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Farm Parent and Youth Aspirations on the Generational Succession of Farming: Evidence From South India

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Agriculture remains vital in ensuring the food security of developing economies like India, yet increasing rural-urban migration, an aging farm population, and waning interest of rural youth in agriculture are emerging concerns. This paper focuses on the aspirations of farm parents and their children in agriculture, the challenges they confront, and potential solutions. We draw on qualitative data from two rural sites in Southern India, different from each other in their agro-ecological and social contexts, to point to the material, social, relational, and structural factors shaping aspirations. First, agrarian distress, resulting from climate variability and market uncertainty, affects farm households' socioeconomic status, resulting in farmers' aspiration failure in agriculture. Farm parents then focus on educating their children, aspiring for secure non-farm jobs for their sons, and finding suitable marriage partners, also in non-farm employment, for their daughters. While this steer from parents discourages youth from aspiring to careers in agriculture, in reality, there is a wide gap in the achievement of aspirations, and a majority of youth, especially young women, do end up working on their family farms. For the future development of agriculture and sustainable food systems, it is essential to protect young farmers from aspiration failures and innovate through appropriate policies.

Keywords: agriculture, rural youth, aspirations, gender, India

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INTRODUCTION

Agriculture continues to play an important role in developing economies, yet with increasing rural-urban migration, aging farm population, and waning interest of rural youth in agriculture, its sustainability is increasingly under threat. The importance of creating opportunities for youth in the global food system is increasingly recognized, not just for securing the goals of poverty reduction, employment, food, and nutrition security, but equally ensuring that as the farmers, entrepreneurs, and workers of tomorrow, they realize their potential to feed the world and solve global challenges (IFAD, 2019). It requires qualified youth to take up farming and allied activities as a profession (Ball and Wiley, 2005).

During the millennial decade (2001–2010), the number of farmers in India decreased by nine million (Times of India, 2013). Based on a survey of 5,000 farm households across 18 states of India, Sood (2018) reported that 76% of farmers wanted to give up farming. Agriculture is seen as a non-remunerative livelihood activity with unstable returns due to the increasing costs of production, climatic risks, market failures, and a lack of social respectability. Lack of attention to

the needs of farmers, especially youth, has contributed to rising agrarian distress (Shroff, 2019), and consequently, weak aspirations in agriculture.

At the same time, better employment opportunities, facilities for higher education, and higher standards of living in urban areas appear to be driving the migration of youth from rural to urban areas, with the rural population declining from 82 to 70% between 1960 and 2010 (Jack, 2018). A recent survey of 30,000 rural youth from 28 Indian states revealed that while 79% of them belonged to farm households, just 1.2% aspired to be farmers; the rest desired non-agricultural jobs (men preferred the army, police, or engineering while women opted for nursing or teaching) with stable and secure incomes. Further, the survey highlighted that rural families prefer not to accept marriage proposals for their daughters from families where farming is the primary source of income (Bera, 2018).

In such a context, with clearly negative fallouts for the sector's future, it becomes crucial to understand the aspirations of farmers, including farm parents, toward their children and succession to their family farms. Aspirations of the rural communities play a significant role in influencing short and medium-term decisions and they shape their livelihood activities, investments on technology and input use which could, in turn, lead to increased productivity. An online analysis by Giuliani et al. (2017) shows an increase in research on rural youth in recent years, yet this does not extend to their aspirations in agriculture (**Annex 1.A**). A systematic literature review on this theme found only 22 studies from 14 developing countries on the agricultural aspirations of rural communities (Nandi et al., 2021); most aspiration studies are confined to educational and occupational choices (**Annex 1.B**). This paper seeks to fill this gap and provide grounded evidence for policies and programs to encourage and support rural youth to innovate and lead a new phase of agricultural development (Riley, 2017).

The paper has four interconnected objectives, namely, to understand: (i) the challenges confronted by smallholder farmers; (ii) the aspirations of farm parents for their children, especially education and succession in family farming; (iii) the perceived challenges to the engagement of rural youth in family farming; and (iv) the potential solutions to addressing aspiration failures in farming.

We focus on farm parents and youth, both men and women, in the semi-arid Warangal district of Telangana State, and the coastal Nagapattinam district of Tamil Nadu state, in southern India. In section Theoretical Background and Conceptual Framework, we introduce the conceptual framework which links the concept of aspirations and its multiple drivers to the material, social and structural realities confronting rural, agricultural communities in India. Section Methodology presents a discussion of the contexts of our study and the methods used for data collection and analysis. In section Results, we present our results. Section Discussion compares insights from the two sites to draw out the diversity of farming contexts in India, but also the nuances of social (caste) and gender identity in differentially shaping capacities, constraints, and aspirations. Section Concluding Remarks offers a few concluding observations.

THEORETICAL BACKGROUND AND CONCEPTUAL FRAMEWORK

Rural communities and their Agricultural Aspirations: The word *aspiration* refers to a "desire or ambition to realize something" (Dictionary, 1989); in other words, aspirations are an individual's goals for their future. Potentially, there are infinite dimensions to which an individual could aspire, including income, wealth, education, and social status (Kosec et al., 2016). They result in forward-looking behaviors to achieve these goals (Dalton et al., 2016), whether economic behavior (Maertens, 2011; Mo, 2012), or political and community engagement (Kosec and Mo, 2017), and may, therefore, significantly affect agricultural productivity, livelihoods, and rural welfare.

We conceptualize farmers' aspirations in agriculture and its potential impact on the aspirations of their children for education and succession to family farming based on four ideas: a*spiration window, aspirations gap* (Ray, 2006), *capacity to aspire,* and *aspirations failure* (Appadurai, 2004). Ray (2006, p. 1) defines an *aspiration window* as "an individual's cognitive world, her zone of '*similar,*' '*attainable*' individuals." An individual draws his/her aspirations from the lives, ideals, and achievements of those around, who serve as role models. Aspirations gaps then are the difference between what an individual aspires to and what he/she already has, or is able to achieve. Such gaps affect future-oriented behavior and in fact, can lead to what Appadurai (2004) calls a "weak capacity to aspire" or "aspiration failures," a situation when individuals fail to set ambitious goals or targets, do not proactively invest in them, hence also fail to achieve them. While aspirations reflect personal interests and capacities and may be rooted in an individual's aspiration "window," they are mediated by a range of factors operating at multiple institutional scales, including material or economic deprivation (of the individual or household), social relations within and beyond the community including discrimination based on identity (gender, caste), and wider structural factors including market arrangements and state policies (Rietveld et al., 2020). We briefly discuss some of these factors below.

Individual and Relational Factors

Individual determinants such as age, education (Bernard and Taffesse, 2014), gender (Kosec et al., 2012), occupation, ethnicity (Strand, 2007), health (Snow et al., 2013), income (Ashby and Schoon, 2010), and self-esteem (Knight and Gunatilaka, 2012) are all seen as important determinants of aspirations. Rather than functioning independently, these characteristics intersect with each other to shape an individual's experiences and aspirations.

However, individuals are embedded within their households and communities, and one finds significant intergenerational influences on aspirations, particularly parents' aspirations for their children's education and occupation (Bernstein, 1975; Coleman, 1980; Mortimer and Finch, 1996). Gutman and Akerman (2008) report a strong relationship between the aspirations of parents for their children and those of the children themselves. For instance, families in Pakistan and Bangladesh who wish their daughters to marry in their community when they are young are likely to interrupt the educational and occupational

aspirations of their daughters, socializing them to look forward to a "good marriage" as their goal. Parental aspirations can then affect the future prospects and outcomes for the children (Vryonides and Gouvias, 2012).

Apart from the contribution of family values and emotional support to the formation of aspirations (Helwig, 1998; Jacqueline et al., 2007), there is also a material dimension. Socioeconomic status (reflected in better economic condition, freedom from indebtedness, alcohol addiction, chronic illness, better relationship with family members and neighbors, respect in society, and food security) contributes to the shaping of exposure and opportunities, building also higher educational, occupational, and agricultural aspirations amongst both parents and their children. Parents with insufficient economic resources and the ability to invest tend to hold lower aspirations for their children, and consequently, youth from socially disadvantaged backgrounds tend to exhibit lower aspirations than their more advantaged peers (Bowles et al., 2005; Schoon, 2006).

For rural agricultural communities, land is the most important factor of production. Access to land plays an important role not just in ensuring food security or reducing poverty but also in determining the social status of a household as being "landed" or "landless" (Rao, 2017a). Yet in India, the average size of operational holding has been consistently declining (1.08 ha in 2015–16 against 1.15 ha in 2010–11), with small and marginal farmers (up to 2 ha) now constituting 86% of all landholders and cultivating 47% of the total operated area in 2015–16 (Agriculture Census, 2015–16). While small farms are productive, the declining size of landholding intensifies the desire for diversification amongst the youth (Brookfield, 2008). The share of female operational holders increased to 14% in 2015–16 from 10% in 1996 (Rao, 2017b), and while undoubtedly an improvement, it reveals strong gender norms that work against the succession of young women to family farms.

Labor Markets

Education is seen as central to the development of human capital and engagement with markets. In India, the average years of educational attainment have improved substantially since the early 1990s, yet gender biases and prevailing social norms mean that boy children tend to do better than girls (Nair, 2010). This disadvantage is intensified by caste, ethnicity, and rurality (Ramachandran, 2004; Kundu and Pandey, 2020), with knock-on effects on employment and income-earning opportunities and levels of poverty. Those less educated and from socially disadvantaged groups [Scheduled Castes (SCs) and Scheduled Tribes] in rural India end up mainly as farm (49.4%) and non-farm laborers (39.6%), with <14% in regular employment (Krishna and Shariff, 2011).

While employment opportunities have been declining in the farm sector, most non-farm jobs for rural youth are low-paying, concentrated in the informal sector (Mehrotra et al., 2014; Reddy, 2014). Workforce participation of women has been declining in both rural and urban areas, whether due to education, changing domestic responsibilities, or the mechanization of agriculture (Mehrotra and Sinha, 2017), although women still constitute 65% of the agricultural workforce (Pattnaik et al., 2018). In terms of wages, urban areas present more diversified job options, and while requiring higher education and skills, also yield higher returns (Karan and Selvaraj, 2008). Aspirations around higher urban wages are an important reason driving the out-migration of rural youth. Investments in improving rural livelihoods can then potentially influence aspirations and the quality of life of rural households.

Structural and Institutional Factors

Agrarian distress in India has intensified over the past two decades due to erratic weather conditions, crop failures, indebtedness, non-remunerative prices, and low returns from agriculture (Radhika et al., 2020). A perception confirmed by a study across 26 countries, which revealed that gross farm revenues in India declined by 14% during 2000–2016, the only country to show such decline (OECD/ICRIER, 2018). Climate change factors such as increasing temperature, decrease in the number of rainy days, and water stress are attributed to decline in paddy and wheat yields in some parts of India resulted agrarian distress (Rao et al., 2016; Nedumaran et al., 2021). Similarly, warming resulted in decline in the yield of wheat, rice and maize by 5, 6–8, and 10–30%, respectively, in India (Aryal et al., 2020), such crop-damaging temperatures have led to increase in the smallholder's suicide cases in India (Carleton, 2017). The National Crime Records Bureau of India (2015) reported that between 1995 and 2015, as many as 2,16,500 farmers committed suicide in different states of the country. In the face of such vulnerabilities, the government needs to put in place strategies to enable farmers to quickly restore their livelihoods but equally retain farming aspirations. Macours and Vakis (2009) demonstrate how cash transfer programs in drought-prone rural communities in Nicaragua helped build local leaders with high aspirations, motivating group members to invest in agriculture, leading ultimately to higher incomes. Without such support, a negative cycle of lower productive investments and lower returns would have persisted (Kosec et al., 2014).

This is particularly important for enabling the creative engagement of young women in agriculture, given the restrictive gender norms that discriminate against them in farming (Elias et al., 2018). Besides, women lack access to the land and other resources, services (credit, extension, training), non-recognition of their work contributions, and non-representation in decision-making (Rao, 2017a).

Based on the above discussion, we present our conceptual framework in **Figure 1**, which is adapted from Nandi et al. (2021). It is evident that agrarian distress, combined with inadequate policy support for agriculture, is depressing the socioeconomic conditions of farm households in India, leading to narrow aspiration windows and a weak capacity to aspire. This in turn, results in low investments, low productivity, low returns, and higher aspiration gaps or failures. Further, farm parents' socioeconomic condition also affects their children's prospects (Bowles et al., 2005). While children in farm households do help their parents in farm activities from childhood, as they witness the risks and disappointments faced by their parents, their aspirations to continue in farming weaken, what we call the intergenerational influence on aspirations. Low parental

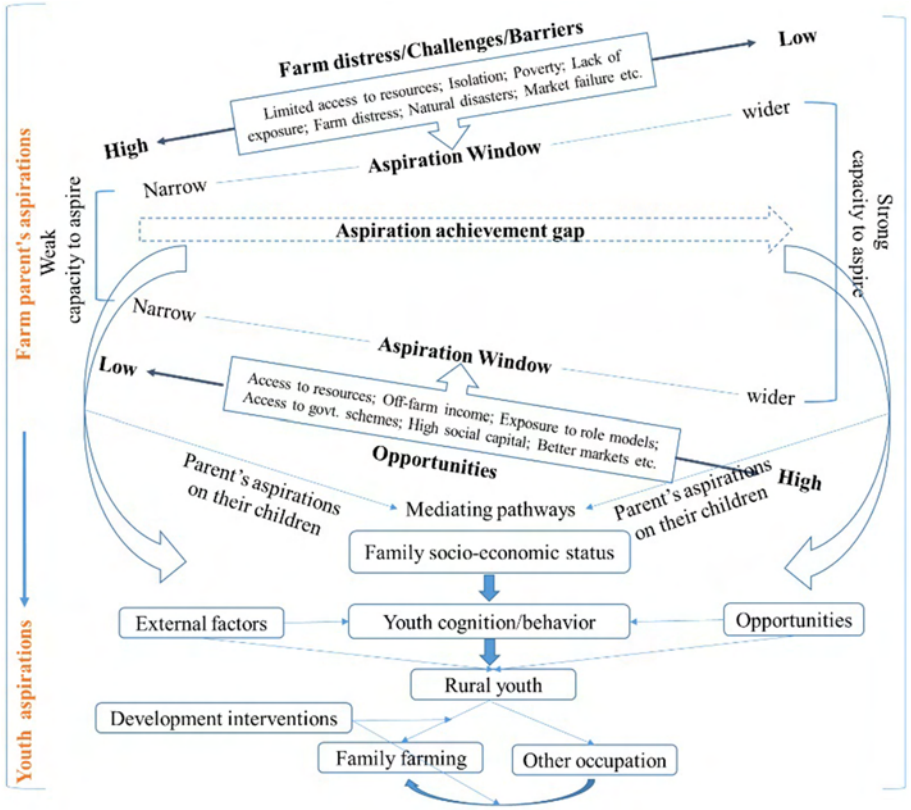

FIGURE 1 | Conceptual framework: factors shaping the intergenerational formation of aspirations in agriculture.

aspirations then push youth out of agriculture in search of jobs in urban areas. Yet, if this doesn't succeed, many do return to farming, though not out of choice, but as a support of last resort (Rietveld et al., 2020). We argue that appropriate policies are needed to raise the aspirations of both farm parents and the rural youth to contribute toward the building of sustainable food systems and indeed livelihoods.

METHODOLOGY

Study Setting

This study was conducted in two diverse research sites representing semi-arid and coastal agro-ecologies in two south Indian states, Telangana and Tamil Nadu, respectively (**Figure 2**). In the semi-arid Telangana site, three villages were selected in the Atmakur Mandal of Warangal Rural district, located about 150 km away from the metropolitan capital city of Hyderabad. More than 93% of the district's population live in rural areas, and agriculture is the main source of livelihood. The characteristics of the study villages are in **Table 1**.

The villages in this district are undergoing rapid transformations in education, infrastructure development, economic transition, and population growth. Given their good road connectivity to the cities of Warangal and Hyderabad, a large number of people migrate during the lean season to

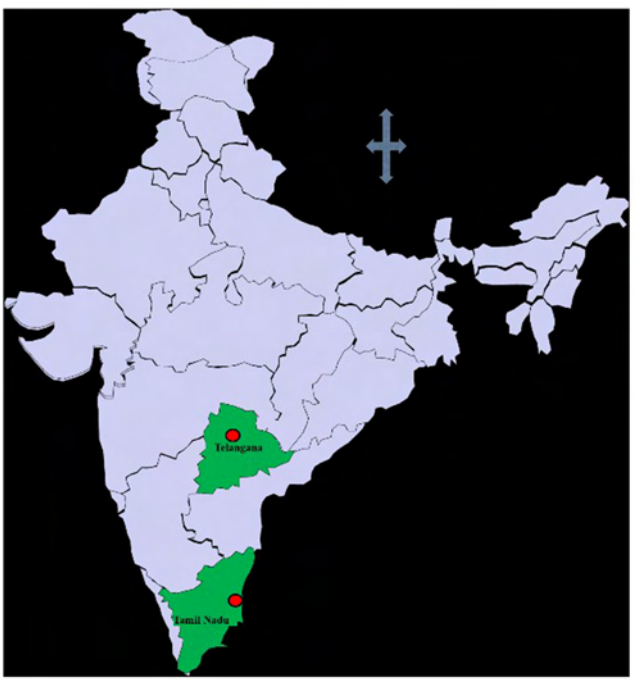

FIGURE 2 | The research sites in Telangana and Tamil Nadu.

TABLE 1 | Characteristics of study villages.

Village	Dependency on farming	Population		Landholding* (hh)				Literacy rate	
		Male	Female	Marginal	Small	Medium	Large	Male	Female
Telangana site									
Neerukulla	96%	2,101	2,124	798	124	63	0	65.97	46.28
Katakhapur and House Buzurg	92%	444	451	214	78	0	0	62.39	41.69
Tamil Nadu site									
Vanagiri panchayat	60% farming; 40% fishing	3,351	3,502	246	18	3	0	89.8	77.6

**Marginal up to 1 ha, Small 1–2 ha, Medium 2–10 ha, and large >10 ha. Source: village revenue office (Census, 2011).*

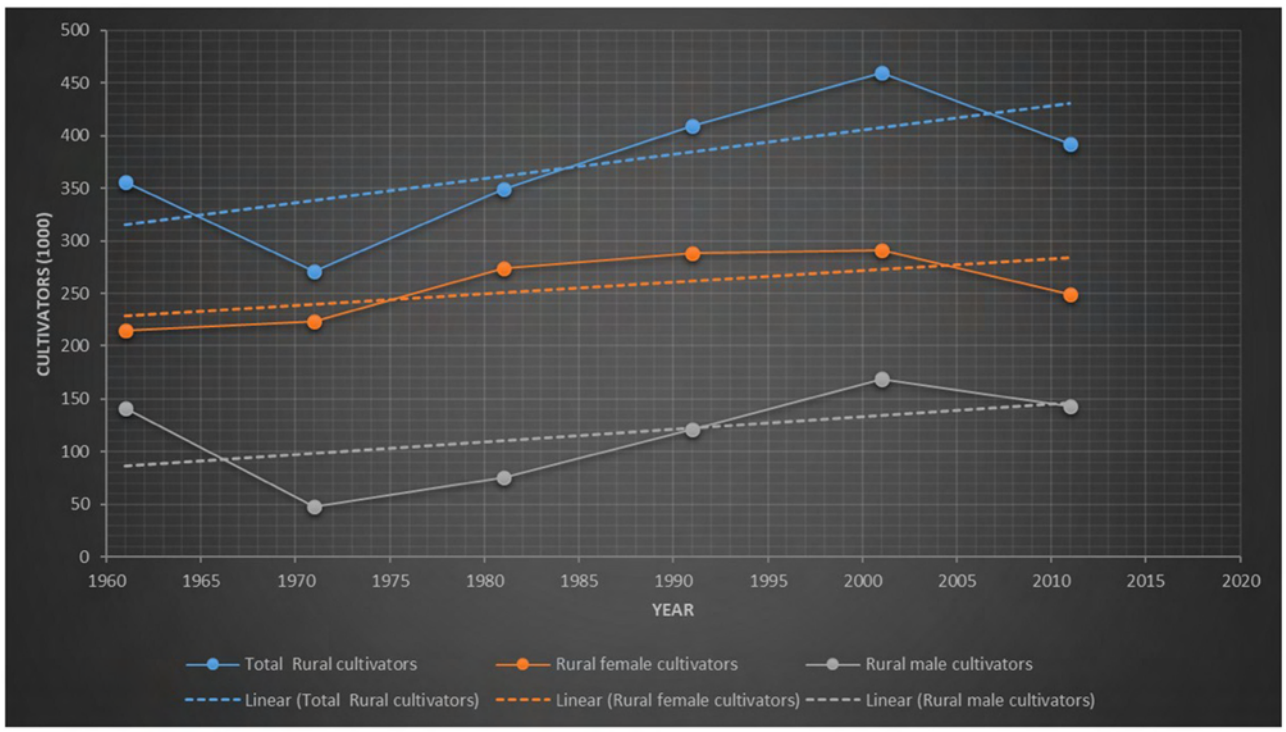

FIGURE 3 | Male and female cultivators (farmers) in Warangal rural district. Source: ICRISAT District-Level Data 2020.

work in construction, hotels, security services, and as delivery boys in e-commerce companies. Paddy, cotton, maize, chili, and turmeric are the major crops grown in the district, yet the share of agricultural income to total household income has been decreasing (Rao et al., 2009; Bera and Dubey, 2020). District-level data also shows a decline in the total number of cultivators from 1966 to 2015 (**Figure 3**).

The coastal Sirkazhi block in Nagapattinam District of Tamil Nadu has the highest rural population ratio (77.4%) in the state and the third-highest ratio of agricultural laborers (51.3%), a majority belonging to the SCs or Dalits (further demographic details of the study population are in **Annex 1.C**). Over a third of the population fall below the official poverty line (District Human Development, 2017). The dominant landholding community belongs to what is called the Most Backward Castes (MBCs) and engages in non-farm activities and migration alongside farming. A majority, however, are marginal and smallholders (**Table 1**). Literacy rates are relatively high, and male-female literacy gaps have been steadily declining (Census, 2011). While agriculture is a major livelihood, next to marine and inland fisheries, and includes the cultivation of a diversity of crops such as paddy, sugarcane, banana, cotton, and vegetables, it has been adversely affected by poor rainfall and consequent non-availability of water from the Mettur reservoir, even though networked with irrigation canals (District Skill Development Plan, 2019). Badly affected by the 2004 tsunami, the region is also prone to cyclones and high tides, leading to seawater intrusion and an increase in soil salinity. As a result, young people are increasingly moving to nearby towns in search of non-farm jobs in construction and other fields.

TABLE 2 | Methods used for data collection.

	Research site I **Semi-Arid Warangal-Telangana**	**Research site II** **Coastal Nagapattinam-Tamil Nadu**
Method 1	Total 19 sex-segregated focus group discussions involving 157 parents (68 males, 89 female) and 18 youths (eight males and 10 females).	Total of 18 FGDs involving 118 farm parents (56 male and 62 female) and 54 youth (30 Male and 24 female).
Method 2	Consultative workshop with 28 lead farmers (21 males and seven females). PRA tools—Social mapping, resource mapping, and transect walk with local resource persons.	PRA tools—social mapping, resource, and vulnerability mapping, transect walk with village people—covered 56 respondents. Besides, participant observation.
Method 3	Eight Key Informant Interviews (KII).	Five Key Informant Interviews to triangulate the data and get an additional perspective.
Method 4	ICRISAT District Level Data—to understand the trend of cultivators. Secondary data from local village offices.	Secondary data from local village offices, and District agricultural census is used.

Study Design

The study adopted a qualitative research approach and used a range of methods for data collection, including Focus Group Discussions (FGDs) involving 275 farm parents, 13 Key Informant Interviews (KII), and selected Participatory Rural Appraisal (PRA) tools such as social mapping, resource, and vulnerability mapping, transect walk with village people. Besides, participant observation, a stakeholder engagement workshops is conducted, in order to understand the aspirations of men and women farmers and their children (see **Table 2**). Field enumerators familiar with the local languages, namely Telugu and Tamil, were recruited to support the authors with data collection. In addition, one local resource person was identified in each village to help select respondents using a stratified purposive random sampling method from a list of households obtained from the revenue office for each village.

Of a total of 347 FGDs respondents, 175 were from Telangana (157 parents and 18 youth), and 172 from Tamil Nadu (118 farm parents and 54 youth). The FGDs were held separately with male and female youth and parents, differentiated by caste, a social identity that by and large coincides with landholding status in the study sites. Each FGD group had 8–10 respondents and was organized in a quiet place. We continued conducting FGDs till we reached a point of data saturation[1]. In this paper, we define "youth" as those in the age group of 15–29 years (National Youth Policy of India, 2014), still unmarried and under the influence of their parents.

[1]Data saturation refers to that point of FGDs where there was no additional information from the respondents compared to previous FGDs or in other words, after certain number of FGDs the information was same as previous FGDs.

Based on insights from the field and our conceptual framing, all the transcripts were coded independently by the lead author and co-leads and were analyzed using the RQDA (R Package for Qualitative Data Analysis) software for Qualitative Data Analysis. RQDA helped systematically cluster responses to open and probing questions into meaningful categories in line with our research questions and to visualize a word cloud (Chandra and Liang, 2016). The Garret Ranking technique, which can provide numerical scores to an ordering of factors, in this case, the challenges/constraints perceived by both parents and youth to fulfilling aspirations in farming, is used to compare and contrast perceptions by both gender and generation across the two sites. By arranging the constraints based on their severity from the perspective of the respondents, this tool helps suggest entry points for addressing these constraints across contexts. Garrett's formula for converting ranks into a percent is:

$$\text{Percent position} = 100 * \frac{(Rij - 0.5)}{N_j}$$

Where,

$Rij =$ Rank given for the i^{th} factor/variable by j^{th} individual

$Nj =$ number of constraints ranked by j^{th} individual

The percent position of each rank is then converted into Garret scores using the Garret conversion table (Garrett and Woodworth, 1969). For each statement on challenges, the scores of individual respondents are added together and then divided by the total number of respondents to calculate the average score for that particular statement. These mean scores are arranged in descending order and accordingly ranked.

In addition, we used statistical software SPSS to analyze the secondary socioeconomic data collected from the local village offices and ICRISAT's District Level Database (ICRISAT-DLD, 2020), the results can be seen through figures three, four and eight. A multi-stakeholder workshop was organized with community representatives, farmers, youth, and researchers at ICRISAT, Hyderabad, in March 2020, to discuss and validate the emerging results and possible recommendations (Nedumaran and Nandi, 2020). We played short videos of FGDs with rural youth and farmers to visualize their aspirations and challenges for continuing in farming as a primary economic activity in order to triangulate the data.

RESULTS

Aspirations in farming: Challenges confronting farm parents and youth: In this section, we present our results in line with the four key themes identified through our analysis. These themes correspond with the research questions set out in section Introduction.

The socio-demographic information relating to our respondents, presented in **Table 3**, reveals that the majority of landholding respondents from Telangana belong to the Backward Castes (BC) and in Tamil Nadu to the MBC. In both sites, the SCs or Dalits, while engaged in farming, tend

TABLE 3 | Socio demography of Telangana and Tamil Nadu respondents.

Variables		Telangana-semi arid (*N* = 175)				Tamil Nadu-Coastal (*N* = 172)			
		Farm parents (*N* = 157)		Youth (*N* = 18)		Farm parents (*N* = 118)		Youth (*N* = 54)	
		M (%)	F (%)	M (%)	F (%)	M (%)	F (%)	M (%)	F (%)
Caste	OC*	21	17	25	–	–	–	–	–
	BC*	51	44	50	70	–	–	–	–
	MBC*	–	–	–	–	63	68	73	50
	SC*	8	15	–	–	38	32	27	50
	ST*	21	24	25	30	–	–	–	–
Education	Illiterate	35	56	38	10	38	44	–	–
	Up to middle school (1–8th std)	24	16	13	10	43	42	7	4
	High and higher sec (9–12 std)	29	22	25	70	18	13	27	38
	Diploma/technical courses (ITI)	–	–	–	–	–	–	56	17
	Under graduation and above	11	5	25	10	2	2	10	42
Land status	Landholder	78	91	75	80	18	37	50	42
	Landless	22	9	25	20	82	63	50	58
Occupation	Farming/part time farming	86	90	75	–	48	36	20	29
	Agricultural laborers	14	10	25	–	52	65	–	–
	Non-farming	–	–	–	–	–	–	37	–
	Unemployed/students				100			43	71

**OC, Open Community; BC, Backward Community; MBC, Most Backward Community; SC, Scheduled Caste; ST, Scheduled Tribe. Source: FGD-Primary data (2020), ICRISAT, and MSSRF.*

to be landless. In Telangana, we also found a few Other Castes (OC), mainly upper castes in the social hierarchy, engaging with agriculture. Women across castes actively participate in agriculture. While most of the farm parents in Telangana cultivated their own lands and very few were agricultural laborers, in Tamil Nadu, a majority were landless and working as laborers. Youth, however, were hardly involved in agriculture: in Telangana, they were unemployed, and in Tamil Nadu, they reported being students.

Agrarian Distress Triggering Aspiration Failures in Agriculture Among Farm Parents

The discussions with farm parents in both sites revealed several determinants of agrarian distress and aspiration failures, Garret scores for which, disaggregated by gender, are presented in **Figure 4**. While lack of income stability (due to environmental risks) and inadequate incomes are common to mothers and fathers across the two sites, control over productive resources, especially land, is a significant determinant for fathers in Tamil Nadu, while social status and acceptability is a key variable for parents in Telangana. The issue of dignity is much less of a problem in Tamil Nadu, perhaps also because large numbers in the population are landless Dalits, who depend on labor for their livelihoods. We discuss each in turn below.

Environmental/Climatic Risks and Income Instability

Both sites are prone to environmental and climatic risks, which lead to income instability, in addition to other production and market risks. In Telangana, frequent seasonal droughts lead to crop losses, including due to increasing pest and disease incidence. Non-remunerative market prices additionally lead to high levels of indebtedness to informal sources charging high-interest rates.

> *The cost of crop production is increasing year after year, but there is no guarantee of yield due to untimely weather events like frequent droughts and floods in recent years* (Male parent, OC, landed, Telangana).

In Tamil Nadu, the lack of income stability is not just driven by natural disasters (heavy winds, cyclones, and drought) but also increasing coastal soil salinity, declining water quality, and scarcity during the peak growth phases of crops. These processes are intensified by the construction of a jetty on the shore, dams in the upper catchment of the Cauvery river, the degradation of local water bodies including ponds, and importantly, the lack of regulation of shrimp farming, a rapidly rising enterprise in the area, leading collectively to losses of 30–50% in crop productivity and threatening local food security (Páez-Osuna, 2001; Rezaul, 2006).

> *Earlier, we had vast land for agriculture, it stretched up to the seashore. Now the farmland is reduced due to the prawn culture ponds. That is the main reason for salinity in the groundwater and has reduced the opportunity for crop cultivation* (Female parent, MBC, Tamil Nadu).

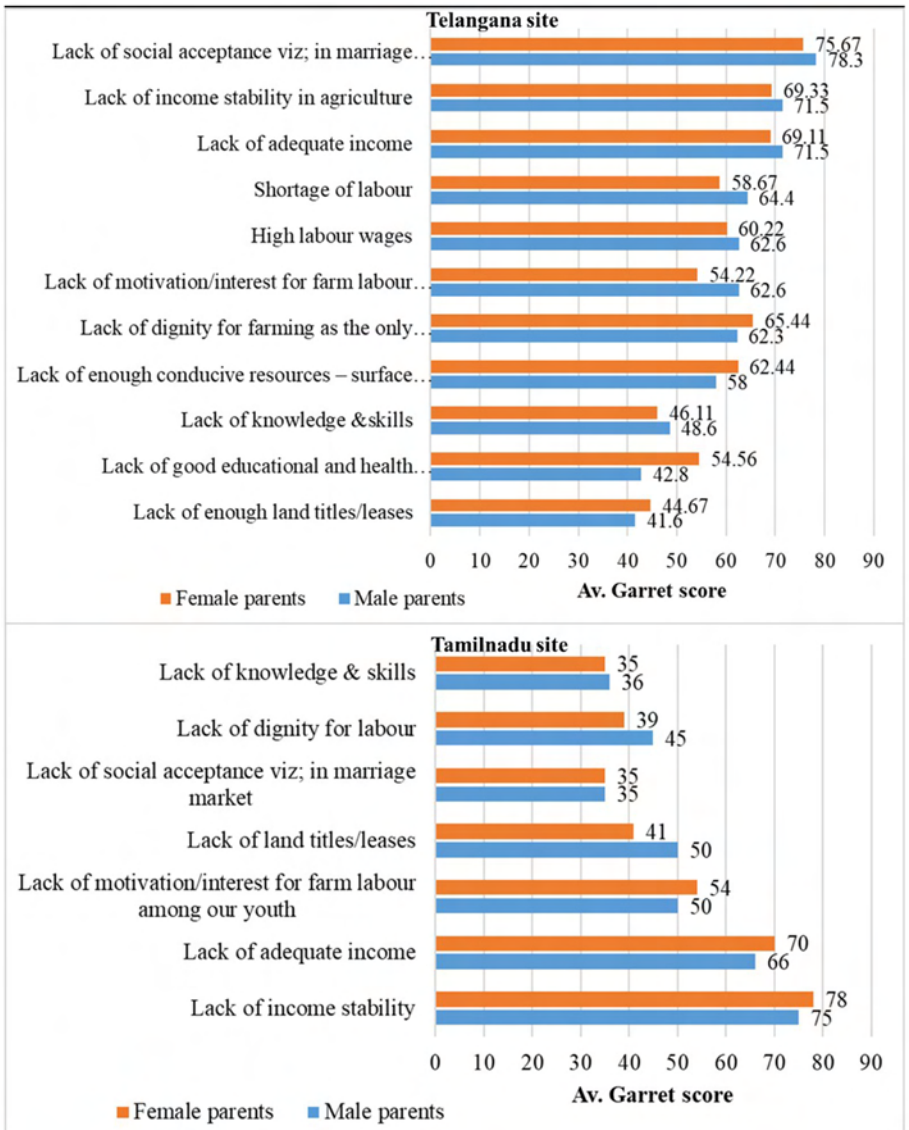

FIGURE 4 | Farm parents' perceptions of challenges to continue farming.

Lack of Adequate Income/Employment

Lack of adequate income is the single most important challenge reported by farm parents across sites (**Figure 4**). Lack of income results from a host of factors, including a reduction in soil fertility and consequent low crop productivity, high costs of production, and low market prices for the produce. In Telangana, migration has increased, both seasonal and daily commuting to nearby cities and towns, leading to labor shortages for some of the non-mechanized agricultural activities and high labor costs during the peak agriculture seasons.

> *[…] income from agriculture is uncertain and inadequate. Whatever we are earning is sufficient for the labor payments, buying fertilizers and pesticides only. If untimely rain coincides with harvesting, then we have to borrow money* (Male parent, BC, landed, Telangana).

In Tamil Nadu, key agricultural operations such as transplanting and harvesting are mechanized, so forcing the landless, small, and marginal farmers out of agriculture for the search of non-farm work. Lack of local employment, land for cultivation, and increased tenancy rent have led to large-scale male out-migration, within and outside the state, but also to the Gulf and Southeast Asian countries.

> *Earlier days transplanting and harvesting works were done manually, but now it is done through machines. Now, there is only a month's work on the farms. We do nothing after nearly one month of work on the farm. Women get more work than us. We get a wage*

up to Rs. 300 per day if we go out for work. Those educated work as diploma engineers or mechanics (Male parent, MBC, Tamil Nadu).

While labor migration is common across sites, we find a difference in Tamil Nadu between the landed and the landless, with the former having more choices, including occupations requiring technical skills, compared to the latter.

Ownership of Land and Access to Resources and Services

Access to land is an important determinant of farming succession and indeed aspirations, and this is deeply gendered. In Tamil Nadu, the few women who own cultivable lands are either widows or those who inherited land from their fathers at the time of marriage. Caste here is perhaps even more important, with only 30% of households, all MBCs, owning land. The number of landholders are gradually reducing, as many have sold their land to private companies due to the growing problem of salinity, as confirmed by the District Agricultural Census (2011). Nevertheless, few continue to cultivate land till the company starts its operations, and some farmers lease in land for cultivation. But tenant farmers cannot access inputs or government benefits without land titles.

For the landless Dalits, owning land in any form, either lease or through the legal title, is a dream. With support from the state and self-help groups, Dalit women are now able to lease-in land for agriculture. A lease amount for 3 years of Rs. 25,000 and Rs. 50,000 per acre for paddy and cotton cultivation, respectively. In some cases, tenancy is based on crop shares of 3:1 between landowners and the women.

The problem for most of these farmers is the lack of access to credit for investment in farming. Inputs suppliers cum traders give them loans, but they are then bound to sell their produce to them at whatever price they quote. Apart from getting loans from informal sources at exorbitant interest rates, they also lack access to new technologies such as high yielding varieties, farm machineries, innovative methods, and processes including Integrated Pest Management, improved irrigation practices and better water management practices, improved seed treatment, *in situ* soil moisture conservation, agro forestry, integrated farming systems and hi-tech horticulture, associated knowledge, and skills in agriculture (**Figure 4**).

Agriculture and livestock need investment (for agricultural inputs and animal feed). We are aware of bank loans, but as most of us own less than an acre, it is not easy for us to approach the banks. We get advances easily from money lenders, but this has a high rate of interest. We made a loss thrice and then never thought about agriculture. Working for wages is easy and no investment is needed (Male parent, MBC, Tamil Nadu).

A similar sentiment was expressed in Telangana.

[…] our politicians (policymakers) always say farmers are the backbone of this country, but nobody hears our voice, we do not have bargaining power. We have no control over agricultural inputs or output prices. […] what production practices to follow are not based on research but on what the input dealers recommend (Male parent, OC, Telangana).

Social Status and Respectability

An important factor shaping aspirations relates to the social respectability and dignity of the occupation pursued. Many agricultural households, particularly in Telangana and the landed in Tamil Nadu, brought up the issue of marriage preferences, with agricultural households seen as less desirable than those with regular jobs in the non-farm sector.

[…] at the time of marriage matchmaking, the girl's family is looking for a non-farm job holder even if his salary is low […] it has become hard to find a girl for young male who are in agriculture, even if they are earning better. There is no respect for farmers and farming in our society (Male parent, BC, landed, Telangana).

Yet, there was a different view amongst the Dalits in Tamil Nadu, traditionally landless and the lowest in the social hierarchy.

It is not agriculture per se, it is the size of land and wealth one possesses. People will have respect, and there is greater social acceptance if a farmer owns a large amount of land (Male parent, SC, Tamil Nadu).

What emerges then is that farm parents' aspirations for their children have shifted from agriculture to non-farm livelihoods, not because they dislike agriculture, but rather the ongoing situation of agrarian distress and disappointment each season due to market failure, untimely rains and frequent droughts. Their aspirations, plans, investments, and actions for their children then focus on education and skills, as discussed next.

Farm Parent's Aspirations for Their Children's Education and Employment

Rather than a career in agriculture, farm parents want their children to have safe and secure lives, with regular incomes to meet their family's needs. Hence, the majority aspire for higher education for their children, irrespective of gender, with the expectation that this will result in better, urban jobs (**Figure 5**). This is evident from the fact that the average educational attainment of their children (9 years) is much higher than that of the parents (5.45 years).

In Telangana, as most children move from primary to secondary education, parents experience no aspiration achievement gap during early education. However, the aspiration achievement gap widens at higher levels due to both lack of affordability and non-availability of higher education opportunities within the vicinity. This results in a wider aspiration achievement gap or unfulfilled higher professional educational aspirations at least for some of the children.

We encourage our children (daughters and sons) to pursue education in the villages. When they complete secondary education, they have to go to cities for higher education […], we cannot afford higher/professional education for all the children in the family (Male parent, BC, landed, Telangana).

FIGURE 5 | Aspirations and dreams of parents toward their children.

In Tamil Nadu, while seeking to educate both sons and daughters, parents' educational aspirations are gendered, with daughters gaining college degrees, while there is a preference for sons opting for technical courses, as the latter are seen to directly open up employment prospects (**Table 3**; **Figure 6**). Amongst the Dalits, parents appear to be giving preference to girls' education. Many young women are working in cities following their college degrees.

In terms of occupational status, while most of the farm parents from both sites are involved in agriculture as cultivators (who own land) or laborers (work in others land), only a few amongst the youth appear to be involved in farming (**Figure 7**), a result perhaps of the lower aspirations to continue in farming.

In Telangana, landed farm parents wish their sons to continue non-farming work, preferably formal sector government jobs, in cities. They do not mind some sons engaging with entrepreneurial agriculture if prevailing challenges are addressed through appropriate policies. For their daughters, as marriage was seen as the key life event, they were not keen for them to pursue agriculture, rather preferred them to learn skills like computer typing, tailoring, or beauty parlor work once they finished schooling (up to 12th standard or higher secondary) in their villages.

> *[…] even if he works as a delivery boy in the cities, he can get monthly assured income, but it is not true in agriculture […] in spite of putting in hard work for months and investment, there is no guarantee of income* (Male parent, BC, landless, Telangana).

A majority of parents from poor and landless households mentioned that they allowed their daughters to engage with agricultural activities such as cotton picking, chili harvesting, and weeding along with them, so they could earn some money to fund their education. This is not the case amongst the middle and upper classes. However, once married, young women do work with their husbands on their family farms, engaging with a range of activities such as milking, sowing, weeding or harvesting. This is reflected in the district-level workforce participation rates wherein 26% men and 20% women were enumerated as cultivators, and 62% women and 30% men as agricultural labor (Census, 2011). Market-related activities involving mobility out of the village and interaction with outsiders are in men's domain.

In Tamil Nadu also, most farm parents do not aspire to have their children stay in agriculture as salinity and other problems have made the farmlands unproductive. Confronting losses year after year, they find non-farm activities like construction or masonry relatively risk-free, providing secure incomes, especially as several infrastructure development projects are currently underway. They hence encourage youth to migrate for work.

> *I do not want my sons to practice agriculture like me, I've seen and done enough in agriculture […], I am eating good food and living in a decent house, not because of agricultural income, but by the money sent by my son, working as a mechanic in the Gulf. If he leaves his job and joins me in agriculture, we both have to starve (Male parent, MBC, Tamil Nadu).*

Agrarian distress due to increased production costs, non-remunerative market prices, climate risks, the drudgery of work, unstable incomes are all factors shifting parental aspirations away from farming. Their aspiration window is also shaped by the better-performing families, those of higher socioeconomic status and engaging with non-agricultural occupations. Yet, many are unable to invest in their children's higher education, ending up with aspiration failures or wider aspiration achievement gaps. The differences across the sites and by gender reflect differences in their respective aspiration windows.

Challenges Confronting Youth Engagement With Farming

The challenges reported by youth, as presented by Garret scores (**Figure 8**), are telling. While overlapping to an extent with the challenges outlined by their parents, they also differ quite significantly across sites and generations. In semi-arid Telangana, the site also being closer to urban areas, youth prefer non-farm livelihoods, while in coastal Tamil Nadu, in spite of the challenges to production, youth appear interested to continue farming innovatively in addition to seasonal non-farm employment outside the villages.

While lack of adequate income was mentioned by youth across sites, in Telangana, young men, in particular, emphasize the lack of social acceptance and support resources as important constraints rather than lack of land, dignity, motivation, or knowledge. Their view of family farming as the last option, if all other possibilities failed, seems to be strongly shaped by the experiences and aspirations of their parents. Young women, on the other hand, rank lack of motivation as the most significant factor for them.

> *It is difficult to work as our parents on farms. Even putting a hundred percent effort, sometimes our parents do not get anything from the field. Such frequent situations make us think of doing any work other than agriculture* (Male youth, BC, Telangana).

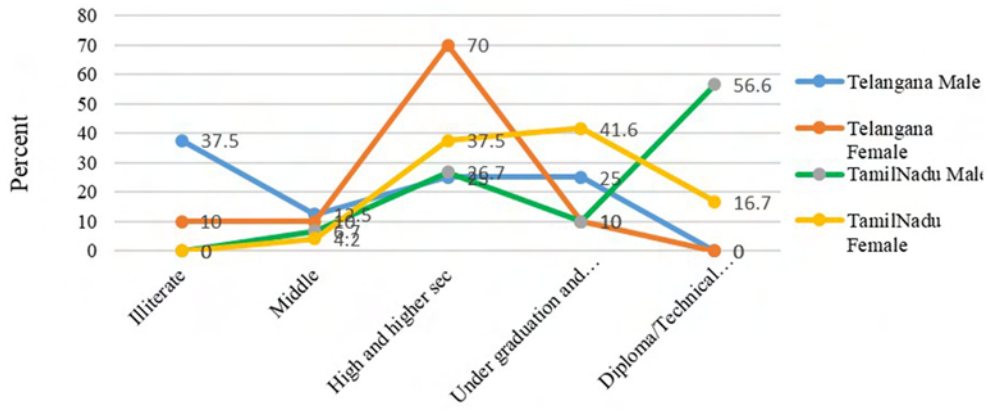

FIGURE 6 | Education of youth by gender in Telangana and Tamil Nadu sites.

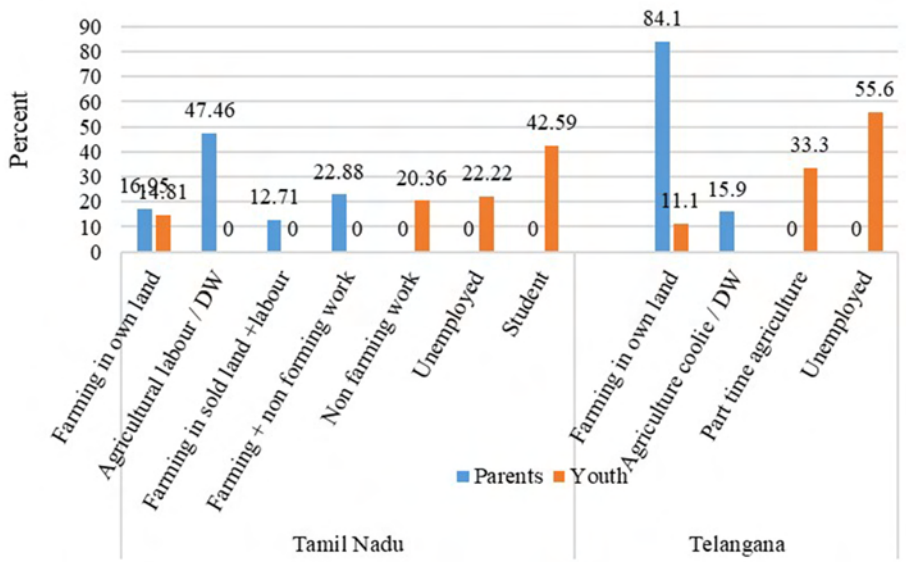

FIGURE 7 | Occupational status of farm parents and youth.

In Tamil Nadu, lack of land is an important issue, as while the Dalits are landless, many of the MBC parents also had sold their land to private companies. While social acceptance is an issue here as well, it is not as significant as in Telangana, especially for young women and young people. Both men and women appear much more motivated to engage in farming. Yet, they realize it is not enough to attain the standard of life they expect. They want to continue farming alongside a good job with a stable income, as they are witnessing the degradation of their land and water resources. Amongst the Dalits, all the young men are migrant workers yet return home during the paddy season to support their family cultivation.

> *After Pongal (harvest festival), we will leave for Hyderabad for work. During the rainy season, we take a gap from our regular job and return to our village to concentrate on agriculture. How much we earn from it does not matter* (Male youth, SC, Tamil Nadu).

As noted earlier, the Dalits have traditionally been landless labor, and to them, cultivation and owning land provide status. While they do occasionally work as farm laborers, they have leased in land for cultivation in order to develop their identities as farmers. For their stable incomes, they migrate during the non-agricultural season (Brookfield, 2008). Rather than abandoning their farmlands, they are trying to acquire land and make agriculture profitable.

> *We feel the farming method followed by our parents is pretty outdated; we would like to do agriculture innovatively. The integrated farming system is one such method, in it, we can use*

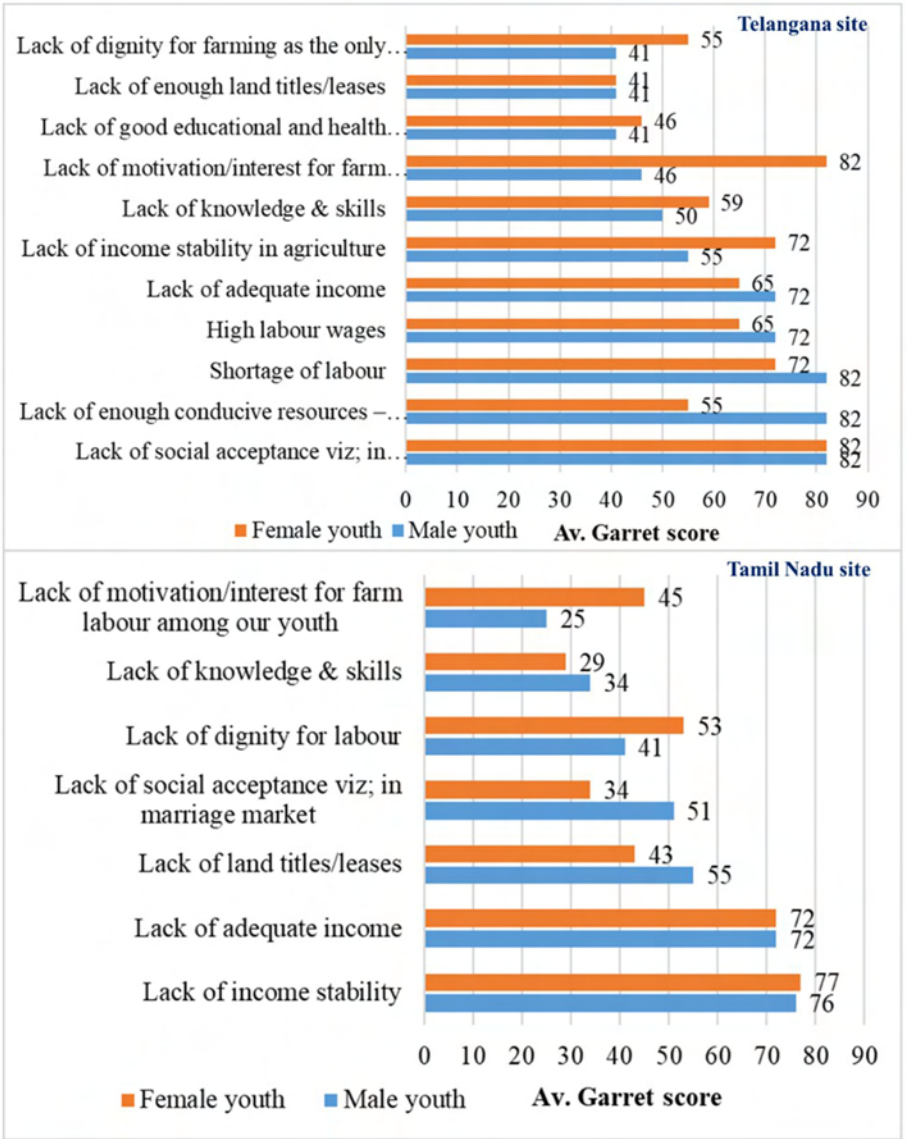

FIGURE 8 | Challenges confronting rural youth in the pursuit of family farming in Telangana and Tamil Nadu.

the waste of one enterprise as a feed for another, it minimizes resource usage and helps in water conservation (Male youth, MBC, Tamil Nadu).

Some youth here are also diversifying into related activities such as rearing exotic birds and animals. Selling such exotic birds through social media has brought good profits, and youth are aspiring such activities. Farm parents, are not encouraging such activities, considering them low prestige and socially unacceptable, given their links to the lower castes.

I rear exotic and fancy breeds of roosters such as fighter cock, emerald pigeon, dove, etc. I sell them commercially and get a good profit (Male youth, MBC, Tamil Nadu).

In the case of young women, while having farming aspirations, gender discrimination is a major barrier in their path. Women are paid lower than men for farm work, they lack equal entitlements and resource access as male farmers, and social norms restrict their involvement in agriculture before marriage (Rao, 2017b). Yet, assisting their parents in preparing traditional manure or cultivating backyard vegetables, they do learn the skills and expressed confidence in managing agricultural operations independently.

In the summer, we used to spread dung and neem seeds on the road, so they will be powdered by passing vehicles. This is then stored for future use and to avoid fungus. After the completion of my postgraduate studies, I have told my mother that I will find a job but invest the money I earn in agriculture. I am very confident

about doing agriculture, but it needs money (Female youth, MBC, Tamil Nadu).

While some youth do aspire for agricultural futures, they note the importance of an enabling environment, not just in terms of social acceptance, but equally government policies that strengthen skill-building programs or make start-ups easier to establish and manage.

Potential Solutions to Strengthen Agricultural Aspirations

Alongside challenges, both farm parents and youth spoke of potential solutions. Almost all the respondents mentioned the need for pro-farmer policies, whether focusing on market prices in Telangana or mitigating environmental risks in Tamil Nadu. Given a context of agrarian distress, government policies they noted must ensure competitive markets for their produce by ensuring Minimum Support Prices (MSP) for all agricultural produce, access to bank loans at reduced interest rates without stringent paperwork, and access to good quality inputs such as seeds and fertilizers. They also noted the need for subsidies for farm machinery and training and capacity building of rural youth in entrepreneurial agriculture, including allied sectors. Some of the youth said that if government policies were supportive, their parents might not discourage them from continuing in farming.

The government should ensure a minimum income for every farmer in order to encourage youth toward agriculture [. . .] If the government fails to address the challenges farmers are facing today [. . .], probably, no one will show interest in agriculture (Female parent, BC, landed, Telangana).

In Tamil Nadu, water is a major constraint for irrigation due to saline ingress. Existing water channels are not maintained, farm ponds are not de-silted, and rainwater harvesting is not systematically practiced (Didar-Ul Islam and Bhuiyan, 2016; Sabareshwari and Ramya, 2017). Alongside these measures to support the cultivation of paddy and cotton, the need to regulate the small-scale shrimp farming industry to prevent the entry of saline water into agricultural land as well as groundwater pollution was emphasized. If shrimp farms follow safety measures and standards, water quality is likely to improve, solving many of the farming-related issues in the area.

The main reason for the salinity of the water is prawn culture ponds. Earlier our groundwater was very good; we used to get water within 25 feet (Male parent, MBC, Tamil Nadu).

Another important solution suggested for dealing with salinity is rainwater harvesting. A local farmer is practicing rainwater harvesting; he has dug several rectangular shallow-water reserves, built channels connecting them, and used the water successfully for cultivation.

One person in our village digs pits in his land for storing water. He is cultivating sorghum, snake gourd, groundnut, radish, brinjal, okra, and coconut. He uses the water in the storage tank whenever required. He does not buy vegetables. Whatever he needs, he cultivates in his field (Male parent, MBC, Tamil Nadu).

Several other constructive suggestions such as construction of check dams, removal of *Prosopis* weed which is causing groundwater depletion, construction of farm ponds, and soak pit were made for solving the issue of water and soil salinity in the region.

DISCUSSION

Through an exploration of the aspirations of farm parents for their children's future away from agriculture, the study throws up at least five critical insights. First, overall agrarian distress that affects farm households' socioeconomic status ultimately results in farmers' aspiration failure or weak capacity to aspire for farming futures. In Telangana, factors such as the failure to realize remunerative prices for farm outputs, natural disasters, inadequate and unstable income from agriculture, high costs of production, and lack of control over inputs are some of the primary reasons for agrarian distress that are negatively influencing farmers. While in Tamil Nadu, in addition to the above factors, water scarcity and soil salinity are driving farmers out of agriculture. Such distress reduces the socioeconomic status of households and their capacity to invest in their farms, contributing to a widening aspiration achievement gap, and loss of interest in agriculture as a career (Sood, 2018). Low aspirations are then reciprocally linked to poverty and economic vulnerability and contribute to reproducing poverty traps (Ray, 2006; Kosec and Mo, 2017). Whether poverty is the cause (Mausch et al., 2018) or consequence of low aspirations (Dalton et al., 2016), we find a "triple burden of agrarian distress" in terms of the farm household's socioeconomic condition, aspirations failure, and the intergenerational transmission of aspiration failure.

Second, farm parents show high aspirations for their children's higher education to facilitate better jobs in cities. During the initial years of children's education, parents achieve their aspirations. However, as children advance to higher education, the educational aspiration achievement gap widens for parents due to higher costs of professional education and its non-availability in the vicinity. Parents educational aspirations for their children vary across sites and genders. In Telangana, parents reported higher aspirations for the education of male children, mainly due to prevalent socio-cultural norms, in line with Beaman et al. (2012), who report lower parental aspirations for the education of girls than boys. In contrast, in Tamil Nadu, parents invest in technical courses for their sons and college degrees for their daughters, the latter expected to attract more educated grooms with high chances of white-collar employment. This finding suggests that parents' aspirations for their children are differentiated and shaped by contextual aspiration windows rather than reflecting a static and homogenous interpretation of gender norms (Rietveld et al., 2020).

Third, parents also exhibit high aspirations toward their children's occupational mobility, which is again shaped by contextual realities. More than 90% of the respondents preferred regular government jobs with assured income for their children rather than engagement with family farms (**Figure 4**), due mainly to the risks involved in farming and the social respectability of being a farmer. In Tamil Nadu, in the absence of regular jobs, parents encouraged their sons to work as masons or in construction, as this still assured them of incomes at the end of the day. Youth appear to have similar aspirations as their parents in terms of seeking out reliable sources of income and livelihoods (Bowles et al., 2005), and this combined effect of parent and youth aspirations leads to youth out-migration in search of jobs (**Figure 7**). Despite the high aspirations of parents toward their children's non-farm occupation in cities, lack of jobs and growing unemployment rates have led to wide aspiration achievement gaps. A few parents admitted that they didn't mind if some of their sons continued entrepreneurial agriculture, provided prevailing challenges in agriculture are addressed through appropriate policies, as in any case, they could not afford to educate all their children.

Fourth, given the lack of appropriate non-farm jobs, more youth relative to their parents were willing to innovate new farming techniques. Similar to Tekale et al. (2015) insight that enhancing the aspirations of youth in agro-based industries such as poultry, goatery, and dairy farming will improve their incomes and consequently social acceptance, we found many young men in our Tamil Nadu site interested in livestock rearing but not getting enough support to promote this as a livelihood. There is also a discrepancy between parental desires and daughters' aspirations about farming careers (Ball and Wiley, 2005), due to prevalent gender discriminatory policies and practices. Many young women, post-marriage, usually have no choice but to engage in family farms. Hence aspirations to innovate and modernize can give them also a sense of agency and fulfillment. Dalit youth aspire to independent agriculture to gain a sense of status and self-reliance not easily achievable in the worksites, where they will always remain labor working for an employer, potentially abused or exploited. Given the influence of parents on shaping the aspirations of youth, a more supportive and socially differentiated inter-generational conversation needs to be encouraged.

Finally, in terms of solutions, there was general agreement that appropriate policies, which recognize the contextual and seasonal nature of agriculture, are the starting point for motivating more youth to stay in and develop agriculture. A host of policy suggestions emerged, including ensuring a fair price for all agri-commodities, subsidized good quality inputs, small farm equipment, promotion of enterprise in agriculture and allied activities, and training and capacity building in modern agricultural technologies and services. To encourage landless rural youth into agriculture, existing tenancy agreements need to be reviewed and formalized. Youth suggested a minimum monthly financial assistance during the initial years of their transition from education to agriculture to help them establish themselves as modern farmers.

CONCLUDING REMARKS

Aspiration studies focusing on rural youth and farmers, especially disadvantaged small and marginal farmers, are meager compared to aspiration studies in the contexts of education, occupation, and migration. Nevertheless, agriculture being the largest employment sector in many developing countries, including India, such studies provide good insights on the need for context-appropriate strategies for ensuring sustainable farming futures. Parents play a vital role in the intergenerational transmission of aspirations, yet these parental aspirations are often not realized and challenged by youth in some instances. Understanding the relational dimensions of aspirations, along with individual characteristics, is important but often ignored.

In this case of agrarian distress, material contexts play an important part in shaping farm parents' aspirations for their children; their perception of a good job is linked to their aspiration window. Viewed as non-profitable and high-risk, aspirations in agricultural occupations are weak. Raising the aspirations of farmers and youth would then be a valuable proposition, an essential step toward helping them achieve their potential and, at the same time, contribute to strengthening sustainable food production systems. However, we need to acknowledge the diversity even within the farming community by agro-ecological context, caste and gender—as we have done in this paper, and develop differentiated strategies to help overcome the particular challenges, whether material or social, they confront.

Given the importance of social acceptability and dignity, it is key that agricultural livelihoods are seen as decent and dignified (Ghanem, 2015), apart from being profitable. To develop innovative methods and practices, farming as an enterprise requires qualified youth to deal with risks and fill the vacuum created by an aging farming population (Leonard et al., 2020). Nevertheless, for youth from socioeconomically disadvantaged households, it is important that external institutions, including schools and training facilities, contribute to building their skills and aspirations. The current curriculum in middle schools, for instance, never prioritizes agriculture as an occupation; that is the time when aspiration windows are developed and aspirations formed. Additionally, it is important to address the multiple, material barriers they confront, such as access to credit or water quality, that can hinder their aspiration achievement in farming. Recognizing and rewarding local innovation can also create role models for youth. However, available programs and policies are neither creative nor adequate to raise the aspirations of rural youth in agriculture and motivate them into making agriculture a profitable and sustainable venture.

STUDY LIMITATIONS

This study has limitations. The data collected from specific research sites in two states of South India and it was not representative sample of the region. Therefore, results from this study cannot be generalized. There is no valid method to measure aspirations of an individual, thus need for development of methods and matrix to measure aspirations precisely. Also,

further research is needed to understand the intergenerational transmission of aspirations.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical approval was obtained from the Institute Review Board (IRB) for ethics at ICRISAT (Reference number IEC-ICRISAT/20190818/01) and MSSRF (Reference number REC/01/2019). All names of respondents have been changed in the paper in line with our ethical protocols.

AUTHOR CONTRIBUTIONS

RN: conceptualization, methodology, validation, transcription, coding, formal analysis, investigation, data curation, and writing—original draft. CP: conceptualization, contribution to research site specific information in data curation, transcription, coding, data analysis, and writing results. SN: conceptualization, methodology, writing—review and editing, supervision, project administration, and funding acquisition. NR: conceptualization, validation, and writing—review and editing. RR: conceptualization, writing—review and editing, and supervision. All authors contributed to the article and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fsufs.2021.804581/full#supplementary-material

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