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Analysis of the Contribution, Competence Levels, and Challenges in Agricultural Practices Faced by Rural Women in Moosa Khatian, Taluka Hyderabad, Sindh

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Abstract

The study was conducted in Moosa Khatian, Taluka Hyderabad. Its purpose was to examine the economic contribution, competence levels, and challenges faced by rural women in the area. The sample size consisted of 120 women farmers, randomly selected from a list obtained from the Revenue Department. A survey method was employed, and a questionnaire was developed and implemented to gather the necessary responses. The results revealed that 65% of the women farmers were married, and 70% had formal education. More than 50% of the women farmers had experience in farming practices. The competence levels of the women farmers regarding agricultural activities such as picking, harvesting, weeding, sowing seeds, storage, and dyeing were found to be somewhat satisfactory. In contrast, their competence levels in poultry management—including raising poultry, collecting eggs, cleaning sheds, and managing diseases—were deemed satisfactory. For household management activities such as embroidery, stitching, basket making, handicrafts, wood collection, and house chores, competence levels ranged from satisfactory to good. In livestock management activities like food preparation for domestic animals, milking, whey production, and ghee making, the women farmers demonstrated good skills. However, the women farmers faced various constraints at the farm level, including a lack of communication with experts, insufficient knowledge, poor coordination, technical challenges, and difficulties in decision-making related to farming activities. Several recommendations were made, including training programs for women farmers in collaboration with women extension workers and NGOs. It is essential to provide women farmers with equal opportunities to participate in various field activities, as they play a crucial role in the farming community.

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Keywords: Economic Contribution, Farming Practices, Women Empowerment, Women in Agriculture

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INTRODUCTION

Agriculture is a primary sector in Pakistan, essential for providing food to its rapidly growing population. The country is deeply associated with agriculture and agro-based industries (GOP, 2024). The agricultural sector plays a crucial role in ensuring food security, driving economic growth, reducing poverty, and fostering industrialization (Sadaf et al., 2005). Women represent a significant portion of the workforce in agriculture, contributing extensively to various agricultural activities. Despite their vital contributions, the challenges faced by women in this sector remain largely unrecognized (Saxton & Morrison, 2003). Women play a central role in agricultural production, participating in every stage from soil preparation to post-harvest activities. This contribution is particularly evident in rural areas, where women are actively involved in crop cultivation, livestock

management, and household activities (Amin et al., 2009). Approximately 43% of the global labor force comprises women, with some regions seeing women accounting for as much as 70% of the agricultural labor force (Raju et al., 2011). Despite these figures, women's work in agriculture often goes unacknowledged and is undervalued by policymakers (Shelly et al., 2002). Women in rural Pakistan engage in a wide range of agricultural tasks, including cotton and vegetable picking, rice sowing, manual weeding, thinning, harvesting, and livestock management. They are also responsible for food security tasks such as food processing, home management, and marketing agricultural products (Rais et al., 2013). In many cases, women also contribute to the construction of about 25% of domestic labor in agriculture, while approximately 75% of overtime work in agriculture is performed by women (Larik, 2001).

Despite their significant involvement, rural women face numerous challenges in the agricultural sector. They work in difficult conditions, often facing poor treatment by landowners, delayed payments, and harsh working environments. Additionally, women are generally paid less than men for similar work, which undermines the recognition of their contribution to agriculture (Alvi, 2012). These challenges, coupled with cultural and socioeconomic barriers, hinder women's full participation in agricultural development and economic growth. Women's empowerment is a multifaceted concept that encompasses the ability to control one's life, make decisions, achieve economic independence, and secure legal protection against discrimination (Chaudhry & Noshseen, 2009; Astutik et al., 2020). Empowering women is essential not only for the advancement of national development but also for reducing poverty and promoting economic progress (Sohail, 2014). It involves challenging traditional gender norms, ensuring equal access to resources, and promoting women's participation in decision-making processes (Kabeer, 1999; Cornwall & Rivas, 2015). In agriculture, empowering women can enhance their contributions to food production, improve household incomes, and stimulate overall economic growth.

Globally, women contribute more than 40% of the agricultural labor force in 52 developing countries, with more than 50% in 24 of them (Yemisi & Mukhta, 2009). Despite their significant role, women's workload in agriculture is often underestimated, and there is a need to re-examine policies that aim to reduce women's work time without fully acknowledging their contributions. Rural women face various challenges such as discrimination, low wages, and insufficient recognition of their agricultural work. In the Taluka Hyderabad rural region of Sindh, agriculture is the dominant sector, with many women involved in agricultural occupations. Despite the critical role of women in this area, their economic contributions to household income are often overlooked. Previous research has highlighted the importance of rural women in agriculture; however, a gap still exists in understanding the full extent of their contributions and the constraints they face. This study aims to examine the economic contribution of rural women in the agricultural activities of Union Council Mosa Khatian, Taluka Hyderabad, Sindh, and the barriers they face in achieving economic independence. In order to address the issue and the research gap following objectives were set forth for the study:

1. To analyze the economic contribution of rural women through various agricultural and household activities.
2. To assess the competence level of rural women in performing roles related to agriculture production.
3. To analyze the constraints as faced by rural women in farm practices.

METHODOLOGY

The research was descriptive in nature. Descriptive research involves multiple choice type questions asked from the respondents. Responses were then reported and tabulated. Following methods and procedures were used in the present study.

Population and Sample: The study was conducted in the year 2023 under which primary data were collected using the purposive sampling technique, from the farming households of union council Moosa Khatian, Taluka Hyderabad. Survey research is designed to collect the information from 120 women those were house wives, working in field, caring livestock's who were selected by purposive sampling techniques. The five villages were taken randomly 12 households from each village total 60 households two women from each household were selected randomly.

Data Collection and Analysis: The data were collected through personal interviews from the selected sample of rural women by the researcher. A social survey was performed to fill out the questionnaire. Predetermined questions were asked through a direct interactive process by the respondents in order to achieve the specific objectives. Twenty-four females per village were randomly selected, those who were engaged in crop, livestock, and household management activities. A codebook was prepared in which all variables were entered for analysis. Statistical Package for Social Sciences (SPSS) was used to analyze the results statistically.

RESULTS

Selected Demographic Profile

Table 1 presents the data regarding selected demographic profile which indicated that 47.5% of the respondents belong to the agriculture occupation whereas, 11.7% of the respondents have the business and 40.8% of the respondents have other occupation, on the other hand majority of the respondents belong to the small family size (64.2%) and the second category fall into medium group (34.2%) and the only few respondents have large family (1.7%). A majority of the respondents had no formal education (30.8%) while (27.5%) of the respondents were up to primary and (29.2%) had the middle class education. Whereas majority of the respondents had cotton cropping experience, while (35.8%) had no experience.

Table 1:
Selected Demographic Profile

Occupation	Only agriculture	47.5%
	Only business	11.7%
	Other	40.8%
Family size	Small	64.2%
	Medium	34.2%
	Large	1.7%
Qualification	No formal education	30.8%
	Primary	27.5%
	Middle	29.2%
Cropping experience	Wheat	11.7%
	Cotton	51.7%
	Sugarcane	0.8%
	No experience	35.8%

Respondents according to their Participation level in agriculture field, the key findings from the data in table 2 indicate significant variation in participation across different

agricultural activities. Threshing and thinning are the least commonly performed tasks, with the majority of respondents reporting no involvement. In contrast, picking shows the highest level of engagement, with a notable proportion of respondents participating regularly. Sowing, harvesting, weeding, drying, and storage display moderate participation, with many respondents engaging occasionally but not always. The high standard deviations observed in activities like picking and sowing suggest a diverse range of involvement, indicating that some participants play more active roles in these tasks. Overall, the findings highlight both widespread non-participation in certain tasks and frequent engagement in others, reflecting varied roles and responsibilities among participants in the agricultural process.

Table 2:**Distribution of respondents according to their Participation level in agriculture field**

Participation	Never		Sometimes		Often		Always		Mean	S.D
	F	P	F	P	F	P	F	P		
Sowing	66	55	11	9.2	17	14.2	26	21.7	2.02	1.25
Weeding	70	58.3	14	11.7	18	15	18	15	1.87	1.15
Thinning	92	76.7	10	8.3	5	4.2	13	10.8	1.49	0.99
Harvesting	69	57.5	14	11.7	12	10	25	20.8	1.94	1.23
Threshing	109	90.8	11	9.2	0	0	0	0	1.09	1.09
Picking	49	40.8	6	5	14	11.7	51	42.5	2.56	1.38
Drying	77	64.2	19	15.8	9	7.5	15	12.5	1.68	1.06
Storage	85	70.8	19	15.8	8	6.7	8	6.7	1.49	0.88

Results from the data in table 3 reveal varied levels of participation in livestock-related activities. Milking and making whey have relatively high participation, with a significant portion of respondents engaging frequently, as indicated by their higher mean scores (2.3 and 2.13, respectively). In contrast, selling milk is the least common activity, with a majority of respondents not participating at all. Food preparation for animals, ghee collection, and animal cleaning show moderate levels of engagement, with some participants frequently involved, while others do not participate. The standard deviations for these activities suggest a fair amount of variability in involvement, indicating that some individuals take on more responsibilities than others. Overall, the data highlights both widespread non-participation in certain tasks and more frequent engagement in others, reflecting diverse roles and responsibilities in livestock management. The data in table 4 suggested that on poultry-related activities show moderate participation across the tasks.

Poultry raising has the highest level of engagement, with 17.5% of respondents reporting frequent involvement ("Always"), and a mean score of 1.94, indicating occasional participation by many. Egg collection shows a similar trend, with 60% of respondents not participating, while 20.8% engage regularly, resulting in a mean of 1.93. Shed cleaning is the least commonly performed activity, with 60.8% of respondents not participating, and a mean of 1.79, suggesting that it is less frequently done compared to the other tasks. The standard deviations for all activities (ranging from 1.15 to 1.24) indicate moderate variability in participation, showing that while some respondents regularly engage in these activities, others are less involved or do not participate at all. Findings from the data in table 5 on participation in handicraft and household activities reveal distinct patterns of involvement. House chores show the highest level of participation, with a mean score of 3.51, as 65% of respondents report engaging in these tasks "Always," reflecting a central responsibility in daily life. Stitching follows with a relatively high mean of 2.43, indicating moderate engagement, with 30% of respondents regularly involved.

Embroidery also shows a moderate level of participation, with a mean of 2.16 and 28.3% of respondents engaging "Often."

Table 3:**Distribution of respondents according to the livestock management**

Participation	Never		Sometimes		Often		Always		Mean	S.D
	F	P	F	P	F	P	F	P		
Food preparation for animal	58	48.3	13	10.8	30	25	19	15.8	2.08	1.17
Milking	53	44.2	14	11.7	17	14.2	36	30	2.3	1.3
Making of whey	57	47.5	19	15.8	15	12.5	29	24.2	2.13	1.25
Selling milk	78	65	6	5	18	15	18	15	1.8	1.17
Ghee collection	66	55	12	10	17	14.2	25	20.8	2.01	1.24
Animal and cleaning	54	45	15	12.5	21	17.5	28	23.3	2.19	1.24

Table 4:**Distribution of respondents according to their participation in poultry management activities**

Participation	Never		Sometimes		Often		Always		Mean	S.D
	F	P	F	P	F	P	F	P		
Poultry raising	70	58.3	8	6.7	21	17.5	21	17.5	1.94	1.21
Egg collection	72	60	9	7.5	14	11.7	25	20.8	1.93	1.24
Shed cleaning	73	60.8	20	16.7	6	5	21	17.5	1.79	1.15

In contrast, basket making and handicrafts have low participation rates, with most respondents indicating no involvement at all, reflected by their low mean scores of 1.07 and 1.42, respectively. Wood collection has moderate participation with a mean of 2.02, showing some variation in engagement across respondents. The standard deviations across activities, ranging from 0.36 to 1.26, suggest that while certain tasks like house chores are almost universally performed, others, like basket making and handicrafts, show high non-participation with a few individuals involved.

Table 5:**Distribution of respondents according to their economic / household management activities**

Participation	Never		Sometimes		Often		Always		Mean	S.D
	F	P	F	P	F	P	F	P		
Embroidery	51	42.5	17	14.20	34	28.3	18	15	2.16	1.13
Stitching	44	36.7	16	13.30	24	20	36	30	2.43	1.26
Basket making	115	95.8	3	2.5	1	0.8	1	0.8	1.07	0.36
Handicrafts	97	80.8	3	2.5	13	10.8	7	5.8	1.42	0.90
Wood collection	56	46.7	26	21.7	18	15	20	16.7	2.02	1.13
House chore	3	2.5	11	9.2	28	23.3	78	65	3.51	0.76

The results on the quality of agricultural activities presented in table 6 reveal varying levels of satisfaction across different tasks. Results are presented in table 6 which suggest that thinning has the lowest mean score (1.42), indicating that the majority of respondents rate it as "Not Satisfactory" or "Somewhat," with very few rating it as "Good" or "Excellent." Threshing also shows a low mean score of 1.13, reflecting a high percentage of respondents who find the activity unsatisfactory (90.8% rated it as "Not"). In contrast, picking receives the highest mean score of 2.7, with a substantial proportion of respondents rating it as "Good" or "Excellent" (39.1%). Other activities like sowing, weeding, harvesting, and drying all show moderate satisfaction, with mean scores

ranging from 1.73 to 1.97, suggesting that while some respondents are satisfied, many others are not. Storage has a relatively low mean of 1.53, indicating more dissatisfaction, though it is still higher than activities like thinning and threshing. The standard deviations range from 0.50 to 1.63, suggesting varying degrees of consistency in how participants rate each activity, with picking showing the most variability in satisfaction levels. Overall, the data highlights a trend of dissatisfaction with tasks like thinning and threshing, while other activities have a mix of satisfaction levels.

Table 6:
Competence level of rural women regarding agricultural activities

Agricultural activities	Not at all Satisfactory		Somewhat Satisfactory		Satisfactory		Good		Excellent		Mean	S.D
	F	P	F	P	F	P	F	P	F	P		
Sowing	67	55.8	13	10.8	22	18.3	13	10.8	5	4.2	1.97	1.25
Weeding	69	57.5	11	09.2	22	18.3	13	10.8	5	4.2	1.95	1.25
Thinning	91	75.8	15	12.5	8	6.7	5	4.2	1	0.8	1.42	0.85
Harvesting	70	58.3	11	9.2	17	14.2	14	11.7	8	6.7	1.99	1.34
Threshing	109	90.8	8	6.7	2	1.7	0	0	1	0.8	1.13	0.50
Picking	50	41.7	8	6.7	15	12.5	22	18.3	25	20.8	2.7	1.63
Drying	77	64.2	13	10.8	18	15	10	8.3	2	1.7	1.73	1.1
Storage	85	70.8	16	13.3	12	10	5	4.2	2	1.7	1.53	0.95

The data on livestock management activities in table 7 reveals varied levels of satisfaction among respondents. Milking and food preparation for animals have the highest mean scores (2.22 and 2.17, respectively), indicating that a significant portion of participants rate these activities as "Satisfactory" or higher, with moderate levels of satisfaction. Making whey follows closely with a mean score of 2.07, showing moderate satisfaction, although a larger proportion of respondents rate it as "Not Satisfactory." Selling milk has the lowest mean score (1.74), reflecting a higher level of dissatisfaction, as the majority (65.8%) rate it as "Not Satisfactory." Ghee collection and animal cleaning have similar mean scores of 1.98 and 2.08, respectively, indicating moderate satisfaction, with a mix of ratings across the five categories. The standard deviations for these activities (ranging from 1.11 to 1.23) suggest moderate variability in satisfaction, with some activities showing more consistent ratings, such as selling milk, and others displaying greater variation. Overall, the data highlights that while many respondents are satisfied with tasks like milking and food preparation, there is considerable dissatisfaction with activities like selling milk.

The data on the competence level of rural women regarding poultry management activities in table 8 shows that a large proportion of participants rate their competence as low in all three tasks. Poultry raising has the highest mean score (1.9), but still reflects a significant level of dissatisfaction, with 58.3% of respondents rating their competence as "Not Satisfactory." Egg collection follows closely with a mean of 1.86, with 60.8% of respondents also rating themselves as "Not Satisfactory" in this task. Shed cleaning has the lowest mean score (1.78), indicating that most respondents feel less competent in this activity, as 60.8% rate it as "Not Satisfactory." The standard deviations (ranging from 1.07 to 1.20) suggest some variability in the ratings, indicating that while the majority of respondents feel incompetent in these tasks, a smaller group considers themselves somewhat or more competent. Overall, the data highlights a general lack of confidence and competence in poultry management activities among the majority of rural women

Table 7:**Competence level of rural women regarding livestock management activities.**

Livestock management activities	Not at all Satisfactory		Somewhat Satisfactory		Satisfactory		Good		Excellent		Mean	S.D
	F	P	F	P	F	P	F	P	F	P		
Food preparation for animal	56	46.7	12	10	31	25.8	18	15	3	2.5	2.17	1.23
Milking	53	44.2	11	9.2	36	30	17	14.2	3	2.5	2.22	1.22
Making of whey	57	47.5	16	13.3	3	27.5	9	7.5	5	4.2	2.07	1.19
Selling milk	79	65.8	7	5.8	21	17.5	12	10	1	0.8	1.74	1.11
Ghee collection	67	55.8	12	10	20	16.7	18	15	3	2.5	1.98	1.2
Animal and cleaning	56	46.7	17	14.2	32	26.7	11	9.2	4	3.3	2.08	1.18

Table 8:**Competence level of rural women regarding poultry management activities**

Poultry	Not a all Satisfactory		Somewhat Satisfactory		Satisfactory		Good		Excellent		Mean	S.D
	F	P	F	P	F	P	F	P	F	P		
Poultry raising	70	58.3	10	8.3	27	22.5	8	6.7	5	4.2	1.9	1.20
Egg collection	73	60.8	7	5.8	27	22.5	10	8.3	3	2.5	1.86	1.17
Shed cleaning	73	60.8	9	7.5	31	25.8	5	4.2	2	1.7	1.78	1.07

The data presented in the table 9 on the competence level of rural women regarding household management activities reveal varying levels of self-assessed competence. House chores receive the highest mean score of 4.02, indicating a strong sense of competence, with 40.8% of respondents rating themselves as "Excellent" and 27.5% as "Good." Stitching also shows a relatively high level of competence, with a mean score of 2.57, reflecting moderate to high competence across a larger group of participants. Embroidery and wood collection have mean scores of 2.31 and 2.09, respectively, suggesting moderate competence, with many respondents rating themselves as "Somewhat" or "Satisfactory." Handicrafts shows lower competence, with a mean of 1.46, indicating that fewer respondents feel confident in this activity. Basket making has the lowest mean score of 1.08, with almost all respondents rating themselves as "Not Satisfactory." The standard deviations range from 0.39 to 1.45, indicating varying levels of variability in the competence ratings, with activities like basket making showing little variation and stitching having more dispersed ratings.

Overall, rural women report high competence in tasks like house chores and stitching, but lower competence in specialized activities such as basket making and handicrafts. The data in the table 10 on the constraints faced by women farmers reveals that economic and financial challenges are the most significant barriers they encounter. Not having own money (mean = 2.32) and transport constraints (mean = 2.46) are the most pressing issues, with respondents indicating these factors as substantial obstacles. Weak economic condition also presents a significant constraint with a mean of 2.28. Other challenges, such as lack of communication (mean = 1.67), lack of coordination (mean = 1.66), and lack of knowledge (mean = 1.83), are perceived as moderately impactful, though they are less severe compared to economic constraints. Lack of adoption of agricultural technology (mean = 1.81) and technology being difficult to understand (mean = 1.74) also pose challenges but to a lesser extent. The standard deviations across

these constraints suggest that while there is some variation in the responses, economic and transport-related constraints are consistently identified as significant issues for women farmers.

Table 9:

Competence level of rural women regarding household management activities

Household activities	Not at all Satisfactory		Somewhat Satisfactory		Satisfactory		Good		Excellent		Mean	S.D
	F	P	F	P	F	P	F	P	F	P		
Embroidery	51	42.5	17	14.2	25	20.8	18	15	9	7.5	2.31	1.35
Stitching	44	36.7	15	12.5	25	20.8	20	16.7	16	13.3	2.57	1.45
Basket making	115	95.8	2	1.7	2	1.7	1	0.8	0	0	1.08	0.39
Handicrafts	97	80.8	3	2.5	10	8.3	8	6.7	2	1.7	1.46	1.01
Wood collection	57	47.5	14	11.7	35	29.2	9	7.5	5	4.2	2.09	1.2
House chore	3	2.5	7	5.8	28	23.3	33	27.5	49	40.8	4.02	1.06

Table 10:

Constraints faced by women farmers

Constraints	Mean	S.D.
Lack of communication	1.67	.613
Lack of knowledge	1.83	.626
Lack of coordination	1.66	.655
Lack of adoption of agricultural technology	1.81	.759
Technology difficult to understand	1.74	.716
Weak economic condition	2.28	.688
Not having own money	2.32	.767
Transport constraints	2.46	.697

CONCLUSIONS AND RECOMMENDATIONS

The findings indicate that rural women face significant variability in their participation and satisfaction levels across agricultural, livestock, and household activities. While tasks like house chores and picking show high levels of consistent involvement, activities such as thinning, threshing, and selling milk are less commonly performed, highlighting the uneven distribution of roles. Women express moderate satisfaction with activities like milking and food preparation for animals, but there is considerable dissatisfaction in tasks like selling milk. Competence levels vary, with women reporting higher proficiency in household tasks like stitching and house chores, while tasks like basket making and handicrafts are marked by low competence, often due to limited training or resources. Additionally, economic constraints, such as weak economic conditions and lack of own money, emerge as the most significant barriers for women farmers, further compounded by challenges like transport constraints and difficulty in adopting new agricultural technologies. To address these challenges, several recommendations are proposed. Providing targeted training and skill development in agricultural and non-agricultural activities will enhance women's competencies and economic independence. Improving financial access, such as through microloans and savings programs, would empower women to invest in resources and technology. Efforts should also focus on simplifying technology adoption by introducing user-friendly tools and training. Strengthening communication and coordination among women farmers, agricultural services, and authorities would improve access to information and resources, while improving rural infrastructure—particularly transportation—would ease logistical challenges. Finally, policies supporting gender-inclusive agricultural programs and

addressing economic constraints are essential to fostering women's full participation and empowerment in rural economies. These interventions would help improve rural women's productivity and socio-economic well-being.

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