



Voices from the Fields: Gender Dynamics in Rural Agriculture in Khyber Pakhtunkhwa, Pakistan

Humera Amin¹, Huzaifa²

¹Assistan Professor, Department of Agricultural Extension and Rural Studies, Sargodha University, Sargodha

²Department of Rural Development, Amir Muhammad Khan Campus, Mardan, The University of Agriculture, Peshawar, Pakistan

ARTICLE INFO	ABSTRACT
<p>Keywords: Gender Dynamics, Rural Agriculture, Women's Labour, Decision-Making, Khyber Pakhtunkhwa, Qualitative Study</p> <p>Corresponding Author: Humera Amin Email: humeraamin@yahoo.com</p>	<p>This study investigates gender dynamics in rural agriculture in Khyber Pakhtunkhwa (KP), Pakistan, focusing on the division of labour, intra-household decision-making, resource access, and women lived experiences. Using a qualitative exploratory design, data were collected from 30 in-depth interviews, six gender-segregated focus group discussions, and field observations across diverse smallholder farming households. Thematic analysis revealed five key themes: gendered division of labour, limited access to productive resources and services, male-dominated decision-making and income control, structural constraints including unpaid care work and mobility restrictions, and women's coping strategies and subtle forms of agency. Findings indicate that women perform intensive and largely undervalued agricultural work, have restricted access to land, credit, and extension services, and possess minimal decision-making power, yet exercise resilience through informal networks and intra-household negotiation. The study underscores the need for gender-responsive policies that recognize women as central agricultural actors, enhance equitable resource access, and support their decision-making and leadership in rural agrarian systems.</p>

Introduction

Agriculture remains a central pillar of Pakistan's rural economy and a primary source of livelihood for a majority of the rural population. In Pakistan, agriculture contributes significantly to national gross domestic product (GDP), employs a large share of the labour force, and underpins food security and rural wellbeing (Agrieconomist, 2024). Within this agrarian context, women play a critical yet often understated role in agricultural production, engaging in labour-intensive tasks such as sowing, weeding, harvesting, livestock care, and post-harvest processing (Agrieconomist, 2024; Ishaq & Memon, 2023). Despite this widespread participation,

women's contributions are frequently categorized as "unpaid family labour" and remain largely invisible in formal economic statistics and policy discourses (Naz et al., 2020; UN Women Pakistan, 2018). A growing body of literature reveals that rural women in Pakistan undertake a broad range of agricultural tasks, often working daily from dawn to dusk with limited recognition or economic compensation (Ishaq & Memon, 2023; Naz et al., 2022; Mahmood et al., 2021). Their involvement spans crop production systems, from seedbed preparation and sowing to harvesting and grain processing, as well as livestock management and dairy practices (Ishaq & Memon, 2023; Mahmood et al., 2021). However, this labour is rarely accounted for in national productivity measures, undermining women's visibility as farmers in their own right and reducing their potential to access tailored technical support and financial incentives (Agrieconomist, 2024; Ishaq & Memon, 2023).

Gender disparities in agriculture are not limited to labour contributions. Access to productive resources such as land, credit, technology, and agricultural inputs remains highly unequal. Empirical research in Pakistan indicates that a significant proportion of rural women lack equitable access to land and formal ownership rights, which restricts their agency in agricultural decision-making and economic empowerment (Agri economist, 2024; Naz et al., 2021). Women typically own a disproportionately small share of farmland, even though they contribute substantially to its cultivation and related activities (Agrieconomist, 2024; Naz et al., 2020; Naz et al., 2018a; Naz et al., 2018b). This disjunction between labour contribution and asset ownership is reinforced by patriarchal inheritance practices and social norms that favour male control over productive resources.

The consequences of limited access to land extend to other dimensions of resource control. Without land titles, women are often unable to secure credit or collateral to invest in agricultural inputs, technology, or farm mechanization, reducing their productivity and perpetuating cycles of poverty and marginalization (Stop Ignoring Women's Role in Agriculture, 2024). Research on gender disparities in access to agricultural production modes confirms that rural women in Pakistan face significant barriers not only to land but also to seeds, fertilizers, credit facilities, and technology (Nasir et al., 2024). These constraints are compounded by limited access to formal training and extension services, which are crucial for disseminating improved agronomic practices and climate-smart agriculture (Safdar & Pervaiz, 2020; *Plantwise*, 2023).

The gendered nature of agricultural extension is particularly pronounced in rural Pakistan, where services are overwhelmingly male-oriented and inadequately tailored to women's needs (Plantwise, 2023; Agrieconomist, 2024). Cultural norms restricting women's mobility and encouraging male dominance in agricultural decision spheres further hinder women's access to extension programmes, field demonstrations, and institutional learning opportunities (Plantwise, 2023; Nasir et al., 2024). Studies show that socio-cultural barriers and household responsibilities limit women's participation in formal training sessions, while extension managers often assume men to be the primary farmers, marginalizing women from targeted support efforts (Plantwise, 2023; Agrieconomist, 2024).

In addition to resource access issues, intra-household power dynamics significantly shape decision-making in rural agrarian settings. Even when women contribute substantially to farm labour, they frequently hold little authority over critical agricultural decisions such as crop selection, input purchases, marketing strategies, and income allocation (Safdar et al., 2021; Naz et al., 2020). This limited decision-making control reflects entrenched patriarchal norms within households that position men as principal economic actors. Studies in KP and other parts of Pakistan confirm that women's influence in farming decisions remains consultative rather than

autonomous, undermining their ability to leverage their contributions into economic and social gains (Safdar et al., 2021; Stop Ignoring Women's Role in Agriculture, 2024).

The structural constraints women face in agriculture extend beyond formal resource access and decision-making power to include significant unpaid care work burdens and mobility restrictions. Rural women shoulder a dual responsibility for both agricultural labour and domestic care work, including cooking, childcare, water collection, and care of elderly family members (UN Women Pakistan, 2018; Agrieconomist, 2024). The cumulative time burden associated with these responsibilities affects their ability to participate fully in agricultural extension services, market activities, and community leadership roles (UN Women Pakistan, 2018). Cultural norms that restrict women's mobility further limit their access to public spaces, training programmes, and markets, reinforcing their invisibility in formal agricultural value chains (Agrieconomist, 2024).

Recent research also highlights the interconnections between rural women's agricultural roles and broader household outcomes, such as food security and nutrition. A study in Punjab showed that increased women's participation in agricultural production can enhance household dietary diversity and caloric intake, although high workloads related to unpaid care work can counteract these benefits if not mitigated by supportive interventions (Nazeer & Zarin, 2025). This underscores the importance of gender-sensitive agricultural policies that consider time poverty, health, and nutrition alongside productivity and economic outcomes.

Despite these structural inequalities, rural women employ diverse coping strategies and demonstrate forms of everyday agency that sustain household livelihoods. These include informal knowledge sharing, collective labour arrangements, and negotiation within household hierarchies to influence decisions related to household welfare (Nasir et al., 2024). While such strategies reflect resilience and resourcefulness, they do not typically challenge underlying gender hierarchies unless supported by institutional reforms and policy interventions designed to enhance women's agency in agricultural systems (Agrieconomist, 2024; Empowering Women in Agricultural Governance, 2024).

The literature increasingly emphasizes that achieving gender equity in agriculture is not only a matter of social justice but also an economic imperative. Closing gender gaps in access to land, credit, extension services, and decision-making has the potential to increase agricultural productivity significantly and improve overall rural development outcomes (Empowering Women in Agricultural Governance, 2024). International evidence suggests that gender-responsive agricultural policies can enhance productivity by up to 30% in contexts where women's access to productive resources approaches parity with men's (Empowering Women in Agricultural Governance, 2024). Khyber Pakhtunkhwa (KP) provides a pertinent context for examining these dynamics due to its smallholder farming systems, high levels of rural participation, and deeply rooted patriarchal norms that shape gender relations. Investigating the gendered division of labour, intra-household power relations, access to resources, and lived experiences of rural women in KP enables a nuanced understanding of structural and relational factors influencing agricultural roles and opportunities. By foregrounding women's voices through qualitative methods, this study contributes to the broader discourse on gender and agriculture in Pakistan and offers evidence to inform gender-responsive policies and programmes that support both equity and agricultural development.

Methodology

Research Design

The study adopted a qualitative exploratory research design to capture the social meanings, practices, and power relations shaping gender dynamics in rural agriculture. A qualitative

approach was considered appropriate for examining everyday experiences and relational processes that are insufficiently captured through quantitative methods (Naz et al., 2024a; Naz et al., 2024b; Naz et al., 2024c). The study was informed by a feminist political economy perspective, which conceptualizes agriculture as a gendered domain structured by unequal access to resources, labour hierarchies, and sociocultural norms.

Study Area

The research was conducted in selected rural districts of KP, Pakistan, where agriculture constitutes the primary livelihood for the majority of households. The study sites represent smallholder-based mixed farming systems, integrating crop cultivation and livestock rearing. These areas are characterized by high levels of female participation in unpaid agricultural labour, limited access to formal agricultural extension services, and deeply embedded patriarchal norms influencing gender relations within households and communities.

Sampling Strategy and Participants

A purposive sampling strategy, complemented by maximum variation sampling, was employed to capture a diverse range of gendered experiences (Naz et al., 2024d; Riaz et al., 2024a; Naz et al., 2023a). Participants were selected based on their active involvement in agricultural activities and residence in rural areas of KP. Efforts were made to ensure variation across gender, age, marital status, and landholding categories (landless, marginal, and smallholder households).

In total, 48 participants were included in the study. Sampling continued until thematic saturation was reached, at which point no substantively new insights emerged from additional data collection.

Data Collection Methods

Data were collected over a four-month period using multiple qualitative methods to enhance analytical depth and triangulation.

In-Depth Interviews

A total of 30 in-depth interviews (IDIs) were conducted, including 18 interviews with women engaged in agricultural and livestock activities and 12 interviews with men, primarily male household heads and agricultural workers. Semi-structured interview guides were used to explore participants' experiences of agricultural labour, access to resources, decision-making authority, income control, time use, and perceptions of gender roles within agriculture.

Focus Group Discussions

In addition, six focus group discussions (FGDs) were conducted, comprising four women-only FGDs and two men-only FGDs, with six to eight participants per group. Gender-segregated FGDs were employed to facilitate open discussion of sensitive issues, including mobility restrictions, unpaid labour, and intra-household negotiations related to agricultural work.

Field Observations

Non-participant field observations were undertaken across all study sites to document gendered patterns of work, interaction, and participation in agricultural spaces. Observational data were recorded through detailed field notes and were used to contextualize and corroborate interview and FGD findings.

Data Analysis

All interviews and FGDs were audio-recorded with informed consent, transcribed verbatim, and translated into English where necessary. Data were analyzed using thematic analysis (Riaz et al., 2025; Riaz et al., 2024b), following an iterative and inductive process. Initial open coding was conducted to identify recurring patterns in the data, which were subsequently organized into broader themes and sub-themes aligned with the study objectives. Comparative analysis was

undertaken across gender and landholding categories to identify convergences and divergences in experiences. Qualitative data analysis software (NVivo) was used to support systematic coding and data management.

Trustworthiness

To ensure methodological rigor, the study adhered to established criteria for qualitative trustworthiness (Ishtiaq et al., 2025; Afridi et al., 2025; Amin et al., 2025). Credibility was enhanced through triangulation of data sources and methods. Dependability was ensured through consistent use of interview guides and documentation of analytical procedures. Confirmability was addressed through reflexive memo-writing, while transferability was supported by the provision of rich contextual descriptions of the study settings and participants.

Ethical Considerations

All participants provided informed consent and were ensured of confidentiality, anonymity, and the voluntary nature of their participation (Naz et al., 2025). Given the sensitivity of gender relations in rural KP, particular care was taken to conduct interviews with women in culturally appropriate and secure environments. Pseudonyms were used in all transcripts and publications to protect participants' identities (Khan et al., 2025a; Khan et al., 2025b, Huzaifa et al., 2025).

Results

The qualitative analysis revealed five major themes and several associated sub-themes that illuminate the gendered nature of agricultural labour, access to resources, decision-making, and lived experiences in rural Khyber Pakhtunkhwa. These findings demonstrate that while women are central to agricultural production, their contributions remain largely invisible, undervalued, and constrained by entrenched sociocultural norms.

1. Gendered Division of Agricultural Labour

1.1 Task Segmentation and Labour Hierarchies

A clear gender-based segmentation of agricultural tasks was observed across study sites. Women were primarily responsible for labour-intensive and repetitive activities such as weeding, seed cleaning, fodder collection, livestock feeding, milking, and post-harvest processing. Men predominantly performed tasks perceived as skilled, mechanized, or externally oriented, including land preparation, pesticide application, machinery operation, input procurement, and crop marketing.

“Men plough the land and go to the market, but the daily work in the fields and with animals is done by women.” (Female participant, smallholder household)

This division reinforced labour hierarchies in which men's activities were associated with productivity and income generation, while women's labour was framed as supplementary.

1.2 Time Burden and Labour Invisibility

Women reported long working hours that combined agricultural labour with unpaid domestic and care responsibilities. Despite this dual burden, women's contributions were rarely recognized as formal agricultural work.

“From early morning we work in the fields, then at home, but people say women do not farm.” (Female participant, marginal farmer)

The invisibility of women's labour limited their recognition as farmers and reduced their eligibility for agricultural services and support.

2. Gendered Access to Productive Resources and Services

2.1 Land Ownership and Resource Control

Land ownership in all study households was overwhelmingly male dominated. Women, even when actively engaged in farming, lacked legal or customary ownership of land, restricting their authority over agricultural decisions.

“The land is in my husband’s name. Even if I work on it every day, it is not considered mine.” (Female participant, landless household)

This lack of ownership constrained women’s ability to access credit or independently adopt agricultural innovations.

2.2 Exclusion from Extension and Institutional Support

Women’s interaction with agricultural extension services was minimal. Extension workers primarily engaged with men, reinforcing institutional gender biases.

“When officers come, they talk only to men. We are not included in these discussions.” (Female participant, livestock caretaker)

As a result, women relied on informal knowledge networks, limiting their exposure to new technologies and practices.

3. Intra-Household Decision-Making and Income Control

3.1 Agricultural Decision-Making Authority

Decisions related to crop selection, input use, and marketing were largely controlled by men. Women’s participation was mostly consultative and limited to subsistence-related matters.

“We can suggest, but the final decision is made by the men.” (Female participant, smallholder household)

This pattern persisted regardless of women’s level of labour contribution.

3.2 Control over Agricultural Income

Control over income generated from agricultural activities rested primarily with men. Women reported limited influence over how income was allocated or spent.

“When crops are sold, the money is kept by men. We only ask when something is needed.” (Female participant, marginal farmer)

This economic dependence further reduced women’s bargaining power within households.

4. Lived Experiences and Structural Constraints

4.1 Unpaid Care Work and Physical Strain

Women described significant physical exhaustion resulting from the combined demands of agricultural labour and unpaid domestic work. Health issues were common, yet access to healthcare remained limited.

“There is no rest. Even when we are sick, the work does not stop.” (Female participant, older woman)

4.2 Mobility Restrictions and Social Norms

Mobility restrictions limited women’s participation in markets, training sessions, and community meetings. These restrictions were often justified through cultural expectations related to modesty and family honour.

“If no male member is free, we cannot go outside for training.” (Female participant, young married woman)

5. Coping Strategies and Everyday Agency

5.1 Informal Support Networks

Women relied heavily on informal networks with other women to share labour, information, and emotional support.

“We learn from each other. Whatever we know, we pass it on.” (Female participant, livestock caretaker)

5.2 Negotiation and Subtle Forms of Agency

Despite structural constraints, women exercised agency through negotiation and strategic compliance. This included influencing household decisions related to food security, livestock care, and children's education.

"We decide small things quietly so that the household runs smoothly." (Female participant, smallholder household)

While these forms of agency did not fundamentally alter gender hierarchies, they enabled women to manage daily realities and secure limited spaces of influence.

Overall, the findings reveal that gender relations in rural agriculture in Khyber Pakhtunkhwa are characterized by women's extensive yet undervalued labour, limited access to resources, and constrained decision-making power. At the same time, women's narratives highlight resilience and adaptive strategies that sustain household livelihoods in the face of persistent structural inequalities.

Table-1: Themes and Sub-Themes on Gender Dynamics in Rural Agriculture in KP

Main Theme	Sub-Themes	Analytical Summary of Findings	Illustrative Excerpts
Gendered division of agricultural labour	Task segmentation; Labour hierarchies; Time burden; Labour invisibility	Women primarily performed labour-intensive, repetitive agricultural tasks alongside unpaid domestic and care work, while men undertook mechanised, market-facing, and financially recognized activities. Women's agricultural labour was largely framed as supportive rather than productive, contributing to its invisibility.	"Men go to the market, but the daily work in the fields is done by women." (Woman, smallholder household)
Access to productive resources and services	Landownership; Input and credit access; Extension exclusion	Land ownership and control over productive resources were overwhelmingly male-dominated. Women's access to inputs, credit, and extension services was indirect and mediated through male household members, limiting their capacity to influence farming practices.	"The land is not in my name, so decisions are not mine either." (Woman, landless household)
Intra-household decision-making and income control	Crop and marketing decisions; Income allocation; Consultative participation	Men held primary authority over crop choices, marketing, and use of agricultural income. Women's participation in decision-making was largely consultative and confined to subsistence-level concerns, reinforcing economic dependence.	"When the crop is sold, the money is kept by men." (Woman, marginal farmer)
Lived experiences and structural	Care work burden; Mobility restrictions;	Women experienced physical exhaustion and health challenges due to the dual burden of farm labour and	"Even when we are tired or sick, the work does not

Main Theme	Sub-Themes	Analytical Summary of Findings	Illustrative Excerpts
constraints	Occupational health risks	unpaid care work. Mobility restrictions constrained participation in training, markets, and community forums, limiting access to information and services.	stop.” (Woman, older participant)
Coping strategies and everyday agency	Informal women’s networks; Negotiation; Knowledge sharing	Despite structural constraints, women exercised agency through informal support networks, intergenerational knowledge exchange, and subtle negotiation within households, particularly around food security and childcare.	“We manage things quietly so that the household can run.” (Woman, livestock caretaker)

Discussion

This study contributes to the growing body of literature on gender and agriculture by providing empirical evidence from rural Khyber Pakhtunkhwa (KP), Pakistan, demonstrating that women’s agricultural labour is extensive yet persistently undervalued, institutionally marginalized, and weakly translated into decision-making power. The findings are consistent with, and extend, existing scholarship on gendered agrarian relations in South Asia and comparable agrarian economies. The findings confirm a deeply entrenched gendered division of labour in rural agriculture, where women predominantly undertake labour-intensive, time-consuming, and low-status tasks, while men control mechanised, market-facing, and income-generating activities. This pattern has been widely documented in Pakistan and across South Asia, where women’s agricultural labour is frequently categorized as unpaid family work rather than productive economic activity (FAO, 2011; Agarwal, 1994; World Bank, 2020). Empirical studies in Pakistan demonstrate that women contribute substantially to crop production and livestock management but are rarely recognized as farmers in policy, extension systems, or agricultural statistics (Ahmad & Afzal, 2021; Jafri et al., 2022). The persistent framing of women’s labour as “assistance” reflects what Agarwal (1994) describes as the ideological construction of gender roles that renders women’s work invisible while naturalizing male authority in agrarian systems. This invisibility has material implications, as recognition as a “farmer” often determines eligibility for training, subsidies, and institutional support (FAO, 2011; Meinzen-Dick et al., 2019). The near absence of women’s land ownership observed in this study reflects a structural constraint that has been extensively documented in Pakistan. National data indicate that women own a negligible share of agricultural land, largely due to discriminatory inheritance practices and sociocultural norms (Government of Pakistan, 2018; SDPI, 2020). Land ownership is widely recognized as a critical determinant of women’s bargaining power, economic security, and access to institutional resources (Agarwal, 1994; Doss et al., 2018).

Consistent with earlier studies, women in this study were largely excluded from agricultural extension services and formal information channels (Ragasa et al., 2019; World Bank, 2020). Extension systems in Pakistan have historically targeted male farmers, reinforcing institutional gender bias and limiting women’s access to innovation, climate-resilient practices, and productivity-enhancing technologies (FAO, 2018; IFPRI, 2020). Such exclusion perpetuates

gender productivity gaps and undermines inclusive agricultural development, particularly in the context of climate variability affecting KP's agrarian systems.

The study's findings reveal that agricultural decision-making and income control remain overwhelmingly male-dominated, even in households where women contribute substantially to farm labour. This aligns with extensive evidence from Pakistan and other patriarchal agrarian contexts, where men retain authority over crop choices, marketing decisions, and financial resources (Kabeer, 2016; Quisumbing et al., 2015; Ahmad & Afzal, 2021).

Research consistently demonstrates that women's control over income is associated with improved household nutrition, child health, and educational outcomes (Duflo, 2012; Quisumbing et al., 2015; World Bank, 2020). The marginal role of women in financial decision-making observed in this study therefore has broader implications for food security and human development in rural KP. As Kabeer (2016) argues, the persistence of male-dominated decision-making structures reflects not only economic inequality but also deeply embedded patriarchal power relations that limit women's agency.

The findings highlight the cumulative burden of agricultural labour and unpaid care work borne by rural women, a pattern widely documented in feminist agrarian scholarship (Elson, 1999; FAO, 2011). Women's long working hours, physical exhaustion, and limited access to healthcare mirror findings from rural Pakistan showing that women's health and wellbeing are systematically compromised by their dual productive and reproductive roles (Naz et al., 2020; SDPI, 2020). Mobility restrictions emerged as a critical constraint on women's participation in markets, training programmes, and community institutions. Similar restrictions have been documented across South Asia, where norms related to honour and respectability limit women's public engagement and access to economic opportunities (Kabeer, 2016; Agarwal, 1994). Such constraints reinforce women's exclusion from decision-making spaces and limit their capacity to benefit from agricultural modernization initiatives. Despite these structural constraints, women in this study demonstrated agency through informal networks, intergenerational knowledge sharing, and subtle negotiation within households. These findings align with feminist conceptualizations of agency as context-specific and relational rather than solely transformative (Kabeer, 2016; Cornwall, 2016). Women's reliance on informal support systems reflects adaptive strategies that enable them to sustain household livelihoods in the absence of formal recognition or institutional support. However, as noted by Agarwal (1994) and Meinzen-Dick et al. (2019), such forms of agency, while important, rarely challenge underlying gender hierarchies unless supported by structural reforms. Without addressing unequal access to land, services, and decision-making power, women's agencies remain constrained within existing patriarchal arrangements.

Taken together, the findings underscore the necessity of gender-responsive agricultural policies that move beyond instrumental approaches to women's participation. Recognizing women as farmers, ensuring equitable access to land and extension services, and addressing unpaid care burdens are essential for achieving sustainable agricultural development in KP and Pakistan more broadly (FAO, 2018; World Bank, 2020; IFPRI, 2020). Failure to address these structural inequalities risks reinforcing existing gender gaps and limiting the effectiveness of agricultural development interventions.

Conclusion

This study examined the gendered dimensions of agricultural labour, resource access, decision-making, and lived experiences in rural Khyber Pakhtunkhwa. The findings demonstrate that while rural women contribute substantially to agricultural production through labour-intensive and unpaid work, their contributions remain systematically undervalued and largely

unrecognized within institutional, economic, and policy frameworks. Women's limited access to land, agricultural extension services, credit, and decision-making authority reflects entrenched sociocultural norms and structural inequalities that constrain their agency and economic empowerment. Women's exclusion from formal agricultural institutions and their restricted control over productive resources perpetuate gender disparities in productivity, income, and wellbeing. The dual burden of unpaid care work and agriculture further exacerbates women's time poverty, limiting their capacity to engage in formal markets and training opportunities. Despite these constraints, women exercise everyday forms of agency through informal networks and intra-household negotiation, underscoring their resilience and adaptive strategies. These findings align with broader evidence that addressing gender inequality in agriculture requires both institutional change and the recognition of women as autonomous agricultural actors.

Recommendations

To address gender disparities in rural agriculture in Khyber Pakhtunkhwa, the following priority actions are recommended:

1. Strengthen women's land and tenure rights by promoting joint and independent land ownership, simplifying registration procedures, and providing legal awareness support to challenge customary barriers.
2. Reform agricultural extension systems to be gender-responsive through the recruitment of female extension workers, localized training delivery, and targeted outreach to women engaged in crop and livestock production.
3. Expand women's access to financial services and inputs by developing women-friendly credit schemes, reducing collateral requirements, and linking female farmers to input supply and value-chain initiatives.
4. Reduce unpaid care and labour burdens through investments in rural infrastructure, labor-saving technologies, and community-based support services that enable women's economic participation.
5. Promote women's participation in decision-making and farmer organizations by supporting leadership training, collective action, and inclusive governance mechanisms at household and community levels.
6. Institutionalize gender-sensitive monitoring by integrating sex-disaggregated indicators into agricultural policies and programmes to track outcomes related to access, agency, and productivity.

References

- Agarwal, B. (1994). *A field of one's own: Gender and land rights in South Asia*. Cambridge University Press.
- Afridi, M. J., Riaz, K., & Naz, S. (2025). Bridging the gap: Exploring the digital divide and women's access to technology in rural Pakistan. *Policy Research Journal*, 3(8).
- Agrieconomist. (2024). *Empowering rural women for Pakistan's agriculture* [Report]. The Agricultural Economist. <https://www.agrieconomist.com/empowering-rural-women-for-pakistans-agriculture/>
- Agrieconomist. (2024). *Women in Pakistan's rural economy: Faith, rights & growth*. The Agricultural Economist. <https://www.agrieconomist.com/women-in-pakistans-rural-economy-faith-rights-and-growth>
- Ahmad, D., & Afzal, M. (2021). Gender dimensions of agriculture and rural livelihoods in Pakistan. *Journal of Rural Studies*, 82, 290–300. <https://doi.org/10.1016/j.jrurstud.2020.12.012>

- Amin, H., Riaz, K., & Jamil, M. (2025). Scrolling and studying: The impact of social media on students' productivity. *Social Sciences and Humanity Research Review*, 3(3), 2361–2372.
- Cornwall, A. (2016). Women's empowerment: What works? *Journal of International Development*, 28(3), 342–359. <https://doi.org/10.1002/jid.3210>
- Doss, C., Meinzen-Dick, R., Quisumbing, A., & Theis, S. (2018). Women in agriculture: Four myths. *Global Food Security*, 16, 69–74. <https://doi.org/10.1016/j.gfs.2017.10.001>
- Duflo, E. (2012). Women empowerment and economic development. *Journal of Economic Literature*, 50(4), 1051–1079. <https://doi.org/10.1257/jel.50.4.1051>
- Elson, D. (1999). Labor markets as gendered institutions. *World Development*, 27(3), 611–627. [https://doi.org/10.1016/S0305-750X\(98\)00147-8](https://doi.org/10.1016/S0305-750X(98)00147-8)
- Food and Agriculture Organization of the United Nations. (2011). *The state of food and agriculture 2010–11: Women in agriculture—Closing the gender gap for development*. FAO. The Agricultural Economist.
- Food and Agriculture Organization of the United Nations. (2018). *Gender transformative approaches in agriculture*. FAO.
- Food and Agriculture Organization of the United Nations. (2020). *Right to own land crucial for empowering rural women* [Report]. <https://www.fao.org/pakistan/news/detail-events/en/c/1265987/>
- Government of Pakistan. (2018). *Pakistan economic survey 2017–18*. Ministry of Finance.
- Huzaifa, H., Tayaba Batool, H., & Batool, I. (2025). Unequal smiles: Gendered barriers to oral health services in resource constrained settings. *Social Sciences & Humanity Research Review*, 3(4). <https://doi.org/10.63468/sshr.249>
- IFPRI. (2020). *Gender and agriculture in Pakistan: Policy challenges and opportunities*. International Food Policy Research Institute.
- Iqbal, M., & Sial, A. (2023). Exploring women's involvement in agriculture and livestock sectors: A study of Punjab province, Pakistan. *Qlantic Journal of Social Sciences*, 4(4), 139–147. <https://doi.org/10.55737/qjss.697595366>
- Ishaq, W., & Memon, S. Q. (2023). Roles of women in agriculture: A case study of rural Lahore, Pakistan. *Journal of Pure and Applied Agriculture*, 1(1). <https://ojs.aiou.edu.pk/index.php/jpaa/article/view/31>
- Ishtiaq, M., Riaz, K., & Naz, S. (2025). Beyond reach: Uncovering barriers to healthcare access among the marginalized population of Pakistan. *Frontier in Medical & Health Research*, 3(6).
- Kabeer, N. (2016). Gender equality, economic growth, and women's agency. *Feminist Economics*, 22(1), 295–321. <https://doi.org/10.1080/13545701.2015.1090009>
- Khan, G., Batool, I., & Batool, H. T. (2025a). Poverty, policy and plaque: Rethinking oral health in a low income population. *Journal of Medical & Health Sciences Review*, 2(4). <https://doi.org/10.65035/mmx6k374>
- Khan, G., Batool, H. T., & Batool, I. (2025b). Mothers as gatekeepers: The social role of women in shaping children's oral health. *Journal of Medical & Health Sciences Review*, 2(4). <https://doi.org/10.65035/98z8qx31>
- Meinzen-Dick, R., Quisumbing, A., Doss, C., & Theis, S. (2019). Women's land rights as a pathway to poverty reduction. *Global Food Security*, 23, 50–56. <https://doi.org/10.1016/j.gfs.2019.04.002>
- Nasir, H., Anjum, F., & Asghar, K. (2024). Gender disparities in access to agricultural modes of production and impediments in rural women empowerment. *Pakistan Languages and Humanities Review*, 8(1), 22–32. [https://doi.org/10.47205/plhr.2024\(8\)03](https://doi.org/10.47205/plhr.2024(8)03)

- Naz, F., Ali, S., & Fatima, N. (2020). Gendered labour burden and health outcomes among rural women in Pakistan. *Pakistan Journal of Social Sciences*, 40(3), 1451–1465.
- Naz, S., & Khan, N. P. (2018a). Financial contribution of livestock at household level in Federally Administered Tribal Areas of Pakistan: An empirical perspective. *Sarhad Journal of Agriculture*, 34(1), 1–9.
- Naz, S., Khan, N. P., Afsar, N., & Shah, A. A. (2018b). Women's participation and constraints in livestock management: A case of Khyber Pakhtunkhwa Province Pakistan. *Sarhad Journal of Agriculture*, 34(4), 917–923.
- Naz, S., Khan, N. P., Khan, H., & Azra. (2020). Does women's participation in livestock management enhance their empowerment? *Sarhad Journal of Agriculture*, 36(3), 823–831.
- Naz, S., Ahmed, A., Nawab, S., Karim, R., Azra, Azam, M., & Afridi, M. J. (2021). Gendered division of household labour in livestock with potential to achieve gender equality: A case of district Mohmand, erstwhile FATA, Khyber Pakhtunkhwa-Pakistan. *Webology*, 18(4), 1754–1768.
- Naz, S., Arif, M., & Ali, A. (2022). Women's participation and its determinants in livestock management across the developing world: A systematic review. *Sarhad Journal of Agriculture*, 38(5), 383–396.
- Naz, S., Ayub, M., & Afridi, M. J. (2023). Factors affecting the choice of delivery among the rural women of Khyber Pakhtunkhwa Pakistan. *Journal of Development and Social Sciences*, 4(3), 23–30. [https://doi.org/10.47205/jdss.2023\(4-III\)03](https://doi.org/10.47205/jdss.2023(4-III)03)
- Naz, S., Ishtiaq, M., & Riaz, K. (2024a). Effectiveness of e-pharmacy services in managing chronic diseases in rural Pakistan. *Journal of Development and Social Sciences*, 5(3), 442–452.
- Naz, S., Riaz, K., & Nawab, S. (2024b). E-pharmacy in rural Pakistan: Evaluating platforms' reach, opportunities, and challenges. *Journal of Health and Rehabilitation Research*, 4(3). <https://doi.org/10.61919/jhrr.v4i3.1515>
- Naz, S., M, Aslam, H. Amin, Khan, Sajid, A. Sayed. (2024c). Mental healthcare in Pakistan; a contemporary study. *Journal of Population Therapeutics and Clinical Pharmacology*, 31(8), 2005–2012.
- Naz, S., H. Amin, & A. Sayed. (2024d). Maternal mortality in Pakistan; the potential role of community midwives. *Journal of Development and Social Sciences*, 5(2), 45–52.
- Naz, S., Riaz, K., & Shafi, M. (2025). Invisible wounds: Psychological effects of gender-based violence on rural women in Khyber Pakhtunkhwa, Pakistan. *International Journal of Social Sciences Bulletin*, 3(8), 872–883. <https://doi.org/10.5281/zenodo.16924401>
- Nazeer, A., & Zarin, S. S. (2025). Impact of rural women labour participation in agricultural production on household food and nutrition security in Punjab, Pakistan. *NUST Journal of Social Sciences and Humanities*, 11(1). <https://doi.org/10.51732/njssh.v11i1.241>
- Plantwise. (2023). *Gender and agriculture extension issues in Pakistan*. Plantwise Knowledge Bank.
- Quisumbing, A., Meinzen-Dick, R., Raney, T., Croppenstedt, A., Behrman, J., & Peterman, A. (2015). *Gender in agriculture: Closing the knowledge gap*. FAO & IFPRI.
- Ragasa, C., Berhane, G., Tadesse, F., & Taffesse, A. (2019). Gender differences in access to extension services. *World Development*, 105, 187–206. <https://doi.org/10.1016/j.worlddev.2017.12.010>
- Riaz, K., Amin, H., & Azam, M. (2024a). Hygiene chronicles of Pakistan: Rural-urban disparities. *International Journal of Social Sciences Bulletin*, 3(1), 508–517.

Riaz, K., Khan, S., Ishtiaq, M., & Amin, H. (2024b). Barriers and access to mental healthcare in rural areas of Pakistan: An inferential statistical analysis. *Journal of Population Therapeutics & Clinical Pharmacology*, 31(9), 2892–2902. <https://doi.org/10.53555/mhznzr83>

Riaz, K., Naz, S., & Afridi, M. J. (2025). Too young to marry: A qualitative inquiry into the physical and mental health outcomes of child marriage in rural Pakistan. *The Research of Medical Science Review*, 3(8), 400–412.

Stop ignoring women's role in agriculture. (2024, March 29). *The Express Tribune*. <https://tribune.com.pk/story/2540584/stop-ignoring-womens-role-in-agriculture>

UN Women Pakistan. (2018). *Status of rural women in Pakistan* [Report]. United Nations Entity for Gender Equality and the Empowerment of Women.

World Bank. (2020). *Pakistan: Gender and agriculture diagnostic*. World Bank Group.