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## ANALYSIS OF GENDER ACCESS TO RURAL ADVISORY SERVICES USING A THEORY OF PLANNED BEHAVIOR APPROACH IN PUNJAB, PAKISTAN

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### ABSTRACT

In Pakistan's rural setting, women are active players, performing multifaceted duties and, more specifically, playing key roles in farm operations. To examine gender access to rural advisory services, this study employed qualitative research design and the Theory of Planned Behaviour (Ajzen, 1991) as a theoretical framework. This study was conducted in Six randomly selected villages of the District Multan, where villages were identified using consultative meetings with Extension Field Staff (EFS). A total of 12 Focus Group Discussions (6 with Male groups and 6 with female groups) were organized after seeking formal consent from the participants. Data were collected using an open-ended, guided interview and analyzed using Nvivo software. Results indicated that constructs of TPB, like attitude, Perceived Behaviour Control (PBC), and Social Norms (SN), had a positive association with access to advisory services. The male group had more access to advisor services than women, who are less privileged due to social norms. Consequently, the potential of women in agriculture is untapped, and their participation in farm operations is unacknowledged. This study augments the need for specific advisory services for women, tailoring their information needs and disseminating information among them using the potential of digital technologies.

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### INTRODUCTION

The agricultural profile of Pakistan is characterized by significant challenges and the urgent need for increased food production to meet the demands of a growing population. By 2025, food production must increase by at least 40% to accommodate a projected 33% population increase (Khan et al., 2022). Pakistan has a diversified economic base with the agriculture sector that contributes 24% in GDP and 37.4% in employment (Government of Pakistan, 2024). Pakistan's agriculture sector grew at an impressive rate during 2023-24 as a whole by 6.25%. However, growth in crops was particularly impressive at 11.03%, while the growth

remained better than 2023 as a whole. Farmers are confronted with many issues, such as the absence of soil testing, low-quality fertilizers, loss during harvest, and inadequate storage facilities. Besides, modern machinery and equipment are also in shortage, and tractors and cultivators are mainly used (Khan et al., 2022).

Women are an integral part of the agriculture system in Pakistan. In a study, Ali et al. (2017) reported that women in rural areas of Pakistan contribute to farm operations by working 8-10 hours a day, performing farm operations from sowing to harvesting. Interestingly, 86.95% of them had no formal education. The Women Empowerment in Agriculture Index score

for the Punjab province of Pakistan was reported at 0.70, with 21% of women empowered and 79% disempowered (Waqas et al., 2023). Women Empowerment in Agriculture Index (WEAI) in Pakistan highlights significant disempowerment among women, particularly in the domains of leadership, income, and resources, with cultural and socioeconomic factors contributing to limited empowerment, while some areas like time and production show relatively better empowerment (Amber and Fakhar, 2019; Aziz et al., 2021).

In Pakistan, women have encountered several problems getting agricultural information through Rural Advisory Services (RAS). Studies show that women are less likely to utilize formal sources of agricultural information than men, who tend to rely more on official agencies. Women prefer interpersonal communication from informal sources, which reveals a gendered preference for accessing information (Lamontagne-Godwin et al., 2018; Lamontagne-Godwin, 2019). This variance is related to socio-cultural and literacy levels, where age and literacy affect female access more than males (Lamontagne-Godwin et al., 2018). The barriers to gender equality in agricultural extension services cut across some socio-cultural and religious standards.

Despite their massive agricultural contribution, women have less access to extension services and agricultural information than men. This is because social norms have limited women's mobility and decision-making authority. This gap is realized in the differences in opinion between the male heads of the households and their female counterparts about the availability of these services (Luqman et al., 2018). Gender-responsive approaches are used to address these inequalities. A promising approach is female-led lead farmer initiatives that blend formal and informal interactions and are preferred by women smallholders. These initiatives could change the pathways of knowledge and improve women's access to agricultural information (Lamontagne-Godwin et al., 2019). Awareness among male extension workers of the need for equality in information access is essential to creating transformative change (Lamontagne-Godwin, 2019).

Plantwise, for example, is one of the programs assessed regarding gender impacts in improving food security through public/NGO partnerships. Though these programs are likely to be part of gender-transformative change, their effectiveness is limited because of low

female participation in initiatives such as plant clinics. This means that more inclusive and participatory approaches that take into account gender-specific needs and barriers are necessary (Lamontagne-Godwin et al., 2019).

While previous literature has quantitatively explored gender roles in agriculture and women's access to extension advisory services, these studies often have a limited scope and provide generalized implications. There remains a significant gap in the literature when it comes to a deeper, more nuanced understanding of the barriers and facilitators impacting women's access to such services. To address this gap, a qualitative approach was deemed essential for in-depth exploration. This study is grounded in the Theory of Planned Behavior (TPB), offering a robust theoretical framework to understand better the underlying factors influencing women's access to agricultural advisory services.

#### **Theory of Planned Behavior (TPB): as a theoretical framework**

Theory of Planned Behaviour (TPB) is significant for assessing gender roles in agriculture as it helps understand the intentions behind individuals' actions, including career choices and entrepreneurial activities in the agricultural sector. This theory can be used to analyze how attitudes, perceived behavioral control, and subjective norms influence agricultural participation and how these factors may differ by gender.

The TPB has been applied to study agropreneurship intentions among youth in Sabah, Malaysia. It was found that attitudes towards agropreneurship and perceived behavioral control positively affect these intentions, while subjective norms do not. Interestingly, gender did not moderate these effects, suggesting that both male and female youths are similarly influenced by these factors when considering agropreneurship (Saptu et al., 2020).

Another study extended the TPB to predict tertiary students' intentions to pursue agriculture-related careers. It identified attitudes towards agriculture, perceived behavioral control, agricultural knowledge, and perceptions of sustainable agriculture methods as significant predictors. Gender and geographic location moderated these relationships, indicating that these factors might influence how students perceive and decide on agricultural careers (Zaremohzzabieh et al., 2021).

While not directly related to agriculture, a meta-analysis on gender and helping behavior suggests that gender

roles can influence behaviors in various contexts. This insight can be extrapolated to understand how traditional gender roles might affect participation and roles in agriculture, although the direct application of these findings to agriculture requires further study (Eagly and Crowley, 1986).

The TPB is a valuable framework for assessing gender roles in agriculture by highlighting the psychological factors influencing career and business intentions. While gender does not always moderate these intentions, it can affect how individuals perceive and engage with agricultural opportunities. Understanding these dynamics can aid in developing targeted policies and programs to encourage broader participation in agriculture across genders. Therefore, the three key attributes (i) attitude, (ii) social norms, and (iii) Perceived behavioral control were associated with the women's intention to access the advisory services.

## METHODOLOGY

### Research Design

This study was qualitative, based on face-to-face focus group interviews. Qualitative research is significant for its ability to explore complex, context-specific phenomena, provide rich and in-depth insights, and address questions that quantitative methods may not adequately capture (Kozleski, 2017; Morse, 2004). This study followed an in-depth probing qualitative approach.

The selection of an appropriate sample size remains critical in qualitative research studies. These studies, such as Mocănașu (2020) and Aguboshim (2021), suggested that determining sample size in qualitative research is complex and subjective, often relying on concepts like data saturation, information power, and judgment, with no clear consensus or guidelines. Therefore, this study considered previously published literature while choosing the sample size. Still, a consultative session was also organized with the district's Agricultural Extension department representative, who is the change agent and used to work closely with the farming groups. This consultative session helped researchers reach the potential respondents who were critical cases in helping us explore the ground realities. We identified those farming groups who were significantly involved in the crop management.

Minimum sample size in qualitative research varies depending on the method and context, with guidelines ranging from as few as 6-9 interviews for code

identification to 20-30+ interviews for theoretical saturation (Van Rijnsoever, 2017; Wutich et al., 2024; Ashraf et al., 2024). In this study, researchers were mainly focused on Focus Group Discussions, and based on time, resources, and previous studies recommendations, FGDs were limited to 12, including 6 with male groups and 6 with female groups. The interview guide was used for the data collection.

### Study area

This situation analysis study was conducted in the Multan District of Punjab, one of the prominent districts in the southern part of Punjab, regarding agriculture production. Agriculture is widely practiced in the districts, where women play an essential role along with their men.

### Sampling procedure

For the situation analysis, a total of six villages were chosen at random. Initially, a consultative meeting was held with the office of the Deputy Director of Agriculture (Extension), Multan, to identify those villages where women are prominent in playing their role in agricultural operations. One consultative meeting was held with the Assistant Director of Agriculture (Extension). These consultative meetings helped us identify the villages and construct the interview guide. Out of the identified villages, six were selected randomly, where the Focus Group Discussions were planned. The selected villages are mentioned in Table 1.

Table 1. List of villages chosen for the FGDs.

District	Respective tehsil	Villages name
Multan	Multan City	Umer pur
	Multan Saddar	Chak Mahni
	Multan Saddar	Makhdoom Rasheed
	Multan Saddar	Chak 4 Faz
	Shujabad	Qasba maral
	Shujabad	Basti Khawaja

### Data collection

12 Focus Group Discussions (FGDs) were organized in the selected villages. Each FGD had a minimum of 10 participants. Of the total 12, six FGDs were conducted with females and six with males (Table 2). Female enumerators were trained to conduct FGDs with females and record their statements for further analysis. Meanwhile, the male-member team comprising three experts conducted FGDs

with males in the same village. Before the discussion, the participants on each side explained the aim of the study and assured us of the confidentiality of the information. Similarly, formal consent was taken before the start of the discussion. The questions were asked in the local language and noted accordingly for further analysis.

Table 2. Total number of FGDs.

Villages	No. of FGDs	
	Male	Female
Umer pur	1	1
Chak Mahni	1	1
Makhdoom Rasheed	1	1
Chak 4 Faz	1	1
Qasba maral	1	1
Basti Khawaja	1	1
Total	6	6
	12	

### Data Analysis

The collected data were analyzed using thematic analysis. Thematic analysis is a commonly employed approach for examining data in primary qualitative research (Thomas and Harden, 2008). It identifies themes by thoroughly reviewing and revisiting transcribed data (King, 2004; Rice and Ezzy, 1999). By employing a rigorous approach to thematic analysis, valuable and reliable findings can be generated (Nowell et al., 2017). Nvivo software was used for data analysis.

## RESULTS

### Application of the Theory of Planned Behavior

The findings revealed that applying the Theory of Planned Behavior could effectively explain men's and women's access to extension advisory services (Figure 1).

### Attitude and Access to Extension Advisory Services

The study found a positive association between attitudes and access to extension advisory services. Both men and women were willing to seek extension services, although their socioeconomic conditions shaped this willingness. Weak financial positions, poverty, inflation, and low wages emerged as key barriers. For instance, a female participant remarked: *"We want to approach extension services, but how can we do that when our financial situation does not allow us to travel or access resources?"*

Similarly, a male participant stated: *"If wages were higher or inflation lower, more of us would be willing to consult extension workers for better farming practices."*

These findings emphasize the need for support mechanisms to mitigate rural communities' financial constraints.

### Social Norms and Access to Extension Advisory Services

Social norms influenced access to advisory services significantly, especially for women. Cultural norms dictate the extent of women's involvement in agriculture and decision-making. Women expressed that they could work in the fields and access extension services if cultural boundaries were respected. One woman shared: *"We want to learn and improve our farming, but only if we are trained by women and in a way that doesn't upset our traditions."*

Another participant noted *That society does not stop us from seeking advice, but we must ensure it aligns with our cultural values.* The study also highlighted women's comfort in female-to-female interactions, suggesting that female extension workers or women-led groups could enhance participation.

### Perceived Behavioral Control and Access to Extension Advisory Services

The findings suggested that improving women's skills and addressing gaps in modern labor practices could positively impact their engagement with extension advisory services. Women expressed a desire for training in digital learning and technical skills. One woman articulated: *We will feel confident approaching advisory services if trained to use new farming methods and technology.*

Another participant echoed this sentiment: *The more we learn, the more we can do. We need someone to show us how.*

### Social Norms and Women's Participation

Social norms, including cultural and traditional practices, significantly shaped women's agricultural participation and access to advisory services. Women revealed that male-to-female communication in their community was against the norms, making women-to-women communication a crucial strategy for change. A participant emphasized: *Talking to male extension officers is unacceptable here, but if women officers come, we are ready to learn.*

The study also identified barriers such as illiteracy, male dominance, and unawareness, which hindered women’s intentions to seek advisory services. Women expressed a collective desire to improve their status and access basic facilities. One participant shared: *We want to be educated and trained to make decisions and improve our lives.*

**Needs of Women Groups**

Women groups expressed specific needs that could enhance their involvement in agriculture. They highlighted the importance of behavioral control from men and recognition of their role in farming. A female participant noted: *We need men to value our efforts and involve us in decisions. Only then can we contribute more effectively.*

The discussions revealed that women were eager to practice farming and access extension services to gain knowledge about modern agriculture, kitchen gardening, and marketing. One woman stated: *We are ready to contact extension workers if they can help us improve our technical skills and make our work easier.*

**Role of Social Networks in Meeting Women’s Needs**

The study underscored the influence of social networks in rural areas, which were largely male-dominated. Men interacted primarily with fellow farmers and pesticide dealers, who often doubled as middlemen providing credit. Women, on the other hand, relied on female-to-female interactions.

A participant explained: *We discuss farming and household problems with other women but need more support from formal networks.* However, the findings also revealed a contradiction in perceptions regarding women’s freedom. Women reported restricted access to mobile phones and decision-making, while men claimed to provide complete freedom to their female counterparts. One woman voiced her frustration: *We are not allowed to own a phone or make decisions, but men say they have given us all the freedom we need.* Meanwhile, a male participant countered: *We trust our women and give them freedom, but they need to understand the limits set by our traditions."*

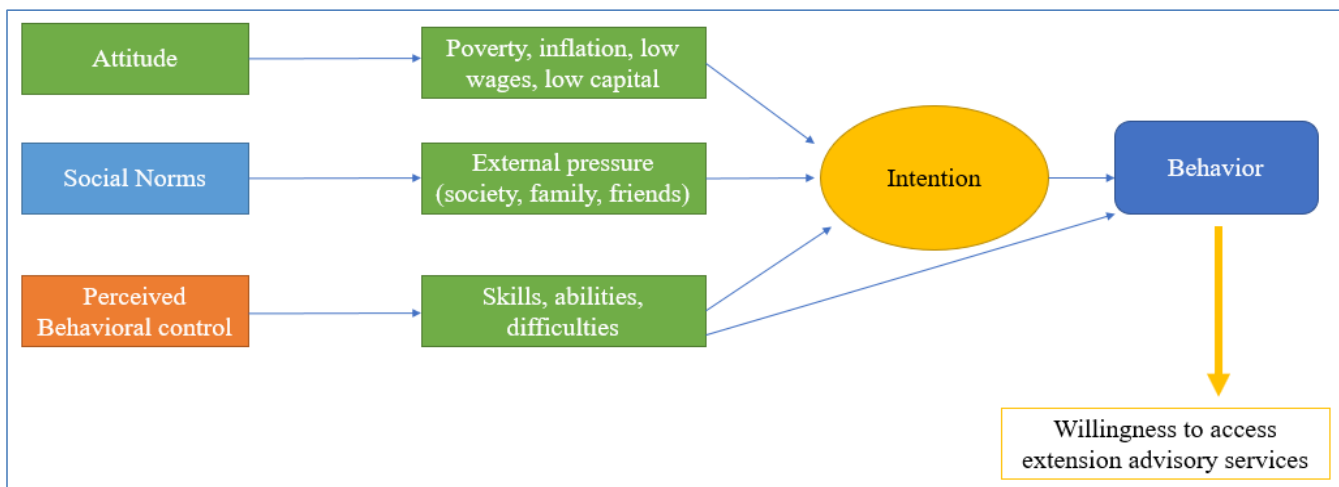


Figure 1. Application of the theory of planned behavior.

**DISCUSSION**

The study's findings will contribute to critical insights into socio-cultural and behavioral factors determining access to extension advisory services for rural communities. Exploiting this study to explore the Theory of Planned Behavior, a case emerged of how attitudes, social norms, and perceived behavioral control interplay to determine willingness and ability among men and women to access these services.

**Application of the Theory of Planned Behavior**

The results confirmed that attitudes play a significant role in determining access to extension advisory services. Both men and women expressed a generally positive attitude toward using advisory services. However, their willingness was constrained by financial barriers such as poverty, inflation, and low wages. These results align with previous research that has emphasized the role of economic conditions in affecting rural farmers' access to agricultural resources (Azadi et al., 2020; Moahid et al., 2021). The interesting feature of this study is its identification of the financial constraints

imposed on women disproportionately, thereby curtailing their participation and engagement. Removing these financial barriers, in the form of subsidies or through financial literacy programs, would drastically improve access among marginalized groups.

Social norms also played a critical role in determining access to extension services, especially for women. Cultural expectations were demonstrated to limit women's interactions with male extension workers, emphasizing the importance of gender-sensitive approaches in agricultural extension systems. Female respondents preferred female-to-female interaction and suggested that deploying female extension officers or forming women's groups could increase participation. These findings corroborate previous research highlighting the importance of culturally sensitive interventions in improving women's access to agricultural resources (Akter et al., 2020).

Culturally sensitive interventions are essential for improving women's access to agricultural resources by addressing gender norms, enhancing women's empowerment, and promoting equitable resource allocation, which in turn can lead to increased agricultural productivity, improved livelihoods, and better nutritional outcomes (Quisumbing and Pandolfelli, 2010; Lestari and Yuwana, 2023).

### **Social Norms and Women's Participation**

The results showed that social norms such as culture and tradition highly impacted women's participation in agriculture and decision-making. Findings indicated that, although women could work in the fields and gain access to advisory services, this was allowed only under strict adherence to the cultural norm. Mohiuddin et al. (2020), Jabeen et al. (2020), and Nazir et al. (2023) mention that women play a huge role in Pakistan's agriculture, mainly in the activities of manual labor and livestock rearing. However, there is still an issue like poor recognition, weak decision-making powers, and other socio-cultural obstacles that impede their empowerment and economic development. However, communication between males and females was not allowed, and therefore, the need for women's specific space and women-headed activities was stressed. Male-to-female communication in Pakistani agriculture farms is minimal due to uneven access to agricultural information, and the women mostly rely on informal sources and have fewer opportunities for access to formal channels (Luqman et

al., 2018; Lamontagne-Godwin et al., 2019). Women's self-help groups in India enhance information access and participation in agricultural decisions but have limited effects on agricultural practices or outcomes due to financial constraints, social norms, and domestic responsibilities (Raghunathan et al., 2019). Interestingly, the study pointed out a contradiction between men's perceptions of granting women freedom and women's actual experiences of restriction. Whereas men reported providing full freedom to women, female participants expressed frustration over their lack of autonomy, especially regarding decision-making and mobile phone usage. The contradiction calls for awareness campaigns challenging traditional gender norms and promoting equitable participation in agricultural activities.

### **Needs of Women Groups**

The women's groups indicated a keen desire for increased participation in farming and decision-making on a higher level. They specified that they want recognition and support from their male counterparts besides receiving technical training and resources. These results align with the increasing body of work advocating women's empowerment to increase agricultural productivity and enhance rural livelihoods (Mobarok et al., 2021). Women's empowerment in agriculture positively impacts agricultural productivity, efficiency, and rural livelihoods by enhancing decision-making and resource access and reducing gender gaps (Diirro et al., 2018). The women also showed keen interest in improving their technical knowledge, particularly in modern farming practices, kitchen gardening, and marketing.

This is consistent with a larger pattern of rural women looking to upgrade their skills to better contribute to household income and food security. Tailored extension programs could help empower women in these areas while improving agricultural outcomes. Extension programs can play an effective role in rural women's development because of increased involvement in agricultural activity, technical know-how, and skill improvement in relation to women-specific issues, which are essential tools for economic empowerment and food security (Ahmadpour et al., 2015; Khoja, 2021).

### **Role of Social Networks in Meeting Women's Needs**

Social networks played a fundamental role in structuring access to resources and advisory services. In rural areas,

men mainly interacted with fellow farmers, pesticide dealers, and landlords, while women relied on female-to-female interactions. Women's limited access to broader social networks and formal advisory services highlights a significant gap in the extension system. Male extension workers in Pakistan know that women access less information less often but may not realize its importance in the gender inequality debate (Lamontagne-Godwin et al., 2019). Women farmers play an essential role in farming activities, but extension strategies often overlook their significant role in the flow of information within a social system (Subedi and Garforth, 1996). Another vital factor of male dominance in the decision-making process was the family resources, which the men mostly managed and controlled their interactions with the actors. However, the study showed that if the proper support is offered, women could be ready to work more actively in farming and advisory services.

The gap can be bridged by initiatives incorporating women in formal social networks, such as starting women-led groups or using digital platforms. Male dominance in decision-making in Pakistan dramatically inhibits women's empowerment across social, political, and economic domains (Burfat et al., 2019; Gul et al., 2022).

### **Implications for Policy and Practice**

The findings of this study have several practical and policy implications. First, extension services should adopt a gender-sensitive approach by prioritizing female extension officers and coming up with spaces specifically meant for women's training and interaction. Gender-sensitive extension services enhance women's access to information on agriculture, increase their engagement in decision-making, and work to reduce the gender gap that exists in the extension systems by improving the production and innovation efficiency of both males and females involved in agriculture (Ragasa 2014; Ragetlie et al., 2022). Thirdly, extension advisory services should encompass skill development training programs for women, such as digital literacy, modern farming skills, etc. Extension services and innovative training programs enhance agricultural productivity and resilience, which are critical for sustainable agricultural development and food security (Raji et al., 2024). Skill development programs for women lead to increased financial empowerment, improved socio-economic status, enhanced confidence and decision-making abilities, and

greater participation in economic and social spheres (Bala, 2023; Pokharel, 2024). Third, it should tackle the financial disadvantage of rural people, such as subsidies, credit schemes, and financial literacy. Lastly, social mobilization among men and women is also necessary to address the traditional social norms that disallow equal involvement in agricultural production. There is a need for awareness campaigns for women farmers to promote sustainable farming practices, increase climate change awareness, improve farmland management, and empower women to enhance food security and economic benefits (Eneji et al., 2020; Ulayi et al., 2023). For example, the Network of Agroecological and Peripheral Female Urban Farmers in So Paulo, Brazil, has encouraged the development of a popular feminist collective identity and consciousness of oppressive social structures, including gender inequality and violence against women (De Carvalho et al., 2020).

### **CONCLUSION**

This study concludes that attitude, social norms, and perceived behavioral control are much more relevant to the intention of women to access advisory services. Women are playing an active role in agriculture, although their work is less acknowledged, and they have to face biases in terms of monetary benefits. Social norms play a key role in shaping attitudes, and they face both expected and unexpected challenges. To gain perceived behavioral control their access to advisory services is much behavioral control, their access to advisory services is much needed. Enhanced access to advisory services can encourage them and boost their productivity. They are not involved in decision-making and are not given rights to control over resources. In addition, women-centered extension services and approaches are not functional. Therefore, women-centered extension approaches should be introduced to facilitate women. Culturally sensitive approaches, skill enhancement programs, and women-led initiatives can break these barriers women are encountering. Education, social networks, and respect for cultural boundaries are necessary to create avenues for more inclusive agricultural development.

### **CONFLICT OF INTEREST**

The authors declare that there was no conflict of interest among authors in the context of this research work and publishing.

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