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A STUDY TO ASSESS THE EFFECTIVENESS OF NURSE LED HEALTH PROMOTION PROGRAMME ON PREVENTION AND MANAGEMENT OF OCCUPATIONAL HEALTH PROBLEMS AMONG FIELD FARMERS IN SELECTED RURAL AREAS, WEST BENGAL-PILOT STUDY.

Indrakshi Basu[1], Dr. R. Premavathy[2]

[1]Ph.D. Scholar, Rani Meyyammai College of Nursing, Annamalai University, Tamil Nadu

[2]Research Guide and Lecturer, Rani Meyyammai College of Nursing, Annamalai University, Tamilnadu

Abstract

A quantitative research study, Interventional Approach with time series design was used to evaluate the effectiveness of Nurse led Health Promotion Programme on prevention and management of occupational health problems among Field Farmers in selected rural areas, West Bengal. The sample was selected by multistage random sampling technique. For sampling, ADA Officials and ASHA s were asked for a list of 100field farmers of their locality. 33 field farmers were chosen randomly by lottery method and contacted for consent and date fixation of meeting over phone. On the fixed day, by home visit data collection was done in four frequencies on day1, day7,day21 and day35 from the period of 28th October to 15th Decemer,2021. After pilot study, it can be concluded that the research tools are easy to administer, design is relevant and participants are participating in four times both from control group and experimental group.

Key words: Occupational, Health Problems, Field Farmers,Health Promotion Programme,Nurse.

Introduction

Agriculture is the largest dynamic livelihood resource of India since ancient time.The term 'Agriculture' is generally used in a broad sense including all activities directly related to cultivating, growing, harvesting and primary processing of agricultural products, animal and livestock breeding including aquaculture, and agro forestry[1]. An estimated 1.3 billion workers are engaged in agricultural production worldwide which represents half of the total world labour force. Almost 60% of them are in developing countries. A great majority of agricultural workers reside in Asia, which is the most densely populated region of the world, with more than 40% of the world's agricultural population concentrated in China and more than 20% in India[2]. 100 to 150 million people are occupationally and professionally involved in Indian Agriculture[3]

The traditional occupational health services used to indicate that if anyone is sick with sign and symptoms of diseases with a probable vision to treat the condition. Personal risk factors, social-economic risk factors also horizontally and vertically need to be included for enforcement of well being in trans disciplinary approach where all stakeholders may perform with autonomy and professional responsibility. Value added health promotional measures are more needed to be implemented than treatment after health problems at workplace. All in all farmers are highly prone to environmental vulnerability, unorganized authority and occupational hazards. Present pilot study aims at revealing the feasibility of effectiveness of due interventions of Nurse led health promotion measures.

Objectives of the study

i) To measure the magnitude of various manifested and perceived occupational health problems among field farmers in selected rural areas.

ii) To identify practice of various occupational safety measures for selected occupational hazards among the rural field farmers.

iii) To explore health service utilisation in terms of facilities and barriers by field farmers.

iv) To evaluate the effect of Nurse-led health promotion programme on status of selected occupational health problems, safety practices, health service utilisation among the subjects in the experimental group and control group before and after intervention.

v) To find out the association between the pre test score of selected health parameters such as manifested health problems, perceived health status, safety practices, health service utilization among field farmers with selected demographic variables.

Methodology

As the pilot study before this experimental trial, its a feasibility study. In this quantitative research study, Interventional Approach with time series design was used to evaluate the effectiveness of Nurse led Health Promotion Programme on prevention and management of occupational health problems among Field Farmers in selected rural areas, West Bengal. The sample was selected by multistage random sampling technique. For sampling, ADA Officials and ASHA s were asked for a list of 100field farmers of their locality. 33 field farmers were chosen randomly by lottery method and contacted for consent and date fixation of meeting over phone. On the fixed day, by home visit data collection was done in four frequencies on day1, day7,day21 and day35 from the period of 28th October to 15th Decemer,2021.

Result

The demographic data of both groups were analyzed using descriptive statistics. Chi-square was used to examine the differences in participants' age, socio economic status, working hours per day and health problems, safety practices of the experimental and control groups using the baseline data. The pilot study is done to check the feasibility of plan to conduct this study, not to test the hypothesis. So, in this small quantity of datasets and ignorable changes in mean of the data, ANOVA, t and r calculations are not possible. Only chi square and fisher's exact test is done to establish association between demographic data and health problems, safety practices(for which calculations were statistically possible). So In result demographic data are presented in table 1

Table 1: Demographic data of the participants

Age in years	Experimental Group	Percentage(%)	Control Group	Percentage(%)
30-40	6	24	4	16
41-50	17	68	17	68
51-59	2	8	4	16
Socio economic status				
Lower middle class	22	88	21	84
Middle class	3	12	4	16
Mode of doing farming				
Hand	6	24	3	12
Hand and legs	19	76	22	88
Drinking Water source				
Public supply	19	76	22	88
Tap water	2	8	0	0
Well	4	16	3	12
Urination during farming				
Open field	23	92	20	80
Public toilet	2	8	5	20
defecation during farming				
Open field	5	20	4	16
Public toilet	7	28	2	8
Toilet at home	13	52	19	76
Smoking habit	23	92	21	84
Habit of alcoholism	19	76	21	84
Type of health care Institution				
PHC	6	24	2	8
Subcentre	17	68	22	88
BPHC	2	8	1	4
Health insurance	19	76	16	64

In major findings, the most participants belong to the age group of 41 to 50 years. As per UdaiParek's scale, 88% (experimental group) and 84% (control group) people belong to upper middle class of socio-economic condition. During farmworks, respectively 92% and 80% farmers use open field for urination whereas 52% and 76% return their home for defecation in experimental and control group. Farm machinaries are used by 24%(experimental group) and 60% (control group)farmers. Smoking and alcohol consumption habit is highly practiced by farmers like respectively 92%(Exp. Goup),84%(Control group) and 76%(Exp. Group),84% (control group).76 % and 64% farmers are having governmental health insurance.

Data on physical conditions depicts that 68%(experimental group) and 88%(control group) farmers had normal body mass index, only 60% and 44% participants had normal lung sound.36% and 52% farmers had severe pain and discomfort score are 48% and 52% in experimental and control groups. In skin of hand and feet, abnormality was observed among respectively 88% and 80% (exp. Group) and 78%, 60% (control group).

N=50
(Experimental group=25&Control Group=25)

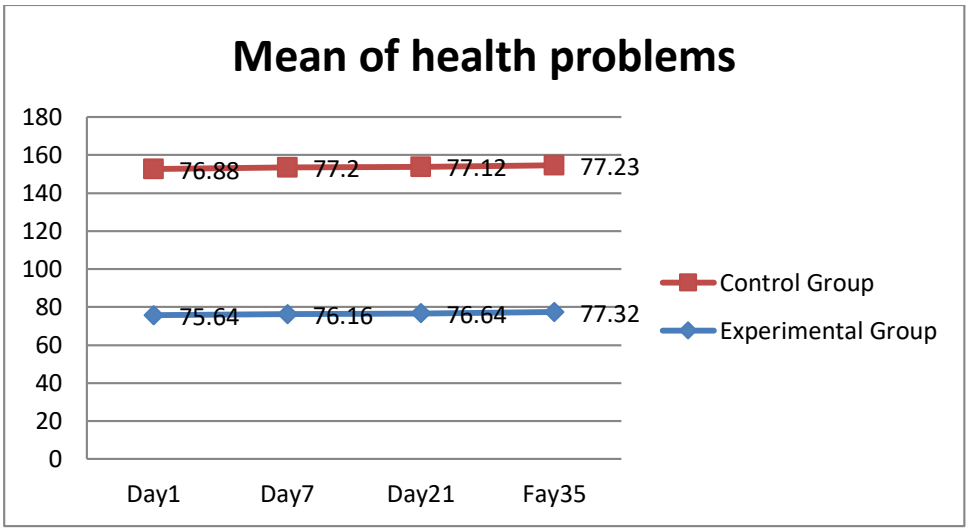

Figure 1: Line diagram on mean of farmer's health problems

As per the effect of intervention of Nurse led health promotion programme on prevention and management of occupational health problems of field farmers mean score of health problems are parellally inclined for experimental and control groups.

N=50
(Experimental group=25&Control Group=25)

Figure 2: Percentage distribution of safety practi control groups

Figure 2 depicts over frequency of first, seventh, twenty first and thirty fifth day safety practices like checking tractor and farming vehicles, inspection of equipment were presented and most safe practices mostly having changes. Weather alert, waste disposal practices were commonly practiced.

N=50
(Experimental group=25&Control Group=25)

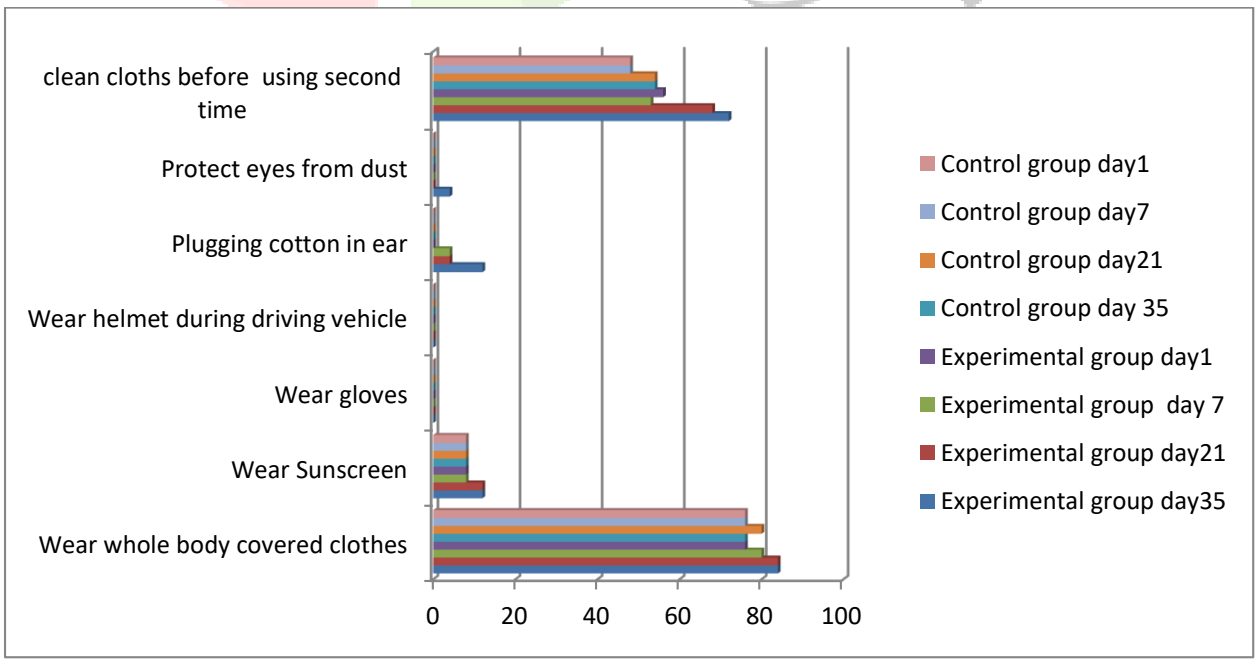

Figure 3: Percentage distribution of personal protective equipment in safety practices among field farmers in experimental and control groups

The bar diagram shows that field farmers were lacking in practices of using personal protective equipment like wearing gloves, sunscreen, ear protection, eye protection from dust. 80% field farmers wear whole body covered clothes.

In table 4, data shows yearly health check up was lacking in experimental (32%)and control group (16%).Health sinformation and regular health services are mostly provided by ASHA workers. Home care is more chosen by both experimental and control group participants.

Table 4: Service utilization by field farmers N=50
N (Experimental Group)=25,N(Control Group)=25

Service utilisition by field farmers	Experimental Group	Percentage(%)	Control Group	Percentage (%)
Yearly health checkup				
One time	13	52	14	68
Two times	4	16	7	28
Not fixed	8	32	4	16
Prescribed health check up				
Nil	20	80	17	52
One time	5	20	8	32
Health care provider of choice				
Consultant Doctors of Govt. Health care facility	9	36	9	36
Consultant Doctors of Private health facility	3	12	5	20
Community Health officers of Subcentre	0	0	1	4
ANM s of Subcentre	5	20	7	28
ASHA of your area	5	20	8	32
Consult traditional healers	20	80	19	76
Quaq Doctors	13	52	15	60
Rural Health Practitioners(bridge course passed quaq doctors)	7	28	6	24
Self medication consulting family member/ peers/neighbors	11	44	12	48
Self medication checking internet websites	2	8	5	20
Consume over the counter drugs	8	32	11	44
Service by ASHA worker				
YES	25	100	25	100

Monthly	19	76	14	56
Out of 15 days	2	8	3	12
Weekly	4	16	8	32
Sources of health information				
News paper	1		4	16
Radio	10	40	6	24
Phone message information from govt. authorities	16	64	20	80
Through community health workers	22	88	19	76
Internet	7	28	13	52
Others	0	0	0	0
Choice of care				
Home care	15	60	22	88
Institutional care	10	40	3	12

Inferential statistics are shown in table 5 and all possible calculated chi square values are not significant.

Table 5: Chi square between demographic data and other parameters with significance

Categories	Experimental group	Control Group	df	Significance(at 0.05 p value)
Age &BMI	0.47	0.89	4	Not significant
Age & health problems	0.68	0.55	2	Not significant
Age & Pain score	4.38	3.1	6	Not significant
Age & discomfort score	7.81	3.321	6	Not significant
Socio economic status and health problems	0.15	3.14	1	Not significant
Working hours & health problems	0.01	0.04	1	Not significant

Conclusion

After pilot study, it can be concluded that the research tools are easy to administer, design is relevant and participants are participating in four times both from control group and experimental group. Field farmers responded well to the experimental intervention of the researcher. Difficulty is observed in statistical calculation of changes of health service utilisation over the time as facilities and barriers are beyond the scope of intervention prepared by the researcher. No significant change is assumed except in objective number four. Otherwise, previously valid and tested reliable tool can be used.