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Newspaper as an Intervention Tool: A KAP Study on Farmers of Haryana

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ABSTRACT

Organic farming is gaining popularity across the globe. It can potentially augment agricultural production methods to boost sustainability, farm profitability, and food safety. The main focus of this study is to measure the expanse of farmers' knowledge about organic farming. The primary objective here is to examine the effectiveness of the newspaper as an intervention tool. The study area was chosen via certified random sampling. A systematic questionnaire was sent to 300 farmers from Haryana state. Closed-ended questions were utilized to elicit proportionate information from respondents. Respondents for the research were suitably chosen from six villages in three districts of Haryana. The questionnaire was tailored to assess farmers' knowledge, attitudes, and practices about organic farming. The study compares pre- and post-intervention investigations to assess the effect of the intervention. The findings reflect a considerable increase in the knowledge of farmers post-intervention. The participants involved in the study agreed that there is a need to increase awareness about organic farming. They still trust in conventional techniques, notably for disease prevention and seed development. In reference to organic farming, respondents are aware of rotating plants, utilizing animal manure, plant and kitchen waste, composting and decreasing fertilizer consumption, manually applying green manure, and weed control. Yet, heavy use of chemicals and post-Green-Revolution methods of farming remain prevalent in actual practice. The study concludes on the note that farmers' understanding of organic farming should be expanded and the newspaper is recommended as the ideal medium for raising awareness and encouraging its practice.

INTRODUCTION

Agricultural Extension Service: The Role of Mass Media

Extension education was introduced to help farmers adopt new agricultural methods and machines. Mass media has been instrumental in encouraging the use of modern agricultural technologies. Mass media usage in mobilizing people for development affects the success of agricultural development initiatives in developing nations. E.M. (1976). Planners in emerging countries know that using media effectively may boost agricultural development. Radio and TV are still praised as the most effective ways to spread scientific information to the public. Singh, K. (2000), In countries like India, TV and radio are important because they quickly disseminate modern agricultural research to a wider spectrum of audiences, including both literate and illiterate farmers, particularly in rural areas. India launched farm and home broadcasting in 1966. These broadcasts were successful in educating farmers about agricultural innovations introduced with the Green Revolution. These broadcasts involved elaborate discussions on methods, machines, tools and directions for the use of new technologies. Popular mass media also include regional language newspapers and agricultural periodicals. They contribute significantly to the transfer of agricultural knowledge to literate farmers. As the country's literacy rate rises, more options emerge to

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employ print media for public communication. (Silverblatt, A., *et al.* 2014) Print medium has expanded communication avenues in various fields. Since they're inexpensive, anyone can buy and read them at any time. A newspaper may be shared among many readers or read aloud among a group of people. Unlike other forms of media, the newspaper comes with no required installation process. Because the messages are permanent and have a high storage value, they may be utilized for study and reference. About 5 decades ago, India pioneered agricultural journalism. And it has gained importance, especially with constructing agricultural institutions in India. These institutions assist in enhancing productivity, allowing farmers access to technical knowledge at the right time and with the right method. As the literacy rate reached 74.04% in 2011, print media's role in teaching the public and farmers about better agricultural practices grew. Today every Indian state produces a farm magazine, and most are published in the state's language.

Research Problem

India's agriculture industry is increasing at a 0.6% annual rate. The Indian government often undertakes new agricultural initiatives with the goal of improving the lives of India's agricultural labor. The "green revolution," "blue revolution," "white revolution," and "yellow revolution" have had a significant impact on commercial agriculture, as well as farmers' economies across the country. Each revolution added something new to the annals of history, and the consequences, despite the shortcomings, proved beneficial to the masses. The emphasis was on the growth of the primary sector. Consequently, the agriculture industry, fertilizer usage, and irrigation system all went through tough times following their extensive overuse and misuse. As a consequence, more traditional agricultural practices suffered. It happened due to the absence of knowledge about land and water. Hence, the only possible option for a safe and speedy agricultural regeneration is to embrace organic farming. The government recognizes its potential and is encouraging farmers to practice organic farming. But this also accentuates the dire need for more efficient and extensive study to establish which communication channel is the most successful for organic farming in order to eliminate this problem and uncover the solutions to these difficulties.

Research Objective

Broad Objective

The research focuses on discovering answers to questions through scientific and systematic methods. The main aim of the research is to find out about various important aspects of Organic farming that are either lesser known or overlooked. The broad objective of this study is-

To find out the efficacy of newspapers as a medium of intervention for organic farming

Specific Objectives

- To explore the knowledge of farmers towards Organic farming
- To analyze the attitude of farmers towards Organic farming.
- To analyze the practice of farmers with regard to Organic farming.
- To find out if a newspaper had efficacy as a medium of intervention for Organic farming.

Theoretical framework

According to this theory, people seek consistency among their many cognitions (i.e., beliefs and opinions). If attitudes and actions contradict each other, dissonance must be alleviated. When a person's attitudes and behaviors contradict one another, the attitude usually shifts to fit the behavior. The weight of contradictory ideas causes cognitive dissonance. Dissonance may be dealt with in three ways: discordant beliefs can be diminished in significance, more consonant beliefs can be added to compensate, or dissonant beliefs can be modified so that they are no longer incongruous. When deciding between two contradicting ideas or acts, cognitive dissonance is common. When both possibilities are equally tempting, dissonance increases. As fewer incentives lead to less dissonance, opinions about fewer incentives may shift. Most behavioral theories anticipate a bigger attitude shift in response to an incentive, which contradicts dissonance theory. Festinger, L. (1962). What factors influence people's attitudes? This is critical. It relieves a person of having to decide what is appropriate on a case-by-case basis. Emotional and cognitive reactions, experiences, and memories of prior conduct all contribute to the formation of an attitude. This concept explains how past knowledge influenced farmers' views. This survey assessed both awareness and attitude.

Research design

An experimental study must be conducted prior to drawing a connection between causes and effects from their relationship. The research in this study evaluates the impact of an independent variable on another variable under their inspection in controlled conditions (interventions). The research is conducted using a valid experimental design. As this design is employed, the change in the independent variable impacts the variable under examination (the dependent variable), which is detected effortlessly. For this study, participants were divided into two groups allowing better constructive and comparative results- the experimental group and control group.

Sampling tool

Haryana is India's breadbasket and a worldwide example of a successful Green Revolution. Despite limited cropland, Haryana is the second-largest supplier of wheat

to the Central Pool. The advent of high-yielding wheat and rice varieties, irrigation infrastructure, resourceful farmers, and strong state government support for new technology have made this possible. Stratified-random sampling is used to choose three districts, one from each zone. The districts picked are Gurgaon, Hisar, and Kurukshetra. Next, two villages were picked at random from each of the districts with agricultural-producing regions. Hence, a total of six villages. A total of 300 respondents were chosen from Haryana.. The margin of error, accordingly, is 5%.

Statistical Tools

Data collection was followed by a thorough check for missing numbers and errors. After coding, the data was entered into SPSS. For a more detailed assessment of the results, the incorrect data were removed from SPSS. The collected data was evaluated by cross-tabulation, the Wilcoxon signed-rank test, and the Simple Percentage tool. MS-Excel 2016 and MS-Word 2016 were used to construct the tables and charts.

Data-Analysis and conclusion

The respondents in this survey (Figure 1) were asked about their level of education, and classified into primary-school, middle-school, higher-school, intermediate, graduate and post-graduate. This categorization takes into consideration the methods used in Organic farming. Primary school make up 3% of the entire sample. Middle school students make up 14% of the total responders. 41% respondents are high school level educated. 30% are intermediate school level educated. 10% of respondents are graduate and postgraduate level educated (Table 1).

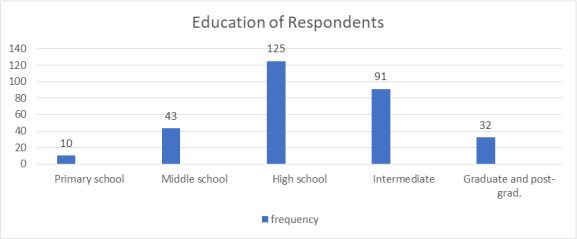

Figure 1: Education of Respondents

Table 1: cross-tabulation of village of respondents and awareness regarding seeds

Village of respondents	Awareness regarding seeds	
	Pre-intervention survey	Post-intervention survey
Bahbalpur	5	12
Nayana	3	7
Alimuddinpur	6	14
Mahchana	8	12
Duniya majra	8	12
Ajrana kalan	9	7
Total	39	64

For the purpose of this research, 300 farmers were selected from six villages spread over three districts in Haryana. In this section of awareness-evaluation, farmers were asked about seeds and their treatments. In pre-intervention survey, the highest level of awareness is recorded among the farmers of "Ajrana-kalan" village, which is 18%. The level of awareness among farmers in the "Nayana" was the lowest, 6%. Before the post-intervention survey, researcher provides content related to Organic farming to the experiment group. The village "Bahbalpur", "Alimuddinpur" and "Duniya majra" are in the experimental group. The tool of communication is the newspaper. In earlier study only 6% farmers from 3 villages are aware. In recent study it is increased to 13%. In the post-intervention survey, overall awareness about seed increased from 13% to 21%. In post-intervention survey, the highest level of awareness is recorded among the farmers of "Alimuddinpur" village at 28%. Earlier it was 12%.

Ho1. There is no significant change between the pre-intervention awareness-level of seed treatment ingredients and the post-intervention awareness level of seed-treatment ingredients among farmers (Table 2).

Table 2: Pre-intervention awareness-level of seed treatment ingredients and the post-intervention awareness level of seed-treatment

		N	Mean Rank	Sum of Ranks	Z	Asymp. Sig. (2-tailed)
Pre-intervention statement 1- post-intervention statement 1	Negative Ranks	2a	12.50	25.00	-7.878a	.000
	Positive Ranks	23b	12.50	287.50		
	Ties	275c				
	Total	300				

Analysis of Test

The Wilcoxon signed rank test indicates that there is a significant change since the pre-test value is 0.000, which is less than the significance criterion of 0.05. As a consequence, the null hypothesis indicated above, that there is no significant change between pre-intervention and post-intervention awareness levels of green manure among farmers, is rejected. While in another part of the table, the positive ranks reflect an increase in awareness level. Negative ranks reflect a reduction in awareness level, ties represent no change. Hence it is simple to assume that the awareness level of 65 respondents in the after-intervention survey has increased (Table 3).

Here, farmers were asked about different manures (green manure, farm yard manures, liquid organic manure, compost etc.). In pre-intervention survey, the highest level of awareness is recorded among the farmers of "Alimuddinpur", "Mahchana" and "Duniya-majra" villages, which is 44% for each. The level of awareness among

Table 3: Cross-tabulation of village of respondents and awareness regarding Organic farming

Village of respondents	Awareness regarding Organic farming	
	Pre-intervention survey (Count)	Post-intervention survey (Count)
Bahbalpur	21	26
Nayana	20	20
Alimuddinpur	22	27
Mahchana	22	24
Duniya majra	22	26
Ajrana kalan	21	23
Total	128	146

farmers in "Nayana" was the lowest at 40%. In earlier study only 22% farmers from 3 experimental villages are aware. In recent study it is increased to 26%. In post-intervention survey, overall awareness about seeds is increased from 43 to 49%. Post-intervention, the highest level of awareness is recorded among the farmers of "Alimuddinpur" village at 54%. Earlier it was 44%.

Ho2. There is no significant change between the pre- and post-intervention awareness levels regarding Organic farming (Table 4).

Table 4: Pre-intervention awareness-level and the post-intervention awareness-level regarding Organic farming

		N	Mean Rank	Sum of Ranks	Z	Asymp. Sig. (2-tailed)
Pre-intervention statement 2- post-intervention statement 2	Negative Ranks	0a	.00	.00	-1.732a	.083
	Positive Ranks	18b	9 .00	16 2.00		
	Ties	282c				
	Total	300				

Analysis of Test

The Wilcoxon signed rank test indicates that there is no significant change since the p-value is 0.083, which is higher than the significance criterion of 0.05. Consequently, the null hypothesis that there is no significant change between pre-intervention and post-intervention awareness-levels of organic-manure among farmers is accepted (Table 5).

Farmers were asked about their perception of Organic farming in this section of Attitude evaluation. In the pre-intervention survey, the highest level of awareness is recorded among the farmers of "Nayana" villages, which is 48%. The awareness-levels among farmers in the "Alimuddinpur" and "Bahbalpur" was the lowest at 34% for each. In earlier study only18% farmers from 3 experimental villages are aware. In recent study it is increased to 30%. In post-intervention survey, overall attitude about Organic farming risen from 40% to 54%. In post-intervention survey, the highest awareness-level is recorded among the farmers of "Duniya-majra" village at 68%. Earlier it was 42%.

Table 5: Cross-tabulation of village of respondents and attitude of farmers towards Organic farming

Village of respondents	Attitude of farmers towards Organic farming	
	Pre-intervention survey	Post-intervention survey
Bahbalpur	17	27
Nayana	24	25
Alimuddinpur	17	29
Mahchana	20	22
Duniya majra	21	34
Ajrana kalan	20	25
Total	119	162

Ho29. There is no significant change between pre-intervention and post-intervention attitude among farmers (Table 6).

Table 6: Pre-intervention and post-intervention attitude among farmers.

		N	Mean Rank	Sum of Ranks	Z	Asymp. Sig. (2-tailed)
Pre-intervention statement 29- post-intervention statement 29	Negative Ranks	0a	.00	.00	-6.877a	.000
	Positive Ranks	43b	21.50	924.50		
	Ties	257c				
	Total	300				

Analysis of Test

The Wilcoxon signed rank test indicates that there is a significant change since the p-value is 0.000, which is less than the significance criterion of 0.05. Consequently, the null hypothesis that there is no significant change between pre-intervention and post-intervention attitude statement 1 among farmers is rejected (Table 7).

Table 7: Cross-tabulation of village of respondents and practicing of organic farming

Village of respondents	Practicing of Organic farming
	Pre-intervention survey
Bahbalpur	8
Nayana	6
Alimuddinpur	8
Mahchana	5
Duniya majra	8
Ajrana kalan	8
Total	43

In this section of practice evaluation, farmers were asked about the practice of organic farming in their field. In a pre-intervention survey, nobody was practicing organic farming. In the post-intervention survey, overall practice of Organic farming increased to 14%.

Conclusion

Based on the findings of the pre-intervention survey and their logical interpretation, it is concluded that the respondents had low levels of expertise in organic farming prior to intervention. There remain considerably higher levels of trust in conventional techniques, notably for disease prevention and seed development. Post-intervention into organic farming related knowledge via the newspaper as a communication tool amplifies farmers' awareness exponentially in a post-intervention survey. It is recorded that 14% of farmers had adopted organic farming. The study records a positive change in the attitude of 54% of farmers. According to the research, the newspaper as a tool of communication in organic farming is very efficient. A positive change in awareness related to seeds, farming methods, manures, crop disease & pest control and organic certification is documented. Most farmers in the study were aware of traditional methods of weed management. Hence there is minimal change noticed in the awareness related to weed management. With regard to organic farming, respondents are aware of rotating plants, utilizing animal manure, plant and kitchen waste, composting and decreasing fertilizer consumption, manually applying green manure, and weed control. Farmers' understanding and techniques employed while practicing organic farming needs to be expanded. The study yields positive outcomes concerning the use of newspapers as a tool of intervention and is recommended as the ideal medium for raising awareness for organic farming.

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