

The Impact of the Feminization of Agriculture on Santal Women in Northern Bangladesh: An Application of Qualitative Study

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ABSTRACT

This study explores the growing feminization of agriculture and its impact on Santal women in northern Bangladesh. Traditionally involved in unpaid family labor, women are increasingly participating in formal agricultural work, driven by factors such as male migration, economic necessity, climate change, and social transformations. Despite this shift, limited research has examined Indigenous women's specific experiences in agriculture. To address this gap, the study conducted Focus Group Discussions (FGDs) and In-depth Interviews (IDIs) with Santal women in rural communities. Findings reveal that traditional gender norms still dominate decision-making, with men often determining women's roles in farming. However, male outmigration for off-farm work has resulted in women assuming greater responsibility for agricultural tasks. Many Santal women also engage in seasonal wage labor to support their families, though they frequently face wage discrimination. The study highlights the crucial role of Santal women in sustaining household economies and driving agricultural productivity, despite structural inequalities. Guided by intersectional feminist theory, the study critically examines how gender, ethnicity, and class intersect to shape the lived experiences and labor roles of Santal women in rural agricultural systems. Their expanding participation marks a significant shift in rural labor dynamics and underscores the need to recognize Indigenous women's contributions in both policy and practice.

Keywords: Gender norms; off-farm activities; poverty reduction; female farming; women's empowerment; agriculture feminization.

INTRODUCTION

The "feminization of agriculture" is reshaping traditional gendered labor divisions worldwide, driven by factors such as pandemics, technological progress, conflicts, climate change, male migration, and the globalization of food systems (Slavchevska et al., 2016; Cornhiel, 2006). This shift has led to women taking on agricultural tasks once dominated by men, significantly changing their role and contributions in the sector. Over the past two decades, male participation in agricultural labor has slightly declined, from 84% in 1999/00 to just above 80% in 2016/17. In contrast, female participation has significantly increased, from 23.9% to 36.3% during the same period (Raihan & Bidisha, 2018). These shifts in agricultural labor are part of broader societal changes, including migration, technological developments, and changing economic needs. The "feminization of agriculture" is a global phenomenon, particularly noticeable in regions where men have migrated away from farming, leaving women to assume more prominent agricultural roles (Khan et al., 2017). While this change has empowered women by boosting their economic independence and earning potential, profoundly ingrained gender norms continue to shape labor divisions within agriculture, as evidenced in the Santal community of Northern Bangladesh.

Santal women in agriculture

Agriculture in Bangladesh predominantly revolves around land-based activities, with farming being the central economic activity for many communities. However, the Santal community, which comprises 76.4% of the target groups, faces significant challenges related to their limited ownership of cultivable land. This lack of access to land severely restricts their ability to establish sustainable livelihoods and enhance economic stability (Tudu & Lakra, 2019). Traditionally, women in the Santal community have played an essential role in agricultural production alongside men, contributing to family subsistence and community agricultural activities. The Santal families are typically nuclear, with the father being the head of the household, overseeing family affairs and assigning tasks to the members. When the father is absent, the eldest son assumes this leadership role. However, if the eldest son is too young or immature, managing family activities often falls to the mother (Islam, 2010; Saha, 2016; Raj, 2018). This family structure means that women take on various critical roles, especially in supporting the household's agricultural production. Women's contributions include working in family-owned land and engaging in activities such as leasing land for cultivation, which allows them to earn an income by growing crops on rented fields. Additionally, many Santal women work as day laborers on the lands of wealthier Bengali farmers, providing essential support for their families' daily livelihoods (Ghosh et al., 2019). However, women in the Santal community face significant challenges in terms of gender discrimination in the workplace. Despite contributing significantly to agricultural labor alongside their male counterparts, Santal women are typically paid lower wages. For instance, while male laborers earn Tk.120 (BDT) per day, women in similar roles receive only Tk.90 (BDT) per day, highlighting the prevalent gender wage disparity (Qais, 2013; Akan et al., 2015; Islam, 2010; Saha, 2016; Sarker, 2021). This gender-based wage inequality reflects broader societal norms that devalue women's labor, even though they often work longer hours or manage more difficult tasks. In addition to wage discrimination, traditional taboos and customs continue to shape gender roles within the community. These societal norms often dictate the tasks men and women can perform, with women being restricted from engaging in certain activities. However, technological advances in agricultural practices have begun to challenge these taboos. For example, the introduction of mechanized equipment like tractors, which women can now operate, represents a break from the traditional belief that men should operate such machinery. The shift from using a plow to operating a tractor symbolizes a form of liberation for Santal women, as it allows them to engage in agricultural tasks that were once restricted to men, challenging longstanding gender-based barriers (Kumari, 2020).

In scholarly and gray literature, it is evident that the 'feminization of agriculture' denotes the rising involvement of women in farming tasks and the reconfiguration of gender roles within the agricultural industry. In Bangladesh's Santal community, women increasingly participate in family agriculture, often substituting for male labor to reduce overall labor costs. Additionally, they engage in wage labor alongside men, albeit without equal treatment. Despite their financial contributions to daily life, decisions about their activities are typically controlled by male family members, reflecting a patriarchal trend within the Santal community.

The 'feminization of agriculture' concept is evident in the Santal community as women play crucial roles in ensuring family financial stability through agricultural activities. However, this phenomenon remains a primarily neglected or under-researched topic among academics and researchers. Existing studies on Santal women are sparse and focus on their participation in agricultural tasks, family decision-making dynamics, criteria for women's wage labor, and working hours.

In this context, the present study aims to illuminate how the 'feminization of agriculture' manifests within the Santal community in northern Bangladesh. To justify these arguments the study uses intersectional feminist theory to analyze how overlapping identities of gender, ethnicity, and class shape Santal women's roles and challenges in agriculture. Our study contributes to existing literature by thoroughly examining the influence of gender norms on Santal women's participation in agricultural activities. We explore the gendered division of labor in agriculture, its impact on women's roles, and the pressures stemming from men's involvement in non-agricultural activities that compel women to engage more in farming. We also analyze the social factors underpinning women's participation as seasonal agricultural laborers. The findings from our research are

anticipated to provide valuable insights for policy dialogues and inform recommendations for designing effective poverty reduction programs for Bangladesh.

RESEARCH METHODS AND TECHNIQUES

Research Design

The present research utilized qualitative methodologies to examine the Santal community residing in Akkelpur Upazila, located in Joypurhat district. The study focused on Santal women engaged in various agricultural activities, including family-run and wage labor-based farming. To capture the diverse experiences within the community, two distinct categories of Santal women were identified for data collection: those whose families owned only cultivable land and those whose families owned their land and leased additional land for cultivation.

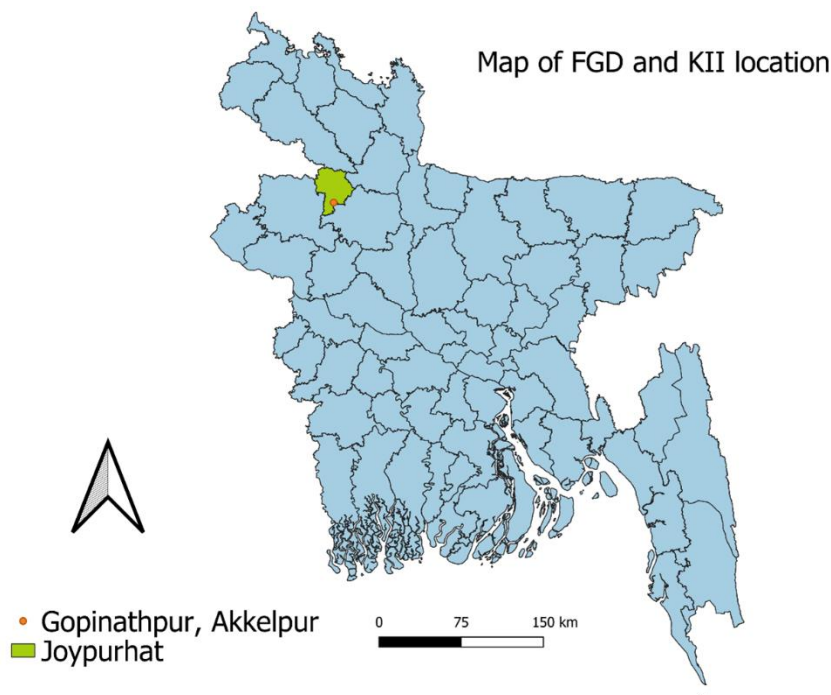


Figure 1: Map of study location

Table 1 showed detailed qualitative data collection technique. A purposive sampling technique was employed to select 36 Santal women across these two categories, ensuring that the sample was representative of different agricultural circumstances within the community. The research incorporated anthropological methodologies such as in-depth interviews, focus group discussions (FGDs), and participant observation. Focus groups, which bring together individuals chosen based on their shared experiences related to the research topic, were used to stimulate discussion and gather insights (Walliman, 2021). In-depth interviews were conducted with 10 women from each category, allowing for detailed personal narratives, while two FGD, involving 13 participants from each, facilitated group discussions on the issues being studied.

Prior to the commencement of data collection, all participants were fully informed about the purpose, scope, and procedures of the study. Detailed explanations were provided regarding the nature of their participation, the voluntary nature of involvement, and their right to withdraw at any time without any consequences. Verbal consent was obtained from each participant to ensure ethical compliance and respect for autonomy. Confidentiality and anonymity were strictly maintained throughout the study; all personal identifiers were removed from the transcripts, and data were securely stored. Special attention was given to cultural sensitivities and the comfort of participants, particularly as all respondents were Santal women discussing potentially sensitive issues related to the feminization of agriculture.

Table 1: Summary of Qualitative Data Collection Technique

Method	No. of Sessions/ Interviews	Participants per Session	Total Participants	Gender	Sampling Method	Data Collection Tools	Duration
Focus Group Discussion (FGD)	2	13	26	All Female	Purposive sampling	FGD guide	60-90 minutes each
In-depth Interview (IDI)	10	1	10	All Female	Purposive sampling	Semi-structured interview guide	45-60 minutes each

Data collection was guided by a semi-structured interview questionnaire, which helped to elicit comprehensive responses from participants. These interviews aimed to explore the feminization of agriculture within the Santal community by addressing various topics. Key areas of focus included the prevailing gender norms that influence agricultural labor, the gender-based division of labor, men's involvement in non-agricultural activities, and the social and economic factors that shape Santal women's roles as seasonal laborers. Through these discussions, the study sought to understand better the intersection of gender and agriculture within the Santal community, shedding light on the complex dynamics of women's participation in agricultural work and how societal expectations and economic pressures impact their livelihoods.

Data Analysis Techniques

Interviews and focus group discussions (FGDs) were audio-recorded to gather field data, supported by comprehensive field notes. After returning from the field, all recordings and notes were transcribed verbatim. These transcriptions were then systematically coded in alignment with the research objectives. Following this, a thematic analysis approach was employed for manual data examination. Guest et al. (2012) outlined that thematic analysis is a standard qualitative research method that involves identifying, analyzing, and documenting recurring patterns or themes within the data.

The analysis followed Braun and Clarke's (2006) six-phase framework for thematic analysis, a widely recognized qualitative method that involves identifying, analyzing, and documenting recurring patterns or themes within the data. This approach emphasizes iterative and recursive engagement with the data rather than a strictly linear process. The six phases included: (1) familiarizing oneself with the dataset through repeated reading and note-taking; (2) generating systematic codes to capture meaningful data segments; (3) identifying and compiling initial themes from the coded data; (4) reviewing and refining these themes in relation to both the coded extracts and the overall dataset; (5) defining and naming themes to ensure clarity and coherence; and (6) producing a detailed analytical narrative that integrates thematic findings with supporting data extracts.

Applying this method enabled we uncover key themes illustrating the impact of the feminization of agriculture on Santal women in Northern Bangladesh, particularly in relation to their socio-economic vulnerabilities and gender-based inequalities.

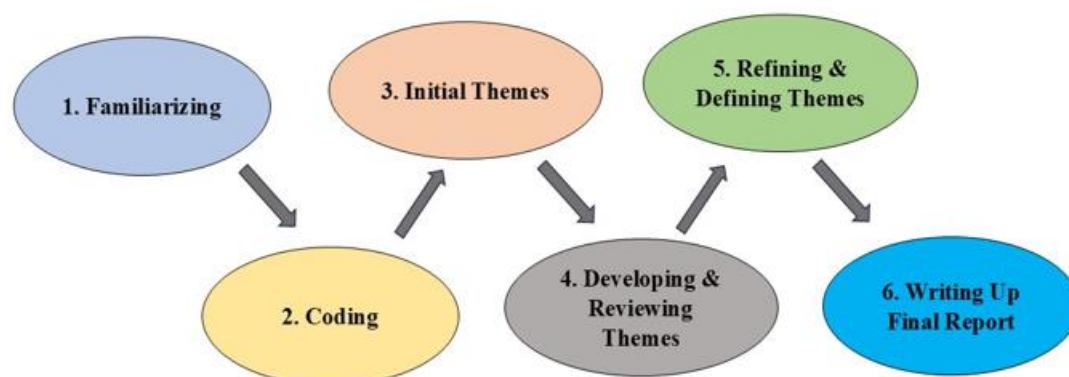


Figure 2: The 6 phases of Thematic Analysis according to Braun & Clarke (2022)

Theoretical Framework

To analyze the gendered dynamics of agricultural labor within the Santal community, this study draws upon intersectional feminism, a theoretical approach developed by Kimberle Crenshaw (1989). Intersectionality highlights how multiple axes of identity, including gender, ethnicity, class, and education interact to shape experiences of marginalization or privilege. In the context of rural Bangladesh, and specifically within the Santal indigenous community, women do not experience gender discrimination in isolation. Rather, their social positioning as ethnic minorities, members of low-income peasant households, and often as less-educated rural women, collectively influence the types of labor they perform, the recognition they receive, and the socio-economic challenges they face.

Applying an intersectional lens enables this study to uncover the compounded nature of their oppression, where patriarchal norms, poverty, and ethnic marginalization converge to dictate both their domestic and agricultural responsibilities. This framework also allows for a deeper understanding of why Santal women from poorer households are more involved in physically demanding labor compared to those from relatively wealthier or Bengali households, and how gender roles intersect with class and ethnicity in shaping everyday realities.

RESULT AND DISCUSSION

Socio-economic profile of the participants in the study

This study examined two groups of Santal women, those from families that own only cultivable land and those from families that own their own land and lease additional land for cultivation. Thirty-six respondents, aged between 22 and 55, were selected. The educational levels of the participants varied, with the majority being illiterate, although a few had attended school up to the fifth or tenth grade.

Among the respondents, five families owned 8 to 15 decimals of land, while the others owned 5 to 10 decimals and leased an additional 33 to 66 decimals for farming. The study area had two distinct types of land: highland areas where crops such as potatoes, gourds, pumpkins, jute, cucumbers, brinjal, beans, and chili were grown, and middle to lowland areas used for rice-potato-rice, rice-mustard-rice, and rice-wheat-rice crop rotations.

Santal women were active in family farming and paid agricultural labor. When their husbands worked off-farm activities such as construction, driving, or road maintenance, the women contributed to family agriculture to help reduce labor costs. They were primarily recognized as seasonal laborers, working mainly during the Boro and Aman seasons. The Boro season, which involves planting from January to February (In Bengali name-Magh to Falgun) and harvesting from April to June (Boishakh to Joistho), and the Aman season, which involves planting from July to August (Ashar to Srabon) and harvesting from November to December (Agrahon to Poish), marked their peak working periods.

In addition to these key planting seasons, Santal women also participated in day labor during December, helping to plant crops such as potatoes, mustard, and wheat. All the families surveyed were nuclear, with married sons typically living separately from their parents.

‘Feminization of agriculture’ in the santal community

The feminization of agriculture is widely recognized as a process in which either men leave the agricultural sector, or women increasingly take on various agricultural roles to maintain their families' financial security. This shift represents their expanding involvement in agricultural activities in the Santal community, where many women come from lower peasant families. The primary goal is to reduce additional labor costs for the family, as men focus on non-agricultural work to ensure economic stability. This study sheds light on how the feminization of agriculture plays out in the Santal community by examining the gender norms that shape this process. It explores the differing roles men and women play in the division of agricultural labor within the

family, how men engage in off-farm work to support the family financially, and the social factors that drive women's participation in seasonal agricultural labor.

Existing gender norms and reflection on women's participation in agriculture

The "feminization of agriculture" has become a significant global trend, driven by the departure of men from the agricultural sector or the increased involvement of women in various farm roles, as Slavchevska et al. (2016) noted. This shift has empowered women, enhancing their earning potential and autonomy, thus narrowing the gender gap and enabling them to live more self-determined lives (Khan et al., 2017). However, two key drivers of this change are male migration away from subsistence farming and the globalization of agricultural and food systems. Several studies, including those by Kawarazuka et al. (2022) and Cornhiel (2006), have observed that gendered labor patterns in agriculture and food systems are shifting, with women increasingly taking on roles once dominated by men, especially in smallholder farming. As men step away from farming, women assume responsibilities traditionally reserved for men, such as tilling the soil and dedicating more time and effort to cash crop production.

However, in tribal societies, a woman's status is not solely defined by her economic contributions. Instead, social norms and the broader cultural framework influence her position within the community. Despite their significant labor and financial contributions, tribal women may not always see a corresponding rise in social status (Thakur & Thakur, 1994/2009). The empowerment and status of women are largely determined by societal expectations and gender relations, which often position them beneath men in various aspects of life (Kakati, 2014). These shifts indicate how women's roles in agriculture expand when men transition to other income-generating activities, leaving women to take on more diverse agricultural tasks, even navigating societal taboos. However, the impact of existing gender norms within Santal society on women's participation in agricultural labor has not been thoroughly explored in these studies.

Our study revealed a significant pattern. Women from the Santal community in northern Bangladesh are actively involved in agricultural work, often taking on tasks typically handled by men who are engaged in other income-generating activities to support the family's financial needs. The findings highlight the strong presence of gender norms, particularly the "feminization of agriculture," in Santal culture. While women contribute significantly to agricultural tasks, traditional gender roles continue to define specific duties for each gender. According to insights from the community, responsibilities such as cooking, laundry, and childcare are predominantly seen as women's roles, even though they also work alongside men in the fields. Additionally, some community members pointed out that decisions about key matters within the family are still primarily made by men, reinforcing traditional gendered power dynamics.

During an in-depth interview, Fulkumari, a 35-year-old Santal woman, shared her family's experiences.

"Yesterday, my husband observed insects infesting our paddy field in the middle lowland, necessitating urgent pesticide application. Simultaneously, weeds had overrun our gourd field in the highland, requiring immediate clearing and fertilization. This morning, my husband instructed me to tend to the gourd field while he addressed the paddy field by applying pesticides."

Although women in the Santal community actively contribute to agricultural work alongside men, their roles are often viewed as less physically demanding in comparison. In Santal culture, men and women believe that women should take on lighter agricultural tasks, while men are responsible for more strenuous labor. This division of labor allows men to pursue other income-generating activities while women focus on less physically intensive agricultural duties. Due to economic challenges within Santal families, men often sought external sources of income, while women played a key role in supporting family agriculture to help reduce labor costs. However, women typically engaged in agricultural work only after completing their traditional household duties, such as cooking, washing, and caring for livestock, which are still primarily considered their responsibilities.

Identifying agri-based gender division of labour

Weeratunge et al., 2011 examined the gender division of labor (GDL) in Muslim and Hindu communities, noting the strict norms surrounding gender roles. In these communities, men primarily focused on cultivating field crops, while women took part in agricultural work within the homestead. The study found that it was challenging to draw direct links between gender equality, women's involvement in fieldwork, and religious beliefs. However, it did identify a connection between patriarchal customs, poverty, and women's participation in agriculture, which also applies to the Santal community. Similarly, Dogo (2014) found that many African societies, including Nigerian society, exhibit patriarchal characteristics, with gender inequality relegating women to subordinate roles. Raj (2018) also points out that in many patriarchal societies, including the Santal community, women face resistance when seeking equal status to men. Due to task-based gender divisions of labor and limited workforce diversity, the adoption of agricultural machinery often displaces women from farming activities, pushing them into non-farm sectors (Afridi, Bishnu, & Mahajan, 2023). It might occur lack of skill and access gap and restrict directly benefiting from mechanization (Masset et al., 2023). Social norms within Santal society serve to subordinate women, limiting their authority across various domains. There is a widespread belief that women's presence could undermine societal norms, and as a result, Santal society does not promote gender equality or parity between women and men. If men were to share everything equally with women, it is thought that women could achieve equal status with men. This perspective reveals the tendency of Santal men to maintain female subordination. Santal society, like many other patriarchal societies, positions men as the heads of households, and the roles and status of women are determined by male preferences. The inequality and subordination between genders are not solely based on biological or psychological differences, as noted by Hembrom (2018). Kakati (2013) further argues that throughout history, gender-based divisions of labor have been prevalent, with men occupying higher social positions and women relegated to lower ones. Oosterbaan (2016) supports this view, noting that in Madhya Khuttimari, farmers hiring agricultural laborers expressed reluctance to employ women for physically demanding tasks, such as chemical spraying, plowing, field preparation, or carrying heavy loads of harvested crops.

In line with various studies, we recognize that while women actively engage in agricultural work alongside men, a clear division of labor remains dictated by the agricultural life cycle. This division is structured around specific tasks designated to either men or women, with some activities being shared between the genders. However, existing research often overlooks the contextual factors influencing the roles of men and women in agriculture, including how and why specific tasks are performed separately or together. Our study seeks to fill this gap by offering a deeper understanding of the factors shaping this division of labor.

In our discussions with women in the community, they shared their firsthand experiences with this gendered labor division. For instance, tasks such as seed preparation, including selecting seeds, preparing seed beds, and sowing, are traditionally managed by men. In contrast, the responsibilities of nurturing and caring for the seeds, such as weeding and watering, are primarily assigned to women. Despite these gendered roles, some activities, particularly tending to the crops during the growing season, are carried out jointly by both men and women, highlighting a more collaborative approach during certain phases of the agricultural cycle.

Both practical considerations and cultural norms influence this pattern of labor distribution. While men may take on tasks that require more physical strength or are seen as more critical to the early stages of farming, women's roles tend to focus on nurturing the crops and ensuring their continued growth. By exploring these nuances, our research contributes to a more comprehensive understanding of how gendered labor divisions are shaped by the agricultural life cycle and influenced by broader social and cultural factors that dictate what is considered appropriate work for each gender.

Participants shared that societal roles in the community continue to be divided along gender lines. They explained that men, with their greater mobility and ability to interact with various individuals, including agricultural officers, are typically making decisions about crop cultivation for the season. However, when men are engaged in external activities, women's labor within the household becomes essential, as it helps to reduce

overall labor costs. Despite the significant contributions of women to agricultural work, these tasks are still predominantly viewed as "women's work" within the family and community.

One of the respondents, a 55-year-old named Shorossoti, had not received formal education. She shared that,

"While we women actively contributed to the fields, our husbands and other male members possessed greater knowledge about crop production. They gained insights from interactions outside the household, learning about which crops would thrive in the season and which ones could fetch higher prices. In urgent situations, men would visit agricultural offices to seek advice from officers. Meanwhile, we undertook less physically demanding agricultural tasks when men were occupied with more strenuous and time-consuming work or engaged in external income-generating activities."

Participants explained that in Santal culture, field preparation is exclusively carried out by men. Boys are trained to take on this responsibility from a young age, as the fields were traditionally seen as a male domain. This division was based on the belief that field preparation required physical strength and skills, such as operating a power tiller, which was perceived to be beyond women's capabilities. However, when it comes to planting, both men and women are involved, although the community strongly emphasizes the value of patience for achieving quality results. Gender norms in the community further reinforced the idea that women should embody patience as a key virtue in their agricultural roles.

Conversely, women's labor was often preferred due to its lower cost than male labor, making them the favored choice for specific tasks. Planting root seedlings, considered a less complex task, was typically assigned to women and children. This division allowed men to engage in other income-generating activities, which were advantageous for the family's financial well-being. However, participants observed that women from poorer farming households were more likely to be assigned crop-planting duties. In contrast, women from wealthier families often held less favorable views of women working outside the home.

In addition to their domestic roles, women in the Santal community were primarily responsible for post-planting tasks, such as weeding the fields, which were seen as less physically demanding compared to other agricultural duties. On the other hand, men were exclusively tasked with more physically intensive activities like managing irrigation systems and applying fertilizers, roles that were considered to require greater strength or technical skill. Furthermore, pest and disease control, which often involved the use of spray machines, was considered a critical yet challenging task that was traditionally handled by men. This division of labor was influenced by the belief that certain activities were inherently more difficult or demanding, leading to the gendered allocation of tasks based on perceived physical capacity or expertise.

Alongside these agricultural responsibilities, women also took on the additional burden of safeguarding crops from potential damage caused by animals. This responsibility, which was seen as part of women's domestic duties, further illustrates the heavy workload that women in the community bore. Despite their significant contributions to maintaining the crops, their work was often undervalued compared to the roles assigned to men. The gendered division of labor during the pre-harvest stage was thus largely shaped by social perceptions of what tasks were considered easier or more appropriate for women. These perceptions reinforced traditional gender roles, ensuring that women's work, though critical to the success of the harvest, remained within the confines of what was deemed "appropriate" for their gender, while more technical or physically demanding tasks were reserved for men.

This division not only reflects the traditional gendered views in agricultural labor but also emphasizes how these societal beliefs shaped the daily realities of women's labor in the field, reinforcing the unequal distribution of work and, by extension, the unequal recognition of their contributions to agricultural production.

Santal family members shared that although both men and women participated in harvesting, women's involvement was essential for lowering the family's overall labor expenses. In families with fewer financial

resources, women were typically assigned to post-harvest tasks, which were carried out within the household. Responsibilities such as storing produce, saving seeds, and husking rice were particularly viewed as women's duties in the Santal community.

Men's involvement in non-agricultural activities

Raihan and Bidisha (2018) noted that in the past two decades, male participation in the agricultural labor force has slightly declined. This shift is partly attributed to male outmigration, men seeking off-farm work, and broader societal changes (Sen et al., 2020). Rising temperatures in rural South Asia have negatively impacted crop yields and income, forcing men to pursue additional sources of income, which in turn has led women to take on more significant roles in agriculture. This trend is especially pronounced among married women and those with limited education, particularly those with less than a primary education (Southard et al., 2022).

In a study of a village in Jharkhand, Rao and Mitra (2013) found that most male migrants in the Santal community were young adults over 18, with about 80% being illiterate. These men, facing language barriers and geographical constraints, often lack social networks and financial resources, relying on local agents, predominantly Muslim youth, to facilitate their migration. Unlike the Bengali community, the Koch and Santal communities experience comparatively lower levels of income inequality. However, off-farm income sources contribute substantially to rising income inequality within these communities.

In line with the work of several researchers, we argue that men's involvement in off-farm activities has led women to take on agricultural labor increasingly. However, existing studies do not fully explore how poverty drives men in the Santal community to seek non-agricultural work, thus prompting women to assume additional agricultural responsibilities instead of their male counterparts.

The study revealed important insights into the income-generating activities within the Santal community, highlighting the roles men played outside of agriculture. Many women reported their involvement in agricultural labor, along with expanding their livestock, primarily cows and goats, to contribute to the family income. This was especially vital since their husbands frequently worked outside the home in sectors such as construction, driving, and day labor. By handling agricultural tasks, women played a key role in reducing household labor costs, enabling their husbands to engage in other income-generating activities. Although women's agricultural work was often viewed as less physically demanding, it was nonetheless critical to maintaining the family's economic stability. Another participant, Lokkhi, aged 35, shared insights on why men engaged in non-agricultural income-generating activities.

"We had tiny land of our own for cultivation, which led to financial struggles for our family every year. My husband and I worked together in the fields, cultivating various vegetables and rice, but poverty was a constant challenge. My husband decided to purchase cows and goats with the money I would manage after completing my household and agricultural duties to improve our situation. Additionally, he worked as a day laborer or van driver to ensure our financial stability."

The social basis of women's participation as seasonal agricultural labor

In Santal society, women have historically played vital roles in economic activities. Many Santal women work as day laborers on the lands of affluent Bengali landowners, contributing to their daily livelihood (Islam, 2010). These women are known for their physical strength and ability to endure long hours of hard labor. From a young age, Santal girls are expected to perform domestic duties such as gathering firewood, fetching water, preparing meals, and caring for younger siblings. Through observation and learning from their mothers and older women in the family, they gradually adopt their expected roles and align with societal norms (Hembrom, 2018). However, the availability of work is inconsistent in rural areas. During critical periods like Arshin-Kartik (September-October), 76% of those surveyed experienced hunger due to a lack of employment or additional financial support (Sarker et al., 2021). In the Barind tract, women's working periods are mostly restricted to the two rice-growing seasons and the post-harvest period (Qais, 2013). Despite working alongside

men for long hours, women face wage discrimination, often earning Tk. 20-25 (BDT) less than their male counterparts. This wage disparity indicates employer bias, which undervalues women's contributions, even when their efforts may be equal to or greater than those of men (Rafiul, 2010; Ahan et al., 2015). However, some studies report contradictory findings, where men worked longer hours during specific periods and received higher pay than female laborers (Tudu & Lakra, 2019; Qais, 2013).

At this point, we align with many researchers who acknowledge that Santal women participate in seasonal wage labor alongside men in agricultural activities. However, existing literature has not fully explored the social factors that drive women's involvement in paid labor. This section examines the social dynamics behind women's participation in agricultural labor beyond their domestic roles, as described by the women themselves.

Participants in the study underscored the dominant role of patriarchal norms within the Santal community, which significantly limit women's productivity and economic participation, particularly in lower-income peasant families. These norms shape not only the roles and expectations assigned to women but also the value placed on their labor. Within these families, there is often a heavy reliance on crops cultivated solely on family-owned land as the primary source of income. However, the agricultural output from this land is frequently inadequate to meet all of the household's needs, leaving families struggling to make ends meet.

As a result, both men and women are compelled to work together to manage labor costs more efficiently and enhance the household's economic prospects. This joint effort is driven by the necessity to supplement the family income. When men are occupied with off-farm income-generating activities, such as engaging in non-agricultural work or migrating to urban areas in search of employment, women step in to take over additional agricultural responsibilities. This redistribution of labor is largely driven by economic need rather than a shift in traditional gender roles, with women stepping into roles usually filled by men. Despite these expanded roles, however, women continue to face limitations imposed by prevailing gender norms, which dictate the tasks they can perform and the value of their contributions within both the family and the wider community.

In essence, the reliance on family-owned land and the insufficiency of its output force both men and women to contribute to the household economy in whatever ways they can, yet women often bear a disproportionate share of the burden when men are unavailable. This dynamic not only highlights the economic necessity driving this labor redistribution but also underscores the deep-seated social and cultural constraints that continue to define women's roles within the family structure.

Despite the rigid gender norms that dictate the division of labor between men and women, women from lower-income Santal families expressed distinct differences in their work opportunities compared to women from other communities, such as Muslim families, who primarily took up domestic work. As a result, women in Santal families mainly sought wage labor in agriculture when male family members were occupied with external work, aiming to improve the household's financial well-being.

CONCLUSION

This study examined the feminization of agriculture within the Santal community, highlighting how gendered labor divisions, entrenched socio-cultural norms, and economic shifts particularly male outmigration have shaped women's roles in agricultural production. Findings reveal a clear transition: Santal women are increasingly performing tasks once carried out by men, often as a result of economic necessity and the need to sustain household income. While this shift has enhanced women's visibility in agriculture, it has not eliminated structural inequalities. Long standing gender norms continue to restrict women's access to certain physically demanding tasks, decision-making spaces, and equal pay.

The results also demonstrate that women's contributions both as unpaid family labor and as seasonal wage earners are critical to sustaining rural economies. Yet their work remains undervalued, and wage discrimination persists, reinforcing patriarchal structures. These constraints are best understood through an

intersectional feminist lens, which shows how overlapping factors such as gender, ethnicity, class, and rural marginalization combine to limit women's agency despite their growing responsibilities.

POLICY RECOMMENDATIONS:

- **Ensure equal pay and labor rights** for women agricultural workers through stronger enforcement of wage equality laws and labor protection policies.
- **Expand women's access to resources** such as agricultural training, credit, and technology to improve productivity and bargaining power.
- **Promote women's participation in decision-making bodies** at community and local government levels to address structural barriers.
- **Introduce targeted educational and skill-development programs** for Indigenous women to diversify their income opportunities and reduce dependency on low-paid labor.
- **Implement social protection measures** including childcare support and health services to alleviate the dual burden of productive and reproductive labor.

This research advances the discourse on feminization of agriculture by centering Indigenous women's experiences, a perspective often overlooked in South Asian agricultural studies. It underscores the importance of applying an intersectional feminist framework to understand how multiple axes of inequality shape labor roles and access to resources. The findings also highlight the need for longitudinal and comparative studies to track how economic, social, and environmental changes influence gender norms over time. Future scholarship should explore the linkages between education, empowerment, and agricultural productivity, as well as how shifts in women's labor roles might translate into changes in household and community power structures.

In sum, while the feminization of agriculture in the Santal community marks a significant change in rural labor dynamics, translating this change into genuine empowerment requires targeted policies, systemic reforms, and sustained scholarly engagement with the complexities of gender, ethnicity, and class in rural development.

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Authors biography

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