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Research Article

OCCUPATIONAL HEALTH HAZARDS FACED BY FARM WOMEN AND MEASURES TO SECURE HEALTH AND ENVIRONMENT

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ABSTRACT

Rural Indian women are extensively involved in agricultural activities. However, the nature and extent of their involvement differs with the variations in agro-production systems. As globalization shifts from agriculture to capital intensive, women bear disproportionate costs of both displacement and health hazards. Occupational dust exposures have been associated with adverse pregnancy outcomes. It is not definite whether it is due to the preservatives such as pesticides or other agents like pentachlorophenol, creosote, formaldehyde, chromium, arsenic, etc. Maternal occupational pesticide exposure has also been identified as a risk factor for still birth.

INTRODUCTION

Women are traditionally known for their skills in the selection and storage of seeds, collection of fuel and fodder, livestock management, organic recycling, etc. Women, as compared to men, in small and marginal farm families in the villages, carry a very heavy work load both on the farm and in the house, with very limited access to and control over the resources necessary for farming or home keeping. Having an important role in agriculture, their nature and extent of involvement in it vary greatly from region to region, farming system, caste, class, socio-economic status of families, etc.

Women's work in agriculture has become more visible over the last few decades as women farmers become more involved in agricultural activities, increasingly assuming the responsibility for household survival and responding to economic opportunities in agricultural production. Many chemicals pose hazards to the embryo especially during organogenesis. This has led to restriction on the employment of women in various hazardous processes under various legislation. Exposure to volatile organic solvents, dusts and pesticides and VDT (Video Display Terminal). Non-ionizing radiation has been found to be associated with increased risk of infertility in women. This could be due to interference with ovulation, fertilization or implantation.

Modern agricultural technologies are sophisticated, precise and locally specific requiring adequate knowledge for its on farm use. Adoption of technology depends on knowledge of and interest in technology without which adoption of technology would suffer. Since people have their attitudes, opinions and values, new technology must be compatible with social and cultural system both. Most of the activities performed by rural women on and off the farm require scientific knowledge and technical skills. Though women play a significant and crucial role in agricultural development and allied fields including crop production, most of them lack in technical and advanced knowledge about farm activities. Trainings would help the women to improve their skill in doing the farm work. Mainly two types of training may be organized for farm women for effective and efficient utilization of their potential. These are (i) the training in latest advances in agriculture and (ii) training in leadership so that they can play an effective role as change agents.

Besides lack in exposure of technologies, farm women face several constraints on account of which they fail to adopt new technologies. These are technological, economical, psychological, social and physical. Majority of marginal and small farmers face technological and socio-economic problems in adoption of technologies. Irrigation, soil, seed, fertilizer and plant protection are some such technologies which come under bio-physical and socio-economic constraints. Thus, for successful adoption of technologies, these constraints have to be removed or reduced.

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Objectives of the Study

1. Socio-economic profile of rural farm women
2. Involvement of farm women in farm activities in terms of time utilization.
3. Exposure of modern crop technologies to farm women.
4. Adoption of modern crop technologies by farm women.
5. Constraints faced by farm women in adoption of crop technologies.

MATERIAL AND METHODS

The study was conducted in Kanpur district. 5 blocks were selected for the study purpose. 240 farm women were randomly selected from the research area. Dependent and independent variables were used. Statistical tools applied were χ^2, T – test, etc. The primary tool used in the study was a detailed proforma. The information was obtained from the children and also their parents by interview method. This method was adopted to make it possible. The survey was possible with the help of principle and teachers of the school. Each subject was contacted individually and was persuaded to answer all the questions in the proforma and their response was recorded.

RESULTS AND DISCUSSION

Table 1 Distribution of farm women according to education

Education	Frequency	Per cent
Illiterate	45	18.8
Up to Primary	62	25.8
Up to Secondary	78	32.5
Up to High School	33	13.8
Intermediate	15	6.2
Graduate	7	2.9
Total	240	100.0
	92.90**	P < 0.01

Role of education has no impact in traditional agriculture. But, in present scenario knowledge about newly developed technology, use of pesticides, knowledge of drudgery activities, knowledge of high yielding varieties etc. are essential. Being educated they can perform these efficiently. It is one of the important factors, which accelerate the knowledge of the respondents which, in turn accelerate growth and development in farming. It was observed in this study that 70.0 per cent of total women respondents were uneducated and 19.0 per cent women respondents had education upto primary level and lowest 4.0 per cent women respondents were educated upto secondary level

Table 2 Participation of farm women in agricultural activities

Agricultural activities	Monthly	No. of days	Time (hrs/days)	Posture
Field preparation	13	20	10	Sitting
Seed selection	2	10	5	Sitting
Seed treatment	1	15	6	Bending
Weed control	1.10	24	9	Bending
Weed management	1.15	20	7	Sitting
Bunds making	1.18	20	6	Bending
Puddling	2	18	5	Bending
Seed up	1	15	4	Bending
Transplanting	2	15	10	Bending
Irrigation	3	20	9	Sitting
Fertilizer application	2	10	6	Bending
Weeding	3	20	8	Sitting
Insect pest control	1	10	5	Bending
Harvesting	4	18	10	Sitting
Bundle making	2	22	8	Bending
Threshing	2	24	8	Standing
Winnowing	1	20	8	Standing
Storage	2	22	8	Bending
Marketing	2	25	7	Sitting

Women play a significant and crucial role in agricultural development and allied fields including, main crop production, livestock production, horticulture, post harvest operations, agro-social forestry, fisheries, etc. It is a fact long taken for granted but also long ignored.

Table 3 Occupational health hazards faced by farm women in agricultural activities

Physiological effects	Mostly	Sometimes	Never	Scores	Rank
Irritation in eyes, nose and throat	162 (67.5)	66 (27.5)	12 (5.0)	2.62	I
Headache	115 (47.9)	70 (29.2)	55 (22.9)	2.25	III
Nausea	90 (37.5)	73 (30.4)	77 (32.1)	2.05	VIII
Asthma	71 (29.6)	50 (20.8)	119 (49.6)	1.80	IX
Skin problem	101 (42.1)	60 (25.0)	79 (32.9)	2.09	VII
Cancer	7 (2.9)	6 (2.5)	227 (94.6)	1.08	XII
Suffocation	126 (52.5)	69 (28.7)	45 (18.8)	2.34	II
Respiratory problem	106 (44.2)	83 (34.6)	51 (21.2)	2.23	IV
Dizziness	93 (38.7)	103 (42.9)	44 (18.4)	2.20	V
Chest pain	45 (18.7)	63 (26.2)	132 (55.1)	1.64	XI
Coughing	93 (38.7)	81 (33.7)	66 (27.6)	2.11	VI
Problems in breathing and bronchitis	60 (25.0)	63 (26.2)	117 (48.8)	1.76	X

(Figures in parenthesis indicate percentage of respective values)

The environment includes both the physical and the socio-cultural environment. By nature of their work and home, farm women are exposed to multiple environmental risk factors. The physical environment includes farm commodity, maintenance and weather related issues.

Temperature extremes result in icy conditions or risk of heat related injury. For example, a woman who feeds small calves in the winter may have to carry milk across icy ground to another building. The same women may be exposed to caustic cleaning solutions used to clean milking equipment, or high environmental temperatures in the summer.

Table 4 Reproductive health hazards/ problems faced by farm women

Reproductive health hazards problem	Mostly	Sometimes	Never	Scores	Rank
Abortion	31 (12.9)	80 (33.3)	129 (53.8)	1.59	III
Still birth	22 (9.2)	31 (12.9)	187 (77.9)	1.31	IV
Low baby weight	80 (33.3)	62 (25.8)	98 (40.9)	1.92	II
Pain/bleeding	72 (30.0)	89 (37.1)	79 (32.9)	1.97	I

(Figures in parenthesis indicate percentage of respective values)

Many chemicals pose hazards to the embryo especially during organogenesis. This has led to restriction on the employment of women in various hazardous processes under various legislations. Exposure to volatile organic solvents, dusts and pesticides and VDT (Video display terminal) non-ionizing radiation has been found to be associated with increased risk of infertility in women. This could be due to interference with ovulation, fertilization or implantation. Exposure to solvents increases the risk of spontaneous abortions and there is

sufficient evidence of association between exposure to toluence, methylene chloride, tetrachloroethylene, petroleum ether, xylene, formaldehyde, paint thinners and reproductive disorders. Women exposed to toluene have reported a greater frequency of menstrual dysfunction including dysmennorhoea, irregular cycles and spontaneous abortions.

Table 5 Constraints in adoption of wheat crop technologies

(Number)

Constraints	Technology not adopted				
	HYV	Seed rate	Irrigation	Fertilizers & manures	Plant protection
Unawareness	11	23	-	7	18
Non-availability of raw materials	-	-	13	5	-
Poor financial position	5	-	-	11	6
Costly application	-	-	-	13	14
Not suitable/hazardous	-	-	-	-	28
Lack of technical know-how	4	17	5	17	19
Total not adopted	20	40	18	43	45

Table 5 shows that 28 respondents have opined that being hazardous application, they have not adopted plant protection measures in wheat crop. Seventeen respondents have not adopted seed rate and fertilizers and manures technologies because of lack of technical know-how.

Table 6 Constraints in adoption of paddy crop technologies

(Number)

Constraints	Technology not adopted				
	HYV	Seed rate	Irrigation	Fertilizer & manures	Plant protection
Unawareness	15	18	-	14	19
Non-availability of raw materials	-	-	11	3	11
Poor financial position	-	-	-	5	6
Costly application	8	-	-	2	13
Not suitable/hazardous	-	-	-	-	21
Lack of technical know-how	11	21	8	13	18
Total not adopted	25	34	19	17	47

Table 6 shows that 21 respondents have not adopted plant protection measures in paddy crop because of hazardous application. Eighteen and 15 respondents have opined that they are unaware about seed rate and HYV application in paddy crop.

CONCLUSION

The effects of potential occupational hazards on women's reproductive health have been, probably, the major focus of concern in the health of women workers. This concern has increased in recent years as more environmental hazards are identified and as more women enter the paid workforce. A range of occupational reproductive hazards has been documented but a large number of possible risks still require further examination. Women who were exposed to pesticides suffered a range of health problems–acute effects of skin and eye and breathing problems, sexual and reproductive problems including miscarriages and still births and chronic effects like cancers.

Women are working with highly toxic pesticides that can cause severe poisoning and death. Many of the pesticides they are heavily exposed to are known to damage the brain and nervous system, or cause cancer, or birth defects. Many agricultural workers are exposed to chemicals on a daily basis. If they do not observe proper precautions, illness or even death may ensue. The Environmental Protection Agency estimates that there are close to 10,000 poisonings each year. The majority are the result of home-related poisonings. Pesticides can enter the body through many routes, but the most common ways are through the skin and by inhaling.

Recommendations

Recognizing the fact that women can and must play an important role in the sustenance of our agricultural systems, they have to be involved in the process of evolution of new technologies which are women specific. Their needs and physical limitations have to be taken into account during technology innovations and development. Trainings may be organized for farm women to disseminate these technologies and be made a regular feature. The training should be vocational (skill oriented), organized for short duration and within her social boundary during the lean months of her involvement in agricultural activities. Suitable audio-visual aids can be used to take the message across. Teaching aids like samples, models and visuals that are appealing and interesting must be used to improve the comprehension of the illiterate women and their capacity to retain the message disseminated. Location specific traditional media like folk songs, folk theater and folk lore can be utilized to communicate technical information in an effective way.

- There is a need to get as much information as possible out on the ways pesticides impact people, particularly women. Groups are also keen to undertake regular monitoring and documentation of pesticides use in the plantations and in rural communities.
- If international efforts to control hazardous pesticides such as PIC and the FAO Code are to have a significant impact then governments will need to start agreeing targets and strategies to reduce pesticide use and to stop adopting policies that increase their use.

References

Carreon, Tania *et. al* (2005). "Gliomas and farm pesticide exposure in women: The Upper Midwest Health Study". **113**. www. knowledge. Allianz.com.

Farr, L.S; Cooper, S.G. *et al.* (2004). Pesticide use and menstrual cycle characteristics among premenopausal women in the agricultural health study. pp. 4770, Email; Sherry{at} alumni. unc.edu.

ICAR (2009). "Bio-pesticides: Stakeholders perspective". New Delhi 5th International Conference. Covers XI sessions between 27 & 80 April eeu/www.icar.org.in

International Survey (2010). "Common occupational hazards of farmers". www. ifpri.or, Ghana web. All right reserved.

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