

## Cotton Picking Bag – Adaptability, Acceptability and Feasibility among Rural Women

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### ABSTRACT

Rural women play a pivotal role in Indian agriculture. They perform key agricultural tasks in all regions of the world ranging from hoeing to harvesting, threshing and post harvesting operations. All these activities stretch on throughout the day due to which women work hard for longer hours in the field and at home. Life of women is therefore, full of drudgery and they face a lots of health problems at every moment. Keeping these facts in mind new technology (cotton picking bag) was introduced for cotton pickers to relive from drudgery as well as other health problems. The study was undertaken in four villages namely, Dhandakheri, Dumerkhan, Dhigana and Pandu Pindara of Jind district of Haryana state. The study was conducted on purposively selected samples of 100 rural women respondents (25 from each village) who were actively involved in cotton picking. After getting training 73 to 89 per cent of rural women were highly skilled in drafting, cutting and stitching of cotton picking bag. Regarding overall adoption feasibility, maximum AFI score was 93.46 per cent followed by 88.46 per cent on attributes like practicability and cultural compatibility which indicates high adoption potential of cotton picking bag among rural women.

**Key words:** Drudgery, Knowledge gain, perceived adoption feasibility index, acceptability, cotton picking bag

### INTRODUCTION

Women perform key agricultural tasks in all regions of the world ranging from hoeing to harvesting, threshing and post harvesting operations. All these activities stretch on throughout the day due to which women work for longer hours because she had not only to toil on the field but also has to work hard at home to feed. Life of women is therefore, full of drudgery and health problems at every moment (Urmila, *et al.* 2014). About 75 per cent of the rural women belong to the families of small and marginal farmers. About two-third of them are illiterate and irrespective of their degree of affluence, they provide 14-18 hours in productive physical labour everyday in a wide variety of activities directly connected with agriculture, domestic and allied chores.

Cotton picking is a tedious job in which women usually use rough jute rectangular cloth jute pallis, old used bed sheet like cloth and synthetic drapper duppata. They tie this cloth like a bag on their back like tying two ends of cloth over head or cross around the shoulder and rest two ends around the waist line. This is the traditional method of making *jholi* for cotton picking. When they carry heavy load of cotton on their back they feel pain or

stress which affect their health as well as efficiency in work. Keeping in view all health problems and drudgery parameters a cotton picking bag was designed to reduce strain and health problems of cotton pickers. This cotton picking bag is made up of grey double width malacia/markin fabric and stitch according to the waist size of the user. Length of cotton picking bag was below the waist line and on front side open pocket like design made it comfortable to put the cotton into bag. Cushion straps on shoulder also make it comfortable to carry heavy cotton weight/ loads.

In view of these facts, it was considered necessary to study self reported cases of illness during cotton picking, perceived adoption feasibility and acceptability of cotton picking bag on the basis of parameters related to health, adoption level according to age of rural women.

### METHODOLOGY

The study was undertaken in four villages namely Dhandakheri, Dumerkhan, Dhigana and Pandu Pindara of Jind district of Haryana state. The study was conducted on purposively selected samples of 100 rural women respondents (25 from each village) who were actively

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involved in cotton picking activity. Before conducting training, survey was conducted to know the self reported cases of illness during cotton picking. Keeping in mind the facts a well planned training programme was introduced to motivate farm women respondents which include campaign, written material, motivational lectures, skill training and demonstration on how to tie and use of cotton picking bag. After a span of period knowledge gain and perceived adoption feasibility of cotton picking bag was assessed on four attributes of innovations like relative advantage, physical and cultural compatibility, simplicity/ complexity and practicability/ triability. Perceived acceptability was also observed by determining comparison between *Jholi* (traditional cloth) and cotton picking bag in terms of health problems and strains. Data were collected by interviewing the rural women respondents with the help of structured interview schedule. Collected data were tabulated and calculated by using mean score, weighted mean score, rank, frequency, percentage and adoption feasibility index.

## RESULTS AND DISCUSSION

The personal profile of rural women has been presented in Table 1. It is evident from Table 1 that most of the rural women (52.0%) belong to middle age group followed by old age group (31.0%) and majority of women were married (80.0%). About 67 per cent of the rural women were farm labourer followed by farmers (33%), out of which 29 per cent had medium size land holding where as only 4 per cent of women had large size of land holding.

**Table 1: Distribution of women respondents according to their personal characteristics**

		n=100	
Characteristics		Frequency	Percentage
Age (years):	Young (15-30)	17	17
	Middle (31-45)	52	52
	Old (46-60)	31	31
Marital Status	Unmarried	9	9
	Married	80	80
	Widow	11	11
Occupation of family	Farm Labourer	67	67
	Farmer	33	33
	Govt. job	00	00
Size of land holding	No land	67	67
	Small (1-2 acres)	29	29
	Medium (3-5 acres)	04	04
	Large (6 and above)	00	00

### Self reported cases of illness during cotton picking

It can be inferred from the results in Table 2 that a majority of the women were suffering from backache (75%), wrist pain (66%), hand strain (54%) and skin

allergies (47%), respectively. The women were also suffering from headache (38%) whereas 21 per cent of women reported neck pain and 20 per cent reported the problems of irritation in eyes, nose and throat, respectively at the time of cotton picking.

The rural women suffered from backache, wrist pain and head strain and got rank I, II and III, respectively. This may be due to two reasons *i.e.* first of *Jholi* was not comfortable in use and it was not made up of cotton cloth, second, after picking of cotton for long hours and heavy load they got rashes on their shoulders due to coarse cloth and felt heavy strain and pain on back.

**Table 2: Self reported cases of illness during cotton picking**

Health Problems	Frequency	Percentage	Rank
Headache	38	38	VII
Backache	75	75	I
Neck pain	21	21	IX
Bronchitis	23	23	VIII
Skin allergies	47	47	V
Body pain	52	52	IV
Wrist pain	56	56	II
Hand strain	54	54	III
Suffocation	45	45	VI
Irritation in eyes, nose and throat	20	20	X

Multiple responses

### Knowledge gain after training programme

The data presented in Table 3 depicts the knowledge gain of the rural women regarding skilled training of cotton picking bag which include different parameters from taking measurement to stitching process. It is interesting to note that 89 percent of women were found highly skilled and getting perfection in stitching of cotton picking bag, followed by cutting (81%) and drafting (73%). This shows that women get high knowledge of stitching of cot bag, ready to use this new technology and work in a healthy way.

**Table 3: Knowledge gain after training programme**

Components	Pre-exposure (f)	Pre-exposure (f)	Gain in knowledge (f)
Taking measurements	00	72	72
Making drafting	00	73	73
Cutting of cloth	00	81	81
Stitching of cotton picking bag	00	89	89

Perceived adoption feasibility was assessed on four parameters. A perusal of data in Table 4 revealed that ranking of parameters pertaining to relative advantage explained the fact that Ist rank was assigned by rural women to multiple use potential (m.s. 2.87) and time saving ranked IInd (m.s. 2.83) and consistency of use got 3rd rank with mean score of 2.72, respectively. Overall adoption feasibility index score was 82.46 per cent which

shows high percentage of perceived adoption feasibility. It means while using cotton picking bag women save time because they can pick more cotton in lesser time and they can use this bag for other purpose also like picking of vegetables and flowers. The findings are in consonance with Gandhi, *et al.*, (2011).

Regarding compatibility of cotton picking bag rural women found that the bag was socially compatible (m.s. 2.82), rank 1st, physically compatible (m.s. 2.70) and culturally compatible got 3rd rank. As far as simplicity and complexity, the scores of application simplicity was high with mean score of 2.72 (ranked 1st). This might be due to that rural women easily made cotton picking bag at their own level after getting training on stitching of cotton picking bag.

The results are in line with Yadav, *et al.* (2012). Attribute wise ranking of practicability further highlights the fact that three attributes like visibility of results, demonstrability and communicability were ranked 1st, 2nd and 3rd and highest mean score was 3.00 to the visibility of cotton picking bag and overall adoption feasibility index score was 93.46 per cent which shows that after getting training rural women found themselves equipped with the full knowledge to communicate this technology to other women also who are cotton picking labourers or have keen interest to learn this techniques of stitching of cotton picking bag to give them relief from pain and strain.

**Table 4: Perceived adoption feasibility of cotton picking bag n=100**

Attributes	Response Category			Weighted Mean Score	Mean Score	Rank
	Agree	Undecided	Disagree			
<b>Relative Advantage</b>						
Low initial costs	27(81)	58(116)	15(15)	212	2.49	V
Monetary benefit	20 (60)	59(118)	21(21)	199	2.58	IV
Consistency of use	65(195)	26(52)	09(09)	256	2.72	III
Time Saving	85(255)	13(26)	02(02)	283	2.83	II
Multiple use potential	89(267)	09(18)	02(02)	287	2.87	I
<b>Total</b>				1237		AFI-82.46%
<b>Physical &amp; Cultural Compatibility</b>						
Cultural Compatibility	75(225)	17(34)	08(08)	267	2.67	III
Physical Compatibility	77(231)	16(32)	07(07)	270	2.70	II
Situational Compatibility	62(186)	35(70)	03(03)	259	2.59	IV
Social Compatibility	79(237)	18(36)	03(03)	276	2.76	I
Relational Compatibility	63(189)	29(58)	08(08)	255	2.55	V
<b>Total</b>				1327		AFI-88.46%
<b>Simplicity/Complexity</b>						
Cognitive Simplicity	32(96)	15(30)	53(53)	179	1.79	V
Applicable Simplicity	81(243)	12(24)	07(07)	274	2.74	I
Adoption Simplicity	78(234)	13(26)	09(09)	269	2.69	II
Resource Simplicity	75(225)	13(26)	12(12)	263	2.63	III
Reversibility	73(219)	16(32)	11(11)	262	2.62	IV
<b>Total</b>				1247		AFI-83.13%

<b>Practicability</b>						
Communicability	87(261)	08(16)	05(05)	282	2.82	III
Visibility of Results	100(300)	-	-	300	3.00	I
Demonstrability	92(276)	07(14)	01(01)	291	2.91	II
Triability	84(252)	09(18)	07(07)	277	2.77	IV
Provision of modification	69(209)	14(28)	17(17)	252	2.52	V
<b>Total</b>				1402		AFI-93.46%

Figure in parenthesis shows corresponding frequency  
AFI- Adoption feasibility index

**Perceived acceptability of cotton picking bag**

It is clear from the data presented in Table 5 that majority (75% and 73%) of rural women faced the health problems like pain in upper back and lower back while using *Jholi* at the time of cotton picking. On the other hand only 15 per cent and 13 per cent of women reported upper and lower back pain, respectively while using cotton picking bag. This may be due to the fact that bag was designed according to respondents’ measurements and beside 21 per cent, only 3 per cent of women reported neck pain because cushion strap of bag made it comfortable for use. These findings are comparable with Dahiya and Yadav, (2014).

**Table 5: Perceived acceptability of cotton picking bag**

Health Problems	Using <i>Jholi</i> (Conventional Bag)		Using Cotton Picking Bag	
	Frequency	Percentage	Frequency	Percentage
Pain in shoulder joints	68	68	19	19
Pain in upper back	75	75	13	13
Pain in lower back	73	73	15	15
Wrist pain	54	54	11	11
Backache	71	71	18	18
Headache	38	38	4	4
Grip stress	36	36	5	5
Neck pain	21	21	3	3

**Distribution of respondents according to their level of adoption**

The data in the Table 6 further revealed that middle and young age group of rural women had favourable attitude (53.8 % and 52.9%) to adopt cotton picking bag as compared to old age group i.e 6.45 per cent only. This might be due the facts that young and middle aged group had keen interest in learning new skills and also curious to use new things / techniques for their benefits.

It is interesting to note that 53.8 percent of middle age group and 52.9 per cent of young age rural women had favourable or high level of adoption for cotton picking bag.

**Table 6: Distribution of women respondents according to their level of adoption of cotton picking bag**

Level of Adoption	Young Age		Middle Age		Old Age	
	Frequency	%	Frequency	%	Frequency	%
Unfavourable( Low)	03	17.6	10	19.2	18	58.0
Some what favourable(Medium)	05	29.4	14	26.9	11	35.4
Favourable (High)	09	52.9	28	53.8	02	6.4

### CONCLUSION

Based on the results it can be concluded that 89 percent of rural women were found highly skilled in stitching of cotton picking bag. Overall perceived adoption feasibility index (AFI) was 93.46 per cent followed by 88.46 per cent on attributes like practicability and cultural compatibility. This indicates that after getting training rural women found themselves equipped with full knowledge to communicate and share this technology with other women who are cotton picker labourers and have potential to get relief from pain and strain.

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### REFERENCES

Dahiya, R. and Yadav, N. 2014. Acceptability of cotton picking bag among farm women. *Journal Cotton Research Development* 28(1): 145-149.

Gandhi, S.; Yadav, N. and Dilbagi, M. 2011. Booklet on "Kapas chugai ka Muskil Kaam, Unnat bag ne kiya aasan". Published by Deptt. of Clothing and Textiles & Family Resource Management, CCSHAU, Hisar. PP. 23-28.

Urmila, D., U.; Verma, S.K. and Yadav, M. 2014. Intergender work load in cotton cultivation among rural women. *Journal Cotton Res. Dev.* 28(1): 150-153.

Yadav, B.; Dahiya, R. and Kundu, P. 2012. Cot Bag: Drudgery reducing and entrepreneurial innovation for farm women. Paper presented In: National seminar on "Scenario of women in agricultural and future projections". CCSHAU, Hisar. Feb.16-17.