual attributes. This implies that marketing success may be more dependent on external infrastructure and district-level policy than on the personal characteristics of the youth. The finding underscore education, farming experience & mass media exposure have significant positive correlation with the overall improvement of ARYA trainees.

Table 6 : Influence of Socio-economic variables on improvements.

Socio economic attributes	Technical	Socio-physical	Economic	Marketing	Overall improvement
Age	0.331	0.043	0.217	0.086	0.276
Education	0.504*	0.157	0.538*	0.242	0.554*
Farming experience	0.528*	0.132	0.500*	0.184	0.525*
Annual income	0.278	0.074	0.354	0.076	0.295
Mass media exposure	0.563*	0.263	0.460	0.185	0.559*

*correlation is significant at 0.05% level

Conclusion

Indeed, the ARYA project launched by the Indian Council of Agricultural Research (ICAR), aims to engage youth mass in agriculture trend by providing resources and fostering collaboration for entrepreneurial mindset. It is evident from the study that consciousness among youths have raised towards skill-oriented activities by gaining firsthand knowledge and required information from capacity building programme, demonstration and exposure to new ideals and innovations. Rural youth have successfully undergone a paradigm change thanks to the ARYA project, moving from traditional, subsistence farming to a technology-driven, semi-commercial entrepreneurial mindset. The study explores the project has had a significant role in increasing awareness of skill-oriented activities in backyard poultry farming. Trainees demonstrated significant improvements in technical knowledge (3.72 mean score) and expert linkages (3.22 mean score), though a critical gap remains in risk-bearing ability (2.54 mean score). This suggests that while ARYA effectively provides "know-how," the transition to a resilient enterprise is hindered by the inherent volatility of the poultry sector. Beyond financial profitability, the project has fostered a heightened sense of social identity (mean 3.66), which serves as a vital non-monetary motivator for youth to remain in the poultry sector. While 56% of respondents achieved an average level of improvement, the low score for employment generation (1.84 mean score) suggests that units are currently optimized for self-employment rather than job creation. Study explores

the overall improvement is strongly influenced by education, farming experience & mass media exposure of ARYA trainees. Youth trained through the ARYA program can act as role models and master trainers for the youth in their rural area; which eventually inspires and motivates the other youth to initiate agri-based start-ups. Making reasonable profits, gaining income and minimizing the dependency from other sources are quite positive remarks of economic progress in part of ARYA youths. Access to market information, network building and better coordination with financial organizations by the respondent shows an affirmative response towards marketing improvements. Even though there are many lacunas and flaws in various fronts which needs to be strengthened by the coordinated effort but still ARYA project had truly paved the paths of youths towards empowerment.

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