Knowledge and Adoption Level of Improved Vegetable Farming Practices of SHG Members and Non-members in Himachal Pradesh, India

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ABSTRACT

Vegetable farming has found its way deeper in hill agriculture. Off-season vegetable production in hills enable consumers to get fresh vegetable all around the year along with harvesting more monetary value from small hill farms. As most of the land holdings are marginal in Himachal Pradesh, group action in vegetable production has emerged as new hope for clubbing efforts on small farms. Self-help groups are being promoted for taking vegetable production as a joint venture of farmers at village level.The present study was undertaken in the state of Himachal Pradesh to find out the socio-economic and communication profile of SHG members and non-members, to appraise and compare the knowledge and adoption level of improved vegetable farming practices of the members and non-members and to delineate the factors affecting the knowledge and adoption level of improved vegetable farming practices. From 30 randomly selected SHGs, 150 members were selected randomly and 150 non-members also selected randomly were included for the study. Most of the members were young while non-members were middle aged. SHG formulation was dominated by female members. Both members and non-members were marginal farmers. Members' knowledge and adoption level of improved vegetable farming were found to be medium while non-members were in low knowledge and adoption category. SHG programme improved socio-economic status of the members and positively influenced knowledge gain and adoption of technologies in the farms.

Key words: *Adoption Level; Vegetable farming; Knowledge level; SHG;*

A Self-help Group (SHG) is an informal homogeneous democratic group of 10-20 people joining together voluntarily to deal with common problems with an underlying philosophy of mutual help and collective wisdom. Government agencies through SGSY, Non-government Organizations, Banks, Development Agencies and Autonomous Bodies like State Institute of Rural Development are promoting SHGs all over the country. Vegetable farming is one of the important activities undertaken by these groups and significantly contributing in empowering them socially, economically and politically. In Himachal Pradesh, vegetable farmingcontributes significantly on poverty reduction in rural areas. The successes of these SHGs depend on the extent of knowledge possessed and adoption level of improved vegetable farming practices by the members. Little is known about their knowledge and adoption of improved vegetable farming practices by the SHG members in Himachal Pradesh. Thus, the present study was undertaken with the following objectives:

i. To find out the socio-economic and communication profile of the SHG members and non-members
ii. To appraise and compare the knowledge and adoption level improved vegetable farming practices of the members and non-members
iii. To delineate the factors affecting the knowledge and adoption level of improved vegetable farming practices.

METHODOLOGY

The study was conducted in the state of Himachal Pradesh. From the state, six districts were selected randomly covering three divisions of the state. From

each selected district 5 vegetable growing self-help groups were selected and from selected 30 self- help groups, 5 members from each were selected randomly to collect data thereby making a total of 150 SHG member respondents.Correspondingly, 150 non-members from the adjacent villages with similar socio-economic background were selected randomly to collect data on vegetable farming and the total sample size for the present study was 300. For the present study, socio-economic and communication characteristics, viz. age of the farmers, gender, educational attainment, experience in vegetable farming, occupation, community relation, access to resources and support services, number of training undergone, loan received, total operational land holding, annual vegetable production, media exposure and extension contact of the farmer were selected. To judge the impact of the study, two dependent variables, knowledge and adoption of improved vegetable production practices was measured by using knowledge test developed by *Yadav (2013)* and adoption index developed by *Singh et al (2011)* respectively with suitable modifications. Data was collected using an interview schedule which was pre-tested in a non-sample area. The data thus generated was subjected to various statistical analyses including correlation and multiple regressions using SPSS software.

Table 1. Socio-economic and Communication Profile of SHG members (M1) and non-members (M2)

Category	M1 (n=150)	M2 (n=150)	Z-value
Age (in years)			
Young (<35)	49 (32.67)	25 (16.67)	
Middle(36-50)	65 (43.33)	70 (46.67)	
Old (>50)	36 (24.00)	55 (36.66)	
Mean value	44.83	47.88	-6.12**
Gender			
Male	20 (13.33)	50 (33.33)	
Female	130 (86.67)	100 (66.67)	
Education Level			
Illiterate	0 (0)	0 (0)	
Functional literate	22 (14.67)	43 (28.67)	
Primary School	27 (18.00)	37 (24.67)	
Middle School	32 (1.33)	40 (26.67)	
High School	46 (26.67)	20 (13.33)	
Senior Secondary	21 (14.00)	10 (6.67)	
Graduate & above	8 (5.33)	0 (0)	
Experience (in years)			
Short (<10)	101 (67.33)	114 (76.00)	
Medium (10-14)	31 (20.67)	20 (13.33)	
Long (>14)	18 (12.00)	16 (10.67)	
Mean value	8.64	7.82	1.49^{NS}
Occupation			
Vegetable farming	29 (19.33)	18 (12.00)	
Vegetable farming+ Other agricultural activities including agriculture labourer	79 (52.67)	94 (62.67)	
Vegetable farming + Business/service	42 (28.00)	38 (25.33)	
Community Relations			
No (0)	22 (14.67)	45 (30.00)	
Low (1)	41 (27.33)	63 (48.00)	
Medium (2)	62 (41.33)	36 (24.00)	
High (3)	25 (16.67)	6 (4.00)	
Mean value	1.56	1.02	4.97**
Access to the resources and support services			
Less (<3)	49 (32.67)	96 (64.00)	
Medium (3-4)	72 (48.00)	46 (30.67)	
High (>4)	29 (19.33)	8 (5.33)	
Mean value	3.30	2.41	5.32**
Number of training attended			
No (0)	6 (4.00)	54 (36.00)	
Low (1)	32 (21.33)	33 (35.33)	
Medium (2)	73 (48.67)	39 (26.00)	
High (>2)	39 (26.00)	4 (2.67)	
Mean value	1.95	0.95	10.38**
Operational land holding			
Marginal (below 1 ha)	120 (80.00)	118 (78.67)	
Small (1-2 ha)	16 (10.67)	17 (11.33)	
Semi-medium (2-4 ha)	14 (9.33)	15 (10.00)	
Mean value	0.54	0.51	0.39^{NS}
Annual Vegetable Production(t/ha)			
Low (<4.48)	15 (10.00)	48 (32.00)	
Medium (4.48-18.06)	109 (72.67)	84 (56.00)	
High (>18.06)	26 (17.33)	18 (12.00)	
Mean value	14.06	10.23	2.68**
Media Exposure			
Less (<4)	45 (30.00)	52 (34.67)	
Medium (4-6)	83 (55.33)	78 (52.00)	
High (>6)	22 (14.67)	20 (13.33)	
Mean value	5.67	5.16	1.27^{NS}
Extension contact			
Low(<4)	28 (18.67)	100 (66.67)	
Medium (4-5)	87 (58.00)	35 (23.33)	
High (>5)	35 (23.33)	15 (10.00)	
Mean value	4.89	3.05	3.98**

RESULTS AND DISCUSSION

Socio-economic and communication profile of the vegetable farming SHG members and non-members:: Data in Table 1 depicts socio-economic and communication profile of vegetable farmingSHG members and non-members. The result showed that majority (49%) of the members belonged to young age category while 70.00 per cent of the non-members were middle aged (35-50 years). This indicated that SHG movement was able to attract relatively younger people. Similar findings were also reported by *Chaudhary (2017), Rahmanand Gupta (2014),* and *Feroze (2009)*. The male groups the vegetable farming basedSHGs in the state were dominated by the female counterparts as 86.67 per cent SHG were with female members only.

Literacy level study depicted in Table 1 reveals that more educated farmers are joining self-help groups for vegetable farming. Most of the vegetable growers in the state found with less than 10 years' vegetable growing experience and it can be interpreted that most of the farmers have been attracted towards vegetable growing in the last ten years. The study revealed that the SHG members maintained a good community relationship than that of the non- members. Informal relationship amongst its members is the underlying principle of SHGs functioning. Group action influenced members' involvement in informal/ formal organizations. Social relationship promoted mutual help amongst the SHG members and also provided mental and emotional support during the time of crisis. Z-value revealed that there was significant difference between the mean score of access to resources and support services of members and non-members. Majority of the farmers in the state are having marginal land holding.Group approach helped the SHG members' access to internal and external credit facilities that were useful in procurement of farm inputs like good quality seeds, fertilizers and other resources.

A perusal of the Table 1 also reveal that both, members (83.00%) and non-members (78.00%) had medium media exposure (between 4-6) and there was no significant difference between both categories of farmers. The mean extension contacts of members (4.89) differ positively and significantly with that of the non-members (3.98). It indicates that the group members maintained links with various stakeholders and change agents from various agencies involved in of vegetable farming made frequent visits to the farms to disseminate information on technical know-how to the members. Similar findings are reported by *Chaudhary (2017), Rahman and Gupta (2014)* and *Ganguly, (2005)* that majority of the members had medium level of extension contact.

Knowledge and adoption level of improved vegetable practices of SHG members and non- members: Data furnished in the Table 2 illustrate that majority of members (48.00%) had medium level (48.87-56.38) of knowledge while non-members (82.66%) were found

Table 2. Knowledge level of SHG members and non-members on improved vegetable farming practices

Respondent	Category Low (<48.87)	Medium (48.87-56.38)	High (>56.38)	Mean Value	SD	MembersVs Non-members (Z- stat)
Member(n=150)	42(28.00)	72(48.00)	36(24.00)	54.21	23.23	10.43**
Non-member(n=150)	124(82.66)	20(12.37)	6(4.00)	28.19	19.86	

(Figure in parenthesis indicate percent)

** Significant at 1%

Table 3. Adoption level on improved vegetable practices of SHG members and non-members.

Respondent	Category Low (42.31)	Medium (42.31-61.54)	High (>61.54)	Mean Value	SD	MembersVs Non-members (Z- stat)
Member(n=150)	37(24.67)	71(47.33)	42(28.00)	52.82	17.86	6.95**
Non-member(n=150)	96(64.00)	36(24.00)	18(12.00)	38.05	19.06	

(Figure in parenthesis indicate percent)

** Significant at 1%

to possess low level (below 48.87) of knowledge. Z- statistical analysis revealed that there exists a significant difference ($p<0.01$) between members and non-members with respect to knowledge level. Similar findings are also reported by Rahman and *Gupta (2014),Yadav (23013), Prakash (2009),* and *Ganguly (2005).* Majority of members (47.33%) were found to have medium adoption level of improved vegetable farming practices while majority of non-members (64.00%) were in low adoption category (Table 3). The Z-statistics (6.95) showed that mean adoption level of members (52.82) and that of non-members (38.05) differed positively and significantly at 1 per cent level of probability.

Knowledge is prerequisite for adoption of any technology or innovation. A higher knowledge level of members on improved vegetable farming facilitated better adoption rate in the farms of members than that of the non-members. The SHG members assembled regularly to discuss various issues including the prime activities. This facilitated the members to share their experience and problems faced in performing day to day activities in the farms. The process of sharing information helped them in gaining knowledge and encouraged them to adopt feasible and viable practices in their farms. Capacity building programmes and frequent visits to the farms by various agencies involved in vegetable farming enhanced the knowledge and skills of the SHG member.

CONCLUSION

The study showed that SHG members were having better socio-economic condition than that of the non-member. Members of SHG werehaving more exposure to their surroundings and maintained better social relation with others. Overall knowledge gains and adoption level of improved vegetable farming practices of the members was quite better than that of the non-members. Information empowerment of SHG members through group activities like meetings, trainings, contacts with change agents, and informal discussion with fellow members helped the members in gaining knowledge and adopting improved farming practices in their farms. Higher knowledge in improved vegetable farming practices was associated with education status, occupation, number of training undergone, community relation, access to resources and support services, land holding, annual vegetable production, media exposure and extension contact of the farmers. Adoption level of the improved vegetable farming practices showed association with education status, occupation, community relation, access to resources and support services, land holding, annual vegetable production, media exposure and extension contact of the farmers. It can be concluded that SHG programme contributed in raising socio-economic status of the vegetable farmers and positively influenced in knowledge gain and adoption of technologies in the farms.

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