CHAPTER-4
RESEARCH METHODOLOGY

Chapter Abstract

This chapter discusses the research plan and design for the present study. The researcher states the research objectives in this chapter. It also highlights the sampling technique, data collection methods and statistical methods respectively used in the study.
RESEARCH METHODOLOGY

This chapter details out the research plan and design of the present study. In the previous chapters, the concept of social advertisement and the related literature have been discussed in detail. The present study ‘content analysis and audience perception of social advertisements in Radio and television’ was divided into two parts depending upon the objectives of the study.

4.1 OBJECTIVES OF THE STUDY

The main objectives of the study are:

- To analyze the content of social advertisements of television and radio.
- To analyze what types of social advertising is prevalent on radio and TV.
- To determine the number of social advertisements appearing on both Radio and Television for some specific period.
- To study the time devoted to social advertisements.
- To analyze different aspects- language, style, shots, characters, slogans, theme and background used in the social advertisements.
- To study the opinion of people regarding different aspects of social advertisements.
- To study the perception of people towards social advertisements.

The four purposes of this chapter are to (1) describe the research plan and methodology of this study, (2) explain the sample selection, (3) describe the procedure used in designing the instrument and collecting the data, and (4) provide an explanation of the statistical procedures used to analyze the data.

4.2 RESEARCH PLAN

Every researcher has to plan the entire process of study in terms of research plan and design suited to the study in order to accomplish the purpose of the study. A plan is typically any diagram or list of steps with timing and resources, used to achieve an objective. It is commonly understood as a temporal set of intended actions through which one expects to achieve a goal.
Planning (also called fore thought) is the process of thinking about and organizing the activities required to achieve a desired goal. It is thought essential to the creation, maintenance and refinement of a plan, or integration of it with other plans. It combines forecasting of developments with the preparation of scenarios of how to react to them and ensure finding of the end results. In other words, planning and the process of organizing activities in a research project is known as research plan and procedure.

4.2.1 RESEARCH

Research is a systematic problem analysis, model building and fact finding for the purpose of important decision- making and control for the purpose of the study undertaken. It is a well-planned, systematic process which implies that it needs planning at all the atages. It uses scientific methods. It is an objective process as it attempts to provide accurate authentic information. It is defined as the application of scientific methods in the solution of problems.

A broad definition of research is propounded by Martyn Shuttle worth. According to him, “In the broadest sense of the word, the definition of research include any gathering of data, information and facts for the advancement of knowledge.

Another definition of research is given by Creswell, who states that, “Research is a process of steps used to collect and analyze information to increase our understanding of a topic or issue.”

4.2.2 METHODOLOGY

Methodology is the systematic, theoretical analysis of the body of methods and principles associated with a branch of knowledge. Typically, it encompasses concepts such as paradigm, theoretical model, phases and quantitative and qualitative techniques. A methodology does not set out to provide solutions. It is, Therefore, not the same thing as a method. Instead, it offers the theoretical underpinning for understanding which method or st of methods or so called “best practices” can be applied to a specific case, for example, to calculate a specific result.

4.2.3 RESEARCH METHODOLOGY

Research methodology is the process which is used to collect informationa and data for the puurpose of making decisions related to problem solving. The research
methodology may include publication research, interviews, surveys and other research techniques, and can include both present and historical information.

4.3 METHODOLOGY ADOPTED FOR THE PRESENT STUDY

This study is divided into two parts; first part is content analysis of social advertisements telecasted on four major news channels for a specific period.

Berelson in his book *Content analysis in Communication Research*, heralded recognition for the technique as a versatile tool for social science and media researchers.

**Definition and purpose of Content analysis**

Content denotes what is contained and content analysis is the analysis of what is contained in a message. Broadly content analysis may be seen as a method where the content of the message forms the basis for drawing inferences and conclusions about the content (Nachmias and Nachmias, 1976). Further, content analysis falls in the interface of observation and document analysis. It is defined as a method of observation in the sense that instead of asking people to respond to questions, it “takes the communications that people have produced and asks questions of communications” (Kerlinger, 1973). Therefore, it is also considered as an unobtrusive or non-reactive method of social research.

A number of definitions of content analysis are available. According to Berelson (1952) content analysis is a research technique for the objective, systematic, and quantitative description of the manifest content of communication. Holsti (1968) says that it is any technique for making inferences by systematically and objectively identifying specified characteristics of messages. Kerlinger (1986) defined content analysis as a method of studying and analyzing communication in a systematic, objective, and quantitative manner for the purpose of measuring variables. Krippendorff (1980) defined content analysis as a research technique for making replicable and valid inferences from data to their context. As for Weber (1985) it is a research methodology that utilizes a set of procedures to make valid inferences from text. These inferences are about sender(s) of message, the message itself, or the audience of message. According to Stone, content analysis refers to any procedure for
assessing the relative extent to which specified references, attitudes, or themes permeate a given message or document.

A careful examination of the definitions of the method show emphasis placed on aspects such as system, objectivity, quantification, context and validity - with reference to the inferences drawn from the communication content about the sender, the message, the receiver of the message. Thus content analysis is all about making valid, replicable and objective inferences about the message on the basis of explicit rules. The material for the content analysis can be letters, diaries, newspaper content, folk songs, short stories, messages of Radio, Television, documents, texts or any symbols.

Further, like any other research method, content analysis conforms to three basic principles of scientific method. They are:

1. **Objectivity:** Which means that the analysis is pursued on the basis of explicit rules, which enable different researchers to obtain the same results from the same documents or messages.

2. **Systematic:** The inclusion or exclusion of content is done according to some consistently applied rules where by the possibility of including only materials which support the researcher’s ideas – is eliminated.

3. **Generalizability:** The results obtained by the researcher can be applied to other similar situations.

Now, if content of communication forms the material for content analysis, where does a content analyst find himself/herself in the communication process?

![Communication Process Diagram](source-message-channel-receiver)

This shows the communication process and where the analyst figures.

*Where does content analyst find himself/herself?*

As can be seen, the analyst figures at the point of the message, and as Holsti (1968:601) points out, draws inferences about sender(s) of message, characteristics of message itself, or the effects of the communication on the audience – that is the researcher interprets the content so as to reveal something about the nature of the audience or of its effects. Lasswell incorporated these components in his classical formulation: *WHO says WHAT to WHOM with WHAT EFFECT.* ²
Uses of Content Analysis

Now, an attempt is made in this section, using some studies as examples, to explain about the applications of content analysis.

Though scholars from various disciplines such as social sciences, communications, psychology, political science, history, and language studies use content analysis, it is most widely used in social science and mass communication research. It has been used broadly to understand a wide range of themes such as social change, cultural symbols, changing trends in the theoretical content of different disciplines, verification of authorship, changes in the mass media content, nature of news coverage of social issues or social problems such as atrocities against women, dowry harassment, social movements, ascertaining trends in propaganda, election issues as reflected in the mass media content, and so on.

Content analysis of Advertisements

Advertising content analysis looks at why effective advertisements work. This is done by dissecting the emotional appeal of advertisements or the methods advertisements use to appeal to the sub rational side of the target audience. While people are confronted by hundreds or thousands of advertisements each day, only a few of these attract the attention of their intended audiences. Expert Jib Fowles says that the small number of advertisements that do succeed do so through "something primary and primitive, an emotional appeal, that in effect is the thin edge of the wedge, trying to find its way into a mind."³

The researcher focused on social advertisements appearing on the four major television networks during primetime. These Network stations are available to everyone with a television, who lives within receiving range of a broadcast signal. The networks target a broad audience, while each cable channel usually targets a narrower demographic group. Advertisements broadcasted on the major networks therefore can reach the largest cross section of the public.

4.4 SAMPLE OF THE STUDY

The sample of the study for content analysis is, social advertisements, appeared on television and radio, during the study. Television advertisements have been chosen by the researcher because Television is the dominant type of media in the developed and developing countries. It combines audio and visual possibilities of social
advertising. Its effectiveness results from ‘learning without involvement’ which means that the people take up the information even without being interested at first. Consequently, television is an essential media for social advertising. People see a lot of advertisements during their TV viewing. Average 2-3 commercial breaks come i.e about 6-7 minutes or more in even in 31 minutes program. The advertisements about various products, services or ideas are presented during these commercial breaks. The prime time is the most favorite time for the advertisers to advertise the products, services and ideas. Earlier approximately 50 % time of one hour prime time program had been devoted to advertisements but Telecom Regulatory Authority of India has released the guidelines of no more than 12 minutes of advertising per hour on TV channels during prime time. An analysis of prime time of six news channels shows that the violation of this law regarding advertisement time is more the norm than the exception. Five of the six news channels of this study have an average of around 31% (18 minutes of advertising in one hour of programme) of advertisements. Also, there is not much difference between free-to-air (Aaj Tak and Star News) and pay channels (CNN-IBN, Zee News and NDTV 24x7). Hindi channels Aaj Tak and Zee News have an average of 43 percent and 46 percent advertisement time. Hindi news channels seem to have larger advertising volume compared with the two English channels in this analysis. Only the government funded DD News (bilingual and free to air) has an average less than the mandated 20 percent.

For TV for news channels, prime time advertisements of four AAJ TAK, ABP news (formerly known as Star news), India TV and Delhi Doordarshan (DD news) were selected. For radio, prime time Social advertisements of two major radio stations AIR and 94.3 My FM were selected. A sample of 200 people was selected from Chandigarh and nearby villages. A questionnaire was prepared to assess the perception and thinking of people about social advertisements.

4.5 DATA COLLECTION FOR CONTENT ANALYSIS
The first step towards conducting content analysis of social advertisements was to collect the social advertisements of TV and radio. For TV, The researcher has recorded the advertisements with the help of TV tuner. TV tuner card is a kind of television tuner that allows television signals to be received by a computer. It is much like the digital video recorder (DVR) that allows the recording television program on a
hard disk. Some ads that cannot be recorded due to some technical issues were downloaded with the help of You tube Downloader.

The social advertisements of prime time (9PM-10 PM) for the period of one month from Aug 2013 to September 2013 on four major news channels-AAJ TAK, ABP news (formerly known as Star news), India TV and Delhi Doordarshan.

Total of 29 social advertisements that appeared during this period were selected as a sample for analyzing the content. The three broad aspects in which the selected social advertisements were analyzed were: occurrence, presentation and content of social advertisements.

For radio, the researcher recorded social advertisements of two major radio stations AIR and 94.3 My FM for one month from October 2013 to Nov 2013 during primetime 9PM-10 PM with the help of mobile recording feature. During the recording the researcher found that not even a single social advertisement appeared on radio during prime time selected by the researcher. So, the researcher recorded advertisements of morning time (8AM –9AM) for seven days. With the help of MP3 cutter application on smart phone, the advertisements were separated from the whole recorded files. A total of 8 social advertisements were collected and selected as a sample for analyzing the content. These advertisements have also been analysed one by one on the basis of following categories:

- Duration/length of the ads in seconds.
- Frequency of the advertisements.
- Issues covered in the advertisements.
- Language and presentation of the advertisements.
- Characters/celebrities used in the advertisements.
- Appeals, themes and styles used in advertisements.
- Shots, music and slogan used in advertisements.

4.6 COLLECTION OF DATA FOR PERCEPTION OF AUDIENCE

- For the second part of the study, the opinion of citizens of Chandigarh regarding the social advertisements of radio and TV was collected. For this, the survey method was adopted
There are a lot of ways to conduct research and collect information, but one way that makes it really easy is by doing a survey. Survey is defined as a brief interview or discussion with individuals about a specific topic. The term survey is unfortunately a little vague, so we need to define it better. The term survey is often used to mean 'collect information.'

The three specific techniques of survey research are:

- **Questionnaires** - a series of written questions a participant answers. This method gathers responses to questions that are essay or agree/neutral/disagree style.
- **Interviews** - questions posed to an individual to obtain information about him or her. This type of survey is like a job interview, with one person asking another a load of questions.
- **Surveys** - brief interviews and discussions with individuals about a specific topic. Yes, survey is also a specific type of survey, to make things even more confusing. A survey is a quick interview, with the surveyor asking only a few questions.

A structured questionnaire was convassed to study the opinion of selected sample population. Questionnaires can go in several ways:

- Open ended questions where the participant fills in the answer with their thoughts. This is useful for a descriptive study.
- Multiple choice questions allow for statistical analysis.

Using questionnaires allows a researcher to utilize several strengths. For example:

- It allows for minimal contact between researcher and participant.
- Multiple avenues, such as handing them out in person, using snail mail, email, and online survey engines, can be used.
- Participant's answers are readily recorded on the forms.

For the present study, the questionnaire was divided into three main sections. The first section consisted of 5 statements to find out the information related to media usage and advertisements watched. The second section consisted of statements regarding occurrence, presentation and content of social advertisements. The third section consisted of background information that tells the age, gender, area and education of the respondent. The sample was selected by using convenience sampling.
The population comprised of educated males and females of Chandigarh city and of two nearby villages Dhanas and Naya Gaon. The sample of the study comprised of 200 citizens. It includes housewives, people from business and service class and students pursuing higher education.

**Validity of the Research Tool**

The validity of the research tool in terms of content validity appropriateness of response system and clarity of language was checked twice by the researcher.

**Collection of Data:** The researcher collected the data personally in two months during November-December 2014. A total of 200 people were surveyed about their opinion of social advertisements.

### 4.7 STATISTICAL METHODS USED

The collected data was analysed and presented in the form of various tables. To prove the validity of sample used for the research study, Chi Square test ($\chi^2$) was applied. It has been applied to show that the distribution of male subjects does not differ from distribution of female subjects.

$\chi^2$ **test of homogeneity**

$\chi^2$ test is homogeneity has been designed to determine whether two or more independent random samples are drawn from the same population or different populations. The researcher takes a hypothesis that two or more samples come from the same population.

While applying $\chi^2$ test following steps are used

1. A null and an alternative hypothesis are established. Null hypothesis $H_0$ is that two samples come from the same population where as $H_1$, the alternate hypothesis is that they come from different populations.
2. A set of expected frequencies is derived under the assumption that the null hypothesis is true.
3. The observed frequencies are compared with the expected frequencies.
4) If the calculated value of $\chi^2$ is less than the table value at a certain level of significance (generally 5% level) for certain degrees of freedom the Ho is accepted. On the other hand, if the calculated value of $\chi^2$ is more than the tabulated value, the null hypothesis is rejected and we conclude that null hypothesis not true and the samples do not come from the same population and there is a significant difference between the two samples.

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\chi^2$ defined: The quantity, $\chi^2$, describes the magnitude of the discrepancy between theory and observation. It is defined as

$$\chi^2 = \frac{(O - E)^2}{E}$$

$O = \text{the frequencies observed}$

$E = \text{the frequencies expected}$

$\Sigma = \text{the `sum of`}$

We can also test the significance by looking at $\chi^2$ table for p value against the calculated value of $\chi^2$. If the value of p is less than 0.05 we conclude that the hypothesis Ho is to be rejected and the alternate hypothesis $H_1$, that there is a significant difference between the observations is accepted.

The following conditions should be satisfied before applying the Chi square test.

1) N must be reasonably large.

2) If the expected frequency is less than 5 in one cell, the frequencies which are less than 5 are pooled with the preceding and succeeding frequency, so that the resulting sum is 5 or more.

3) When the expected frequencies are less than 5, Yates correction is applied.

4) The corrected $\chi^2$ after applying Yates correction is

$$\chi^2(\text{corrected}) = \frac{[O_1 - E_1 - 0.5]^2}{E_1} + \frac{[O_2 - E_2 - 0.5]^2}{E_2} + \ldots$$

or

$$\chi^2 = \sum \frac{(O-E-0.5)^2}{E}$$

Where $O_1, O_2$ are observed frequencies and $E_1, E_2$ are expected frequencies.
**Testing difference between means of two samples**

Given two independent random samples of size $N_1$ and $N_2$ with means $\bar{x}_1$ and $\bar{x}_2$ and standard deviations $S_1$ and $S_2$, we may be interesting in testing the hypothesis that the samples come from the same normal population. To carry out the test we calculate the value of ‘$t$’ as follows

\[
t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}
\]

Where $S_1$ and $S_2$ are the sample standard deviations and $N_1$, $N_2$ are number of observations in 1st and 2nd sample. $\bar{x}_1$ and $\bar{x}_2$ is the mean of 1st and 2nd table.

The degree of freedom = $(N_1+N_2-2)$

If p value of the statistic ‘$t$’ at $(N_1+N_2-2)$ degrees of freedom is less than 0.05 we reject the hypothesis Ho but if $p \geq 0.05$ the hypothesis (Ho) of no difference is accepted and we conclude that the two samples are coming from the same population.

In each table Chi Square test of homogeneity has been applied for testing the significance of difference between the frequency of any two columns or rows where ever required. The percentages have been calculated and presented for all these tables. Where ever required, the average along with SD has been calculated and presented and Students t test has been applied to test the difference of the means.
REFERENCES