



Evaluating the Impact of Women's Time in Pulses Value Chain on Household Food and Nutrition Security in Pakistan

Women's time poverty and household food and nutrition security in Pakistan

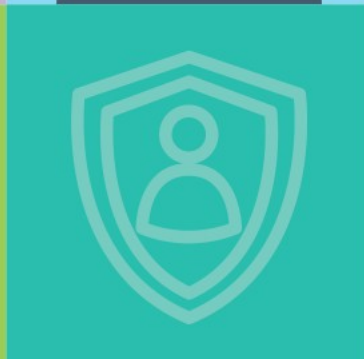
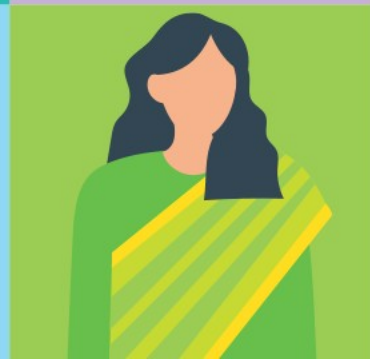
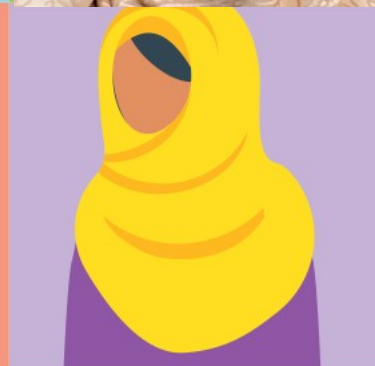
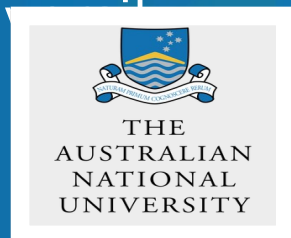
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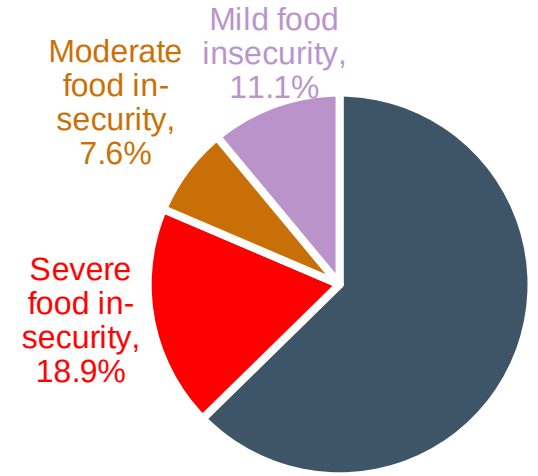
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Does household food and nutrition insecurity exist in Pakistan?

- Agro-based economy: food insecure population (36.9%) and undernourished population (20.5%) (NNS, 2018).
- This situation is more worse in rural areas.
- Women can play an important role in achieving rural household food and nutrition security.
- Women agricultural employment comprises 65% of all working women in the country.
- Rural women's earning is only 18% of their men's earning.
- If female farmers and laborers would have same access to resources and opportunities, then there would be 100 to 150 million fewer hungry people in the world (SC, 2014).



Are rural women time poor?

- Majority of agricultural interventions demand **feminization of agriculture** (Picchioni et al., 2020).
- Rural women spend time to **productive tasks, reproductive tasks** and **non-productive tasks**.
- An increase in women's time to productive activities can increase their **time poverty**, which can impair their reproductive tasks leading to poor women and child health and **household nutrition outcome** (Pandey et al., 2016; Ruel et al., 2018).
- Therefore, by ignoring time constraints of women, extant literature has failed to document a clear evidence of nutritional improvement through agricultural interventions.
- There is lack of empirical evidence on how women's time trade-offs mediate household food and nutrition security in rural economy.



Pulses Production and Women Role in Pakistan

D4N 2023

- **Pulses** are rich in protein (20-40%) and low in prices-meat of poor people
- Pakistan's pulses production is 0.7 million tons, while pulses consumption is 1.5 million tons.
- Pakistan imports 0.8 million tons of pulses at an annual cost of USD360 million from Canada, the USA, Australia, China, Russia, Ukraine and Africa.
- Enhancing pulse productivity is important for food and nutrition security and gender equality in Pakistan (Khan, 1990).
- Pulses are considered as **women's crop** But how much rural women contribute to household food and nutrition security is not computed yet.
- **ACIAR** funded project "**Developing Competitive and Inclusive Value Chain of Pulses in Pakistan**"
- Developing women included pulses value chain in Pakistan



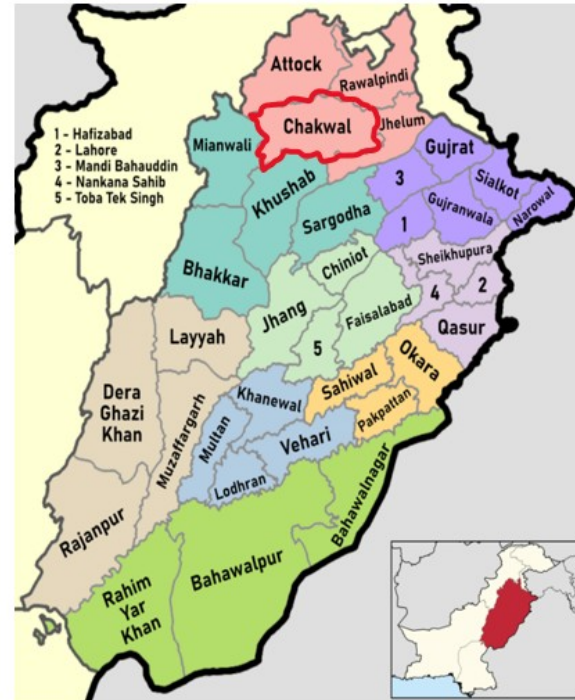
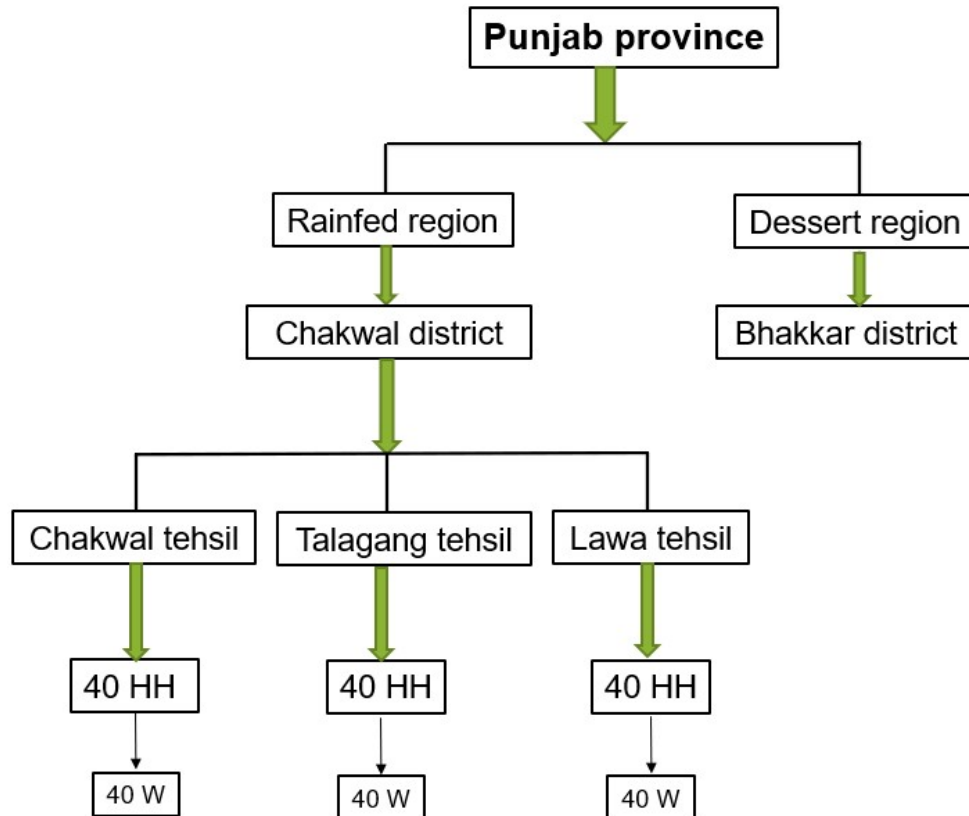
Study Objectives

The specific objectives of this study are to:

- investigate role of pulses in nutrition value chain of rainfed region of Pakistan
- evaluate the impact of rural women's time allocation to pulses value chain (PVC) on household food and nutrition security in rainfed region of Pakistan



Data Collection



This study used a pretested and structured questionnaire comprising on three sections:

- household and women socioeconomic information, mapping nutrition value chain,
- seven days recall food consumption approach,
- Time use survey tool (a full 24-hour fixed interval time diary using half-hour division)

Figure 1: A six-stage sample selection technique

Table 1 Characteristics of rural women participating in pulses value chain

Table 1	Mean	Stan. Dev.
Age (years)	52.008	14.912)
Education (years)	4.775	5.225
Currently married (%)	81.67	38.856
Weight (kg)	58.275	1.058
Height (m ²)	1.594	0.069
Body mass index (kg/m ²)	22.990	4.592
Total waking time (hours/day)	16.108	2.617
Allocation of time to agricultural productive tasks (hours/day)	4.500	2.983
Allocation of time to pulses productive tasks (hours/day)	2.700	1.790
Allocation of time to household reproductive tasks (hours/day)	6.329	2.177
Allocation of time to non-productive tasks (hours/day)	5.279	1.846
Agricultural tasks performed (No.)	3.700	2.332
Owned livestock (TLU)	0.725	0.840
Owned cultivated land (acre)	0.278	(0.478)
Personal income (Rs/month)	22,491.670	22,523.940

Table 2 Characteristics of rural households involved in pulse production

Table 2	Households (120)
Family size (No.)	5.925 (2.434)
Pulses grown for subsistence vs commercial purposes (%)	49.167 (50.203)
Income (Rs/month)	39,908.33 (22,304.61)
Lawa tehsil (%)	33.33
Talagang tehsil (%)	33.33
Chakwal tehsil (%)	33.33

- About **49%** of rural households cook their own produced pulses
- Remaining **51%** of rural households sold pulses after keeping them for household consumption

Gender Participation in Pulses Value Chain in Chakwal District of Pakistan

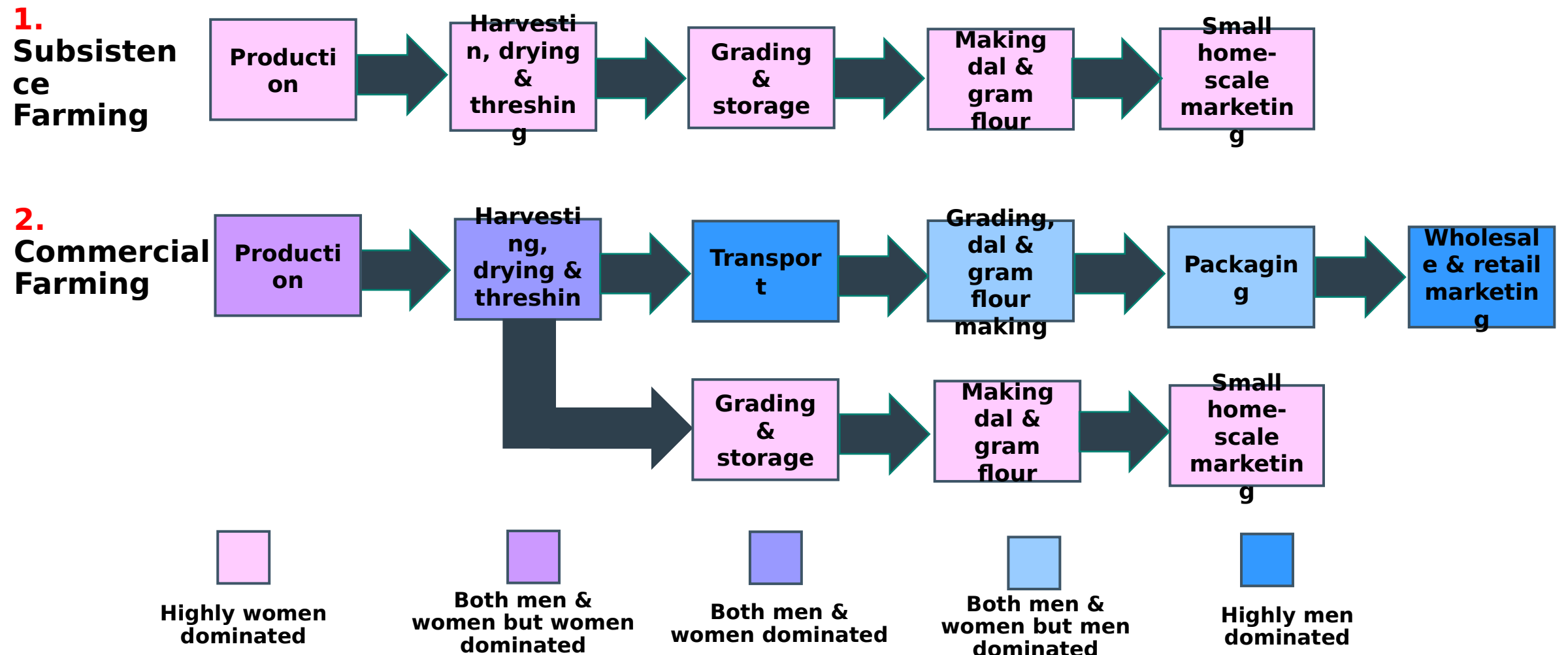


Table 4 Determinants of household food consumption

Table 4	Calorie consumption (Kcal/AE/day)
Women's characteristics	
Age (years)	74.205**
Age square (years)	-0.734**
Education (years)	-10.492
Currently married (%)	209.692
Body mass index (kg/m ²)	-
Allocation of time to pulses productive tasks (hours/day)	217.142**
Allocation of time to household reproductive tasks (hours/day)	73.671*
Allocation of time to non-productive tasks (hours/day)	38.862
Owned livestock (TLU)	171.564*
Land ownership (dummy)	9.826
Household characteristics	
Pulses grown for subsistence vs commercial purposes (%)	-
Household income (log)	1258.379***
Lawa tehsil ^a	33.572
Talagang tehsil ^a	34.267

Table 5 Determinants of household dietary diversity

Table 5	Dietary diversity (score)
Women's characteristics	
Age (years)	0.141***
Age square (years)	-0.002***
Education (years)	-0.014
Currently married (%)	0.377
Body mass index (kg/m ²)	-
Allocation of time to pulses productive tasks (hours/day)	0.333***
Allocation of time to household reproductive tasks (hours/day)	0.120**
Allocation of time to non-productive tasks (hours/day)	0.072
Owned livestock (TLU)	0.297**
Land ownership (dummy)	-0.120
Household characteristics	
Pulses grown for subsistence vs commercial purposes (%)	-
Household income (log)	1.251***
Lawa tehsil ^a	-0.252
Talagang tehsil ^a	0.006

Conclusion and Recommendations

- Rural women are mediators to agriculture-nutrition pathway
- Women involved in PVCs not only help to improve household's access to protein rich grains but also helps to enhance dietary diversity
- National and international organizations should devise agricultural interventions focusing on increasing participation of rural women in PVCs.
- This ACIAR project supported women in small scale income generating interventions
 - home made gram flour (**Women Barani Besan**) and linking to local markets



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Thank You

