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Development and Standardization of posters on Sustainable Natural Resource Management Practices

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ABSTRACT

The media is an excellent toll for raising awareness among people. Electronic and print media both operate at the grassroots level and provide information on a variety of issues. People had low knowledge about Sustainable Natural Resource Management Practices. So, to create awareness about Sustainable Natural Resource Management Practices among people. Posters were prepared as a print media and its effectiveness was judged on different parameters. The prepared posters were administrated to 20 judges from Swami Keshwananda Rajasthan Agricultural University. For standardization a valid and reliable questionnaire was used and judges' feedback regarding the media was recorded with this. The effectiveness of media was assessed using weighted mean score, reliability and perceived feasibility index. Regarding effectiveness of posters results shown that overall mean score for attributes of objectivity was 2.92 followed by coverage (2.91), illustration (2.90), accuracy (2.89), writing style (2.88), compatibility (2.87) and content presentation (2.86), respectively. Overall reliability coefficient of posters found significant at 5% level of significance with 0.88* "r" value. The perceived feasibility of posters was high with 2.85 overall mean score and perceived feasibility index of posters was 95.00.

Keywords: Sustainable Natural Resource Management Practices, Media, Poster, Development and standardization

INTRODUCTION

The sustainable management of natural resources is crucial for the well-being of both present and future generations. Effective communication of sustainable Natural Resource Management (NRM) practices is essential for raising awareness, promoting adoption, and supporting behavior change. Visual aids like posters can be powerful tools for communicating complex information in an engaging and accessible way.

However, the effectiveness of posters in conveying sustainable NRM practices can be enhanced by standardizing their design, content, and messaging. Standardization can ensure consistency, clarity, and accuracy in communicating sustainable NRM practices, ultimately contributing to better environmental outcomes. This standardization guide aims to provide a framework for designing and developing posters that effectively communicate sustainable NRM practices. By following these guidelines, poster designers and developers can create visually appealing and informative posters that support the adoption of sustainable NRM practices.

Objective:

1. To develop posters on Sustainable Natural Resource Management Practices
2. To check the effectiveness of posters

METHODOLOGY

Development and standardization of posters:

Five posters in hindi language were designed with effective slogans and pictures on Sustainable Natural Resource Management Practices to create awareness.

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The effectiveness of posters was judged by twenty judges from College of Agriculture and College of Home Science from SKRAU, Bikaner, and KVK Bikaner. For standardization of posters reliable and valid questionnaire was used developed by Extension Education and Communication Management Department, SKRAU, Bikaner. On the basis of feedback of judges, effectiveness was assessed on seven criteria *i.e.*, accuracy, coverage, objectivity, writing style, content presentation, illustration and compatibility and the posters were tested professionally.

Statistical tools:

Mean score:

Mean scores were calculated to evaluate developed posters and also to find out readability and comprehension of posters by respondents.

$$\text{Mean Score} = \frac{\text{Total score}}{N}$$

where,

N= Number of members

Mean score was obtained by dividing total score given by panel members for evaluation of posters and total score given to respondents for readability and comprehension of the posters.

Weighted mean score and ranking:

Weighted mean score was used to access the effectiveness and perceived feasibility index of posters.

For each item the frequencies falling under each rating were tabulated. Then the frequencies of each category were multiplied by the score and added. Then resulting sum- of each aspect were divided by the total number of respondents. In this way, the weighted mean score in each aspect were calculated.

Coefficient of reliability (Split half technique):

The reliability of the posters were tested with the application of split half technique by administering to 20 judges. The response of the judges marked 1, 2 and 3 for indicating to greater extent, to somewhat extent and not at all, respectively. The zero-order correlation coefficient between even and odd numbered items was calculated as a measure of reliability. Subsequently, the coefficient of reliability was computed with the help of Spearman Brown Formula.

It was used to assess the reliability of the posters. Following formula was used:

$$r_{tt} = \frac{2r_{hh}}{1 + r_{hh}}$$

r_{tt} = reliability of total test estimated

r_{hh} = correlation between two tests

Perceived feasibility index (for each message):

$$\text{PFAI} = \frac{\text{E (RA + PC + CC + SC + Tr)}}{\text{P (RA + PC + CC + SC + Tr)}} \text{ x } 100$$

where,

PFAI = Perceived feasibility index (for each message)

E = Extent to which message was rated applicable by the respondents as regard to relative advantage (RA), physical compatibility (PC), cultural compatibility (CC), simplicity/complexity (SC) and Triability (Tr).

P = Maximum limit to which message was related Field applicable as regard to relative advantage (RA), physical compatibility (PC), cultural compatibility (CC), simplicity/complexity (SC) and Triability (Tr).

RESULTS AND DISCUSSION

Slogans on Sustainable Natural Resource Management Practices:

Five posters were developed on Sustainable Natural Resource Management Practices which contains the slogans is shown in the Table 1

Effectiveness of message on Sustainable Natural Resource Management presented in posters:

Total five posters were prepared and the

Table 1 : Slogans on Sustainable Natural Resource Management Practices in posters

Sr. No.	Topic
Poster 1	आओ हाथ से हाथ मिलाये। सभी मिलकर पानी को बचाये।।
Poster 2	मृदा की उर्वरक क्षमता को बढ़ाये। गोबर या देशी खाद को अपनाये।।
Poster 3	बर्बादी से पहले संभलना होगा। ऊर्जा संरक्षण के पथ पर चलना होगा ।।
Poster 4	नीम का धुआं रखे पशुओं को कीट – पतंगों से दूर। रखे अपने जानवरों को हमेशा बीमारियों से दूर ।।
Poster 5	साइलेज बनाओ, पौष्टिकता अपनाओ। अपने पशुओं को वर्ष भर हरा चारा खिलाओ।

effectiveness of posters were assessed on criteria *i.e.*, accuracy, coverage, objectivity, writing style, content presentation, illustration and compatibility.

Table 2 showed that in terms of "understanding of title" from accuracy attributes poster 1, poster 2, poster 3, poster 4 and poster 5 scored WMS 2.95, 2.80, 2.90, 3.00 and 3.00, respectively. In term "free from grammatical spelling and other typographical error", poster 1 scored WMS 2.95, poster 2 scored WMS 2.85, poster 3 scored 3 WMS 2.90, poster 4 scored WMS2.95 and poster 5 scored WMS 2.75 and found higher level of accuracy. Regarding "no repetition of information", poster 1 scored WMS 2.90 followed by poster 2 (WMS 2.80), poster 3 (WMS 2.85), poster 4 (WMS 2.95) and poster 5 (WMS 2.90) with higher accuracy. For "clarity of printing", poster 1, poster 2, poster 3, poster 4 and poster 5 scored WMS 3.00, WMS 2.90, WMS 2.85, WMS 2.90 and WMS 2.80, respectively. Poster 1, poster 2, poster 3, poster 4 and poster 5 scored WMS 2.80, WMS 3.00, WMS 2.95, WMS 2.85 and WMS 2.90, respectively with higher accuracy under "size of printing" term. With regard to "appropriateness of language term", poster 1 scored WMS 2.90, poster 2 scored WMS 2.85, poster 3 scored WMS 2.90, poster 4 scored WMS 2.80 and poster 5 scored WMS 2.95 with higher accuracy.

Poster 1 covered the entire necessary information message with WMS 2.90 followed by poster 2 (WMS 2.95), poster 3 (WMS 2.85), poster 4 (WMS 2.95) and poster 5 (WMS 2.90) with high coverage of messages.

In term "write up of all message clearly stated/ self-explanatory" for objectivity attributes poster 1 scored WMS 2.95 followed by poster 2, poster 3, poster 4 and

Table 2 : Effectiveness of messages on Sustainable Natural Resource Management presented in poster (N=20)

Sr. No.	Variables	Poster 1 (WMS)	Poster 2 (WMS)	Poster 3 (WMS)	Poster 4 (WMS)	Poster 5 (WMS)	Overall mean score
1.	**Attributes of accuracy**						
	Understanding of the title	2.95	2.80	2.90	3.00	3.00	
	Free from grammatical spelling and other typographical error	2.95	2.85	2.90	2.95	2.75	**2.89**
	Repetition of information	2.90	2.80	2.85	2.95	2.90	
	Clarity of printing	3.00	2.90	2.85	2.90	2.80	
	Size of font	2.80	3.00	2.95	2.85	2.90	
	Appropriateness of language	2.90	2.85	2.90	2.80	2.95	
2.	**Attributes of coverage**						
	Message covers all the necessary information	2.90	2.95	2.85	2.95	2.90	**2.91**
3.	**Attributes of objectivity**						
	Write up of all message clearly stated/self-explanatory	2.95	2.90	2.95	3.00	2.95	**2.92**
	Information appeared to be valid and well researched	2.80	2.85	2.90	2.95	3.00	
4.	**Attributes of writing styles**						
	The main points were more emphasized	2.90	2.95	2.85	3.00	2.90	
	All the message/main headings were differentiated from each other	2.95	2.80	2.90	2.85	2.95	**2.88**
	Information of messages were not complex in nature and having no doubts	2.80	2.95	2.90	2.85	2.80	
	Words did not repeated again and again which creates boredom	2.85	2.95	2.75	2.90	2.85	
5.	**Attributes of content presentation**						
	Material managed in logical sequence and grouping	2.75	2.95	2.80	2.85	2.75	
	Technical terms	2.85	2.95	2.85	2.90	2.95	**2.86**
	Usefulness of the information	2.90	2.80	2.95	2.85	2.80	
	Completeness of message	2.95	2.85	2.90	2.85	2.90	
	Ease of reading	3.00	2.80	2.85	2.75	2.85	
	Length of message	2.95	2.95	2.75	2.80	2.90	
6.	**Attributes of illustration**						
	Layout of the pictures/ illustrations/ graphics was accurate to per content	2.95	2.90	2.75	2.90	3.00	**2.90**
7.	**Attributes of compatibility**						
	Presentation of material of various message was according to readers background	2.85	2.90	2.80	2.85	2.95	**2.87**

Maximum mean score is 3.00

poster 5 scored WMS 2.90, WMS 2.95, WMS 3.00 and WMS 2.95, respectively and fallen in high rating category. Regarding term "Information appeared to be valid and well researched", WMS 2.80, WMS 2.85, WMS 2.90, WMS 2.95 and WMS 3.00 were coined by poster 1, poster 2, poster 3, poster 4 and poster 5, respectively which included these posters into high rating category.

Attributes of writing style covered four statements in Table 2 Poster 1 emphasized on main points with WMS 2.90 followed by poster 2 (WMS 2.95), poster 3 (WMS 2.85), poster 4 (WMS 3.00) and poster 5 (WMS 2.90) in the high range category. In term "the entire message/ main heading were differentiated from each other", poster 1 scored WMS 2.95 followed by poster 2, poster 3, poster 4 and poster 5 with WMS 2.80, WMS 2.90, WMS 2.85 and WMS 2.95, respectively. Regarding the statement, "information or messages were not complex in nature and having no doubts", WMS 2.80, WMS 2.95, WMS 2.90, WMS 2.85 and WMS 2.80 were scored by poster 1, poster 2, poster 3, poster 4 and poster 5, respectively with high rated category. With regard to term "words did not repeated again and again which creates boredom" had fallen in high mean score category by obtaining WMS 2.85, WMS 2.95, WMS 2.75, WMS 2.90 and WMS 2.85 in poster 1, poster 2, poster 3, poster 4 and poster 5, respectively.

Poster 1 reported that material was managed in logical sequence and grouping with WMS 2.75 followed by poster 2 (WMS 2.95), poster 3 (WMS 2.80), poster 4 (WMS 2.85) and poster 5 (WMS 2.75) in high category. In case of technical terms, poster 1 scored WMS 2.85 followed by poster 2, poster 3, poster 4 and poster 5 with WMS 2.95, WMS 2.85, WMS 2.90 and WMS 2.95, respectively. On usefulness of information, poster 1 scored WMS 2.90, poster 2 scored WMS 2.80, poster 3 scored WMS 2.95, poster 4 scored 2.85 and poster 5 scored WMS 2.80 with higher effect. Regarding completeness of message, poster 1 scored WMS 2.95 followed by poster 2, poster 3, poster 4 and poster 5 scored WMS 2.85, WMS 2.90, WMS 2.85 and WMS 2.90, respectively and fallen in high rated category. Poster 1 showed ease of reading with WMS 3.00 followed by poster 2, poster 3, poster 4 and poster 5 scored WMS 3.00, WMS 2.80, WMS 2.85, respectively. Poster 1 contained appropriate length of message with WMS 2.95 followed by poster 2 (WMS 2.95), poster 3 (WMS 2.75), poster 4 (WMS 2.80) and poster 5 (WMS 2.90) in high category.

In attributes of illustration, poster 1 score WMS 2.95 followed by poster 2, poster 3, poster 4 and poster 5 scored WMS 2.90, WMS 2.75, WMS 2.90 and WMS 3.00, respectively. Poster 1 scored WMS 2.85, poster 2 scored WMS 2.90, poster 3 scored WMS 2.80, poster 4 scored 2.85 and poster 5 scored WMS 2.95 for attributes of compatibility.

Effectiveness of posters has been presented in Table 2. It can be clearly seen from the table that overall mean score for attributes of objectivity was 2.92 followed by coverage (2.91), illustration (M 2.90), accuracy (2.89), writing style (2.88), compatibility (2.87) and content presentation (2.86) for all posters.

Overall reliability coefficient of posters perceived by judges:

Split half technique was used as measure of inter consistency and it was depicted in Table 3 along with the reliability (rtt) value.

It was found high for the message covered in posters. Overall reliability coefficient of posters found significant at 5% level of significance with 0.88* "r" value. Frankel remarked in 1996 that for research purpose, thumb rule is that reliability should be at least 0.70 and preferably high.

Perceived field applicability of various message related to Sustainable Natural Resource Management in posters perceived by judges:

Regarding perceived field applicability of posters, simplicity scored highest weighted mean score (2.95) followed by relative advantage (WMS 2.90), Triability (2.85), cultural compatibility (2.80 WMS) and physical compatibility (2.75), respectively. The overall mean score of posters were 2.85 with perceives feasibility index 95.00 (Table 4).

Table 3 : Overall reliability coefficient of posters perceived by judges (N=20)

	Attributes of content and format	Reliability	Overall Reliability
Posters	Accuracy, coverage, objectivity, content presentation, illustrations, writing style and compatibility	Inter consisting methods (split half technique)	0.88*

Significant at 5% level of significance

Table 4 : Perceived field applicability of various message related to Sustainable Natural Resource Management in posters perceived by judges

Attributes of content	Posters (weighted mean score) (N=20)
Relative advantage	2.90
Cultural compatibility	2.80
Physical compatibility	2.75
Simplicity/ complexity	2.95
Triability	2.85
Overall mean score	2.85
Perceived field applicability index	**95.00**

Conclusion:

The development and standardization of posters on sustainable Natural Resource Management practices marks a significant milestone in promoting environmentally friendly practices and supporting the conservation and sustainable use of natural resources. By working together, we can create a more sustainable future for all.

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