P-ISSN 2322 - 0678 & E-ISSN 3048 - 9946
https://doi.org/10.56572/gjoee.2025.40.2.0025 Gujarat Journal of Extension Education Vol. 40 : Issue 2 : December - 2025

SOCIO-PERSONAL CHARACTERISTICS INFLUENCING ASPIRATIONS OF TRIBAL FARM WOMEN FOR SELF-RELIANCE

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ABSTRACT

The study explores the socio-personal factors influencing the aspirations of tribal farm women for self-reliance in the tribal-dominated districts of Middle Gujarat—Dahod, Panchmahals, Chhotaudepur, and Mahisagar. Employing an ex-post-facto design, data were collected from 240 respondents using a structured and pre-tested Gujarati interview schedule. The analysis employed regression and path analysis techniques. Eighteen independent variables were considered, including age, education, farming experience, social media utilization, family type, occupation, and others, with aspirations for self-reliance as the dependent variable. Results revealed that self-confidence, farming experience, type of family, and decision-making ability significantly impacted women's aspirations. Regression results showed that eight variables had a statistically significant effect, with self-confidence emerging as the most influential. Path analysis highlighted that self-confidence and decision-making ability not only had strong direct effects but also mediated substantial indirect effects from other variables like education and attitude towards agriculture. Despite government programs like MKSP, DAY-NRLM, and PMKSY aiming to empower tribal women, structural challenges such as literacy gaps, cultural norms, and limited access to extension services persist. This study underscores the necessity of inclusive, gender-sensitive agricultural extension services that align with the cultural context and aspirations of tribal women. Promoting education, resource access, and leadership in extension activities can foster sustainable livelihoods and support India's broader goals under the Sustainable Development Goals (SDGs).

Keywords*: aspirations, self-reliance, tribal farm women, socio-personal characteristics*

INTRODUCTION

Tribal farm women in India play a pivotal role in agriculture and allied sectors, contributing significantly to household livelihoods, food security, and rural well-being. Despite constituting nearly half of the tribal population and having the highest female labour force participation rate (LFPR) among social groups—37.00 per cent in 2022–23—their contributions often go unrecognized and under-supported. Tribal women predominantly engage in self-employment and casual labour, reflecting socio-economic disparities and limited access to formal employment opportunities (PLFS, 2022–23). The feminization of agriculture is especially visible in tribal communities, where women are increasingly managing farms due to male out-migration and economic compulsion. However, barriers like limited education, poor access to resources, and gendered labor roles restrict their aspirations and participation in decision-making (FAO, 2018; Pachauri, 2019). Studies also show that aspirations influence women's behavior, productivity, and long-term engagement with agriculture (Crossland *et al.,* 2021; World Bank, 2017). This underscores the importance of recognizing and supporting tribal farm women's aspirations through appropriate interventions.

Women play a significant and crucial role in agricultural development and allied fields. The nature and extent of women's involvement in agriculture varies greatly from region to region. But regardless of these variations, women are actively involved in various agricultural activities. (Chandravadia *et al*., 2020)

For a variety of reasons, agricultural development has been constrained in the tribal dominated areas. It is urgent need to take crucial reform measures in agriculture sector at ground level to make profession of agriculture a profitable venture so that tribal farmers may adopt agriculture as a source of employment. (Bora *et al*., 2023)

The major areas of women participation including crop production, fisheries farming, value addition, agro-processing, agro-forestry products, marketing of poultry, dairy and other agricultural products in local and informal. Gujarat has achieved rapid growth especially in manufacturing and service sectors, but even though agriculture sector has an

important role, because it is the main sources of income of majority of the population. In addition, 63% of the population of Gujarat lives in rural areas and relies on agriculture and agro related rural non farming sector for their livelihood. (Patel, K. M *et al*. 2018) Women constitute a substantial majority of the agricultural workforce and produce most of the food that is consumed locally, which makes them the principal agents of food security and household welfare in rural areas.

The Indian government has initiated programs such as MKSP under NRLM, DAY-NRLM, NFSM and PMKSY to empower women, especially in tribal areas, by improving skills, promoting sustainable agriculture, and enhancing access to financial services. Yet, the reach of these programs remains limited due to literacy barriers, remoteness, and lack of cultural sensitivity. Agricultural extension services, though vital, often fail to engage tribal women due to male-centric designs and language or cultural gaps. Therefore, for meaningful development and the achievement of Sustainable Development Goals (SDGs 1, 2, and 5), it is crucial to adopt a gender-sensitive, inclusive, and localized approach to extension services. Programs must address tribal women's unique needs and aspirations, thereby fostering self-reliance, resilience, and sustainable rural development (Anonymous, 2011; Anonymous, 2022; Anonymous, 2023).

Regression analysis has become one of the most widely used tools for analyzing functional relationships among the variables which is expressed in the form of an equation connecting the target variable Y and one or more features X1 , X2 ,…, Xn. In this study, two regression models namely linear regression were upto build the most accurate and effective models since the learning information occurs with required outputs and also the objective of the study was to determine a common rule of showing input to output. In addition, regression models have some individual benefits like; they can model non-linear relationships between multiple data sources. The present research will be useful for researchers to know an independent effect towards aspirations (Parmar *et al*. 2021).

OBJECTIVES

(1) To study the extent of variation caused by independent variables on aspirations of tribal farm women for their self-reliance

(2) To find out direct and indirect effect between antecedent characteristics of tribal farm women and their aspirations of tribal farm women for their self-reliance

METHODOLOGY

The present study was carried out in middle Gujarat on viz. tribal districts namely, Dahod, Panchmahals, Chhotaudepur and Mahisagar of Middle Gujarat. Based on the highest number of tribal populations, two talukas were chosen from each district, and three villages were chosen randomly from each selected talukas of three districts. A total of 240 tribal farm women were included in the sample, with 10 randomly chosen from each selected village. Four districts were thus used to choose twenty-four villages. To gather responses, a structured interview schedule was used to collect the data by personally contact method. Ex-post-Facto research design was used in the present study (Kerlinger, 1976). The data were collected through pre-tested Gujrati interview schedule and investigator contacted all the data personally. The data were gathered, processed and analyzed to draw the meaningful conclusion. The statistical tools used for the analysis of the data were regression and path analysis (as adopted by Vinaya et al., 2017). Data was analyzed by SPSS software. Eighteen variables were selected as independent variable and aspirations of tribal farm women for their self-reliance were selected as dependent variable.

RESULTS AND DISCUSSION

It is concluded from the Table 1 that 51.60 per cent of the total variation in the aspirations of tribal farm women for their self-reliance was explained through the variables considered as the regression equation. The unexplained variation was 47.70 per cent, which may be due to extraneous factors. The calculated 't' values of the partial regression coefficient were significant in case of age (X1), farming experience (X3), type of family (X6), occupation (X7), attitude towards agriculture as an occupation (X15), attitude towards allied sectors of agriculture as an occupation (X16), self-confidence (X17) and decision-making ability (X18).

From the regression analysis, it was concluded that out of eighteen variables, eight variables namely age, farming experience, type of family, occupation, attitude towards agriculture as an occupation, attitude towards allied sectors of agriculture as an occupation, self-confidence and decision-making ability had significant effect on the aspirations of tribal farm women for their self-reliance. Regression coefficient indicated that one-unit change in age, education, farming experience, type of family, occupation, attitude towards agriculture as an occupation, attitude towards allied sectors of agriculture as an occupation, self-

Table 1 : Multiple regression analysis of aspirations of tribal farm women for their self-reliance (n = 240)

Sr. No.	Independent variables	Aspirations of tribal farm women for their self-reliance				
		Unstandardized Coefficients	't' value	p-value	Regression Co-efficient (b)	Rank
	Constant	-5.347	-.839	.402	-	-
X_1	**Age**	-0.075*	-2.145	0.033	-0.137	18
X_2	**Education**	0.872*	2.397	0.017	0.125	8
X_3	**Farming Experience**	3.053**	3.879	0.000	0.239	2
X_4	**Social media utilization**	0.327	1.658	0.099	0.087	11
X_5	**Social participation**	0.930	1.908	0.058	0.093	9
X_6	**Type of family**	3.124**	4.206	0.000	0.208	3
X_7	**Occupation**	0.883**	2.924	0.004	0.150	6
X_8	**Family income**	-0.270	-1.004	0.316	-0.050	17
X_9	**Material Possession**	0.086	1.827	0.069	0.089	10
X_{10}	**Extension participation**	0.325	1.680	0.094	0.085	12
X_{11}	**Information seeking behavior**	-0.013	-0.115	0.909	-0.006	16
X_{12}	**Scientific orientation**	0.070	1.406	0.161	0.069	14
X_{13}	**Economic motivation**	0.212	1.664	0.098	0.085	13
X_{14}	**Credit orientation**	0.243	0.687	0.493	0.034	15
X_{15}	**Attitude towards agriculture as an occupation**	0.192*	2.699	0.007	0.144	7
X_{16}	**Attitude towards allied sectors of agriculture as an occupation**	0.202**	3.826	0.000	0.185	5
X_{17}	**Self confidence**	0.513**	6.117	0.000	0.311	1
X_{18}	**Decision making ability**	0.171**	3.778	0.000	0.205	4

* Significant at 0.05 level of probability R2=0.516 ** Significant at 0.01 level of probability

confidence and decision-making ability would affect -0.075, 0.872, 3.053, 3.124, 0.883, 0.192, 0.202, 0.513 units and 0.171 units change in aspirations of tribal farm women for their self-reliance, respectively. The results are in line with the findings of Padaliya et al. (2023); Padaliya et al. (2023); Dey et al. (2025).

Rank based on SPRC

The multiple regression analysis revealed that among various factors influencing the aspirations of tribal farm women for their self-reliance, self-confidence (Rank 1) emerged as the most crucial contributing factor, indicating that women with higher self-confidence tend to have stronger aspirations for self-reliance. This was followed by farming experience (Rank 2), Type of family (Rank 3) and decision-making ability (Rank 4) also had significant positive impacts. Attitude towards allied sectors of agriculture (Rank 5) and occupation (Rank 6), attitude towards agriculture as an occupation (Rank 7) were also significant, education (Rank 8).

Sr. No.	Age	Edu	FE	SMU	SP	TOF	OCC	AI	MP	EP	ISB	SO	EM	CO	AOA	AO Allied	SC	DMA	Total IND	CORREL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
X_1	-0.1369	-0.0445	0.1475	-0.0117	0.0125	-0.0060	0.0003	0.0050	0.0025	0.0006	0.0009	-0.0028	-0.0030	-0.0038	0.0080	-0.0041	0.0204	0.0001	0.1219	-0.0150
X_2	0.0486	0.1254	-0.0588	0.0179	-0.0018	0.0080	0.0034	-0.0062	0.0023	0.0017	-0.0007	-0.0003	0.0140	0.0037	-0.0044	-0.0143	-0.0013	0.0245	0.0363	0.1617
X_3	-0.0843	-0.0308	0.2395	-0.0048	0.0093	-0.0017	-0.0033	0.0010	-0.0010	0.0089	0.0007	0.0011	0.0086	-0.0014	0.0048	-0.0094	0.0137	-0.0002	-0.0888	0.1507
X_4	0.0186	0.0259	-0.0133	0.0866	-0.0090	-0.022	-0.0141	-0.0095	0.0095	-0.0049	-0.0012	-0.0025	0.0193	0.0004	0.0128	-0.0032	0.0446	0.0253	0.0767	0.1633
X_5	-0.0185	-0.0024	0.0239	-0.0085	0.0925	0.0091	-0.0001	-0.0009	-0.0035	-0.0016	0.0008	0.0028	0.0051	0.0025	0.0063	-0.0063	0.0024	0.0018	0.0129	0.1054
X_6	0.0040	0.0048	-0.0019	-0.0092	0.0041	0.2077	0.0218	-0.0006	0.0096	0.0087	-0.0006	0.0023	-0.0010	0.0032	-0.0023	-0.0159	0.0126	0.0234	0.063	0.2707
X_7	-0.0003	0.0029	-0.0053	-0.0082	-0.0001	0.0303	0.1495	-0.0050	0.0084	-0.0131	0.0008	-0.0019	0.0124	0.0018	-0.0029	-0.0169	0.0354	-0.0311	0.0072	0.1567
X_8	0.0138	0.0158	-0.0047	0.0166	0.0017	0.0026	0.0152	-0.0495	0.0053	-0.0038	-0.0005	0.0032	0.0142	-0.0028	0.0165	-0.0049	0.0247	0.0089	0.1218	0.0723
X_9	-0.0039	0.0033	-0.0028	0.0092	-0.0036	0.0225	0.0142	-0.0029	0.0889	-0.0011	-0.0005	0.0053	0.0039	0.0046	0.0085	-0.0045	0.0224	-0.0026	0.072	0.1609
X_{10}	-0.0009	0.0025	0.0249	-0.0050	-0.0017	0.0211	-0.0229	0.0022	-0.0011	0.0853	-0.0013	-0.0058	-0.0047	0.0018	0.0086	0.0062	0.0118	0.0398	0.0755	0.1608
X_{11}	0.0196	0.0141	-0.0270	0.0176	-0.0131	0.0191	-0.0198	-0.0038	0.0072	0.0183	-0.0060	0.0048	0.0100	-0.0005	0.0192	-0.0145	0.0443	0.0405	0.136	0.1300
X_{12}	0.0056	-0.0006	0.0038	-0.0032	0.0037	0.0069	-0.0041	-0.0023	0.0069	-0.0071	-0.0004	0.0688	-0.0038	0.0004	0.0205	0.0220	0.0244	0.0202	0.0929	0.1617
X_{13}	0.0049	0.0206	0.0242	0.0196	0.0056	-0.0025	0.0217	-0.0082	0.0041	-0.0047	-0.0007	-0.0030	0.0852	0.0022	0.0129	-0.0078	0.0215	0.0253	0.1357	0.2209
X_{14}	0.0154	0.0139	-0.0100	0.0009	0.0068	0.0194	0.0080	0.0040	0.0122	0.0045	0.0001	0.0008	0.0055	0.0338	-0.0040	0.0109	0.0345	0.0015	0.1244	0.1582
X_{15}	-0.0076	-0.0039	0.0079	0.0077	0.0041	-0.0033	-0.0030	-0.0057	0.0053	0.0051	-0.0008	0.0098	0.0076	-0.0009	0.1439	0.0023	0.0881	0.0786	0.1913	0.3352
X_{16}	0.0031	-0.0097	-0.0122	-0.0015	-0.0032	-0.0179	-0.0136	0.0013	-0.0021	0.0029	0.0005	0.0082	-0.0036	0.0020	0.0018	0.1851	0.0077	0.0103	-0.026	0.1591
X_{17}	-0.0090	-0.0005	0.0106	0.0124	0.0007	0.0084	0.0170	-0.0039	0.0064	0.0032	-0.0009	0.0054	0.0059	0.0037	0.0408	0.0046	0.3107	0.0349	0.1397	0.4504
X_{18}	-0.0001	0.0150	-0.0003	0.0107	0.0008	0.0237	-0.0227	-0.0022	-0.0011	0.0166	-0.0012	0.0068	0.0105	0.0002	0.0552	0.0094	0.0531	0.2047	0.1744	0.3791

Direct and indirect effect between antecedent characteristics of tribal farm women and their aspirations of tribal farm women for their self-reliance All the independent variables were subjected to path analysis. The data thus, indicate that observed relationship between the variables were only partially absolute and partially relative. Partially relationship was a contribution made by other variables exercising their influence jointly.

It is therefore, necessary to study the influence of one variable on other variable both directly as well as through other variables presented in the situation. The result of path analysis is presented in Table 2.

Direct effect

The data in Table 2 revealed that Self-confidence (0.311) had exerted maximum direct positive effect, followed by farming experience (0.239), type of family (0.208), decision making ability (0.205), attitude towards allied sectors of agriculture as an occupation (0.185), attitude towards agriculture as an occupation (0.144), education (0.125), social participation (0.093), material Possession (0.089), social media utilization (0.087), extension participation and economic motivation (0.085), credit orientation (0.034), occupation (0.15).

As far as negative direct effect is concerned age (-0.137) had exerted maximum direct negative effect, followed by information seeking behavior (-0.006), family income (-0.05).

It can be inferred that major variables contributing the maximum direct positive effect on their aspirations for their self – reliance were farming experience, type of family, decision making ability, attitude towards allied sectors of agriculture as an occupation, attitude towards agriculture as an occupation, education, social participation, material possession, social media utilization, extension participation and economic motivation, credit orientation, occupation in descending order, while age had exerted maximum direct negative effect, information seeking behavior, family income contributing negative direct effect in descending order on their aspirations for their self – reliance.

Total indirect effect

So far, total indirect effect is concerned sixteen variables had positive total indirect effect on their aspirations for their self – reliance of tribal farm women. Further, it can be observed that attitude towards agriculture as an occupation had maximum total indirect effect (0.191208) through self-confidence (0.088013) and decision-making ability (0.07872), followed by decision making ability (0.174544) through attitude towards agriculture as an occupation (0.055296) and self-confidence (0.053181), self-confidence (0.140059) through attitude towards agriculture as an occupation (0.040752) and decision making ability (0.035055), information seeking behavior (0.136403) through self-confidence (0.044473) and decision making ability (0.04059), economic motivation (0.135454) through decision making ability (0.025314) and farming experience (0.024114), credit orientation (0.124709) through self-confidence (0.034513) and type of family (0.019439), family income (0.121844) through self-confidence (0.024713) and attitude towards agriculture as an occupation (0.016517), age (0.121687) through farming experience (0.147224) and self-confidence (0.020393), scientific orientation (0.093058) through self-confidence (0.024399) and attitude towards allied sectors of agriculture as an occupation (0.022039), social media utilization (0.076479) through self-confidence (0.044784) and education (0.02575), extension participation (0.075654) through decision making ability (0.039975) and farming experience (0.024837), material possession (0.072226) through type of family (0.022507) and self-confidence (0.022411), Type of family (0.063034) through decision making ability (0.023405) and self-confidence (0.012646), education (0.036282) through age (0.048635) and decision making ability (0.024509), social participation (0.012956) through attitude towards agriculture as an occupation (0.006303) and economic motivation (0.005129), occupation (0.007359) through self-confidence (0.035408) and economic motivation (0.012325), while two variables had negative total indirect effect among which attitude towards allied sectors of agriculture as an occupation had maximum total indirect effect (-0.02599) through decision making ability (0.010362) and scientific orientation (0.00822), followed by farming experience (-0.08917) through self-confidence (0.013707) and social participation (0.009298).

Substantial indirect effect

Data further revealed that out of 36 substantial indirect effects, twelve each routed through self-confidence and eight each routed for decision making ability, four each routed through attitude towards agriculture as an occupation, three each routed for farming experience, two each routed through attitude towards allied sectors of agriculture as an occupation and economic motivation, type of family and one routed through scientific orientation, age, education and social participation.

It could be concluded that self-confidence and decision-making ability of tribal farm women was the key variables in exerting considerable direct and substantial indirect effect while attitude towards agriculture as an occupation had exerted highest indirect effect on their aspirations for their self – reliance.

CONCLUSION

The study concludes that the aspirations of tribal farm women for self-reliance are significantly shaped by both psychological and socio-economic factors, with self-confidence, decision-making ability, and farming experience emerging as the most influential. While education and attitudes toward agriculture also contribute positively, variables like age and income had minimal or negative influence. The findings affirm that empowering tribal women requires not just technical interventions but also socio-psychological support systems. Tailoring extension services to be more inclusive, culturally sensitive, and women-centric is crucial. Recognizing their aspirations and enabling their capacity for decision-making can catalyze sustainable agricultural practices and inclusive rural development. Hence, policy efforts must focus on strengthening self-help groups, promoting leadership among tribal women, and increasing their access to resources and education. Such strategies will not only elevate the individual aspirations of tribal farm women but also significantly contribute to national development and the achievement of global SDGs.

POLICY IMPLICATIONS

(1) Promote education and digital literacy : Enhance education and digital access for tribal farm women to build confidence and aspirations for self-reliance.

(2) Strengthen extension and resources : Provide gender-sensitive extension services, credit, and training support to improve sustainable livelihoods.

ACKNOWLEDGMENT

The author sincerely thanks the Department of Agricultural Extension and Communication, AAU, Anand, for guidance and support. Gratitude is also extended to all tribal farm women respondents for their valuable participation in the study.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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Received : July 2025 : Accepted : September 2025