EFFECTIVENESS OF PINK RIBBON CAMPAIGN

MS Thesis

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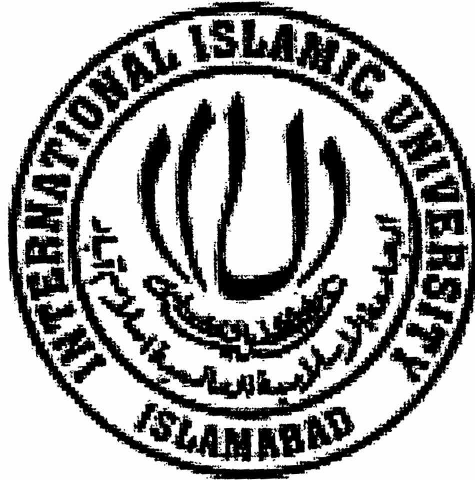

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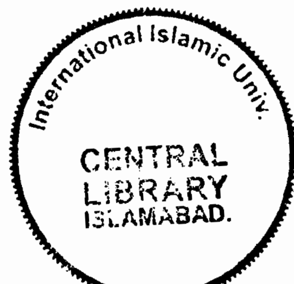

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1. Heath education - Breast Cancer - pakistan

2. Women's heath - pakistan

Dedication

I dedicate this to my

Parents** and youngest sister **Mursalah Mukhtar

who give meaning to my life.

Date: ____________

Final Approval

It is certified that we have read this thesis submitted by Ms. Sahifa Mukhtar. It is our judgment that this thesis is of sufficient standard to warrant its acceptance by the International Islamic University, Islamabad for MS in Media & Communication Studies.

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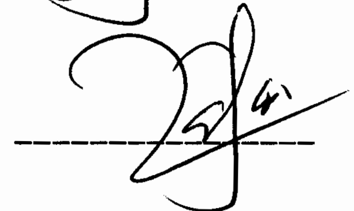

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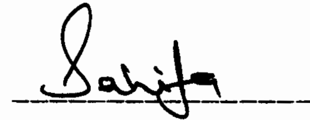
Declaration

This thesis has been submitted as partial fulfillment of MS in Media & Communication Studies to the Department of Media & Communication Studies. I solemnly declare that this is my original work and no material has been plagiarized. Any material quoted from a secondary source has been provided with proper citations and references.



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ABSTRACT

The aim of the research was to find out the effectiveness of Pink ribbon campaign, a campaign to raise awareness on breast cancer. Breast cancer has become a serious health issue for women in Pakistan and it needs to be addressed more extensively and effectively. In Pakistan due to lack of education and other information poor environments, health sector is badly suffering and it is a common observation that issues like breast cancer are taken as social taboos, especially when it comes to women. According to a report every ninth woman in Pakistan is suffering from breast cancer. Pink Ribbon Pakistan has been working to create awareness in the female segment, using communication appeals through; electronic and print media, but their main tool is interpersonal communication. Seminars are being conducted in different areas of the country and it is being tried to reach the maximum audience in all segments of the society. This research has examined the effects process at all three levels cognitive, effective and conative on women.

The study was quantitative in nature and a questionnaire with closed ended questions was distributed amongst the drawn sample to assess the effect process. Stratified method for specification of

the demographic characteristics was adopted while convenience method was used for collection of data from the target population of 350 women living in Rawalpindi and Islamabad. The final questionnaire comprised of 4 closed ended questions, demographic profile of the sample population with 22 statements was distributed. Second part of the questionnaire comprised of 22 statements. Statements measuring cognition, attitude and behavior were randomly placed in the questionnaire. The variables included in the study were knowledge, attitude, behavior, demographic variables were age, education and employment status. Sources of information on breast cancer were other important variables which were pink ribbon campaign, electronic and print media and interpersonal communication. Age was divided in three response categories; 21-30 years, 31-40 years and above 40 years. Three groups were specified for education; no education, low education and high education. Employment status referred to two categories; employed and unemployed women. SPPS and Pearson's correlation test was performed for the analysis.

Results showed that different sources of communication had different effects at all three levels. Although the number of respondents who got information on breast cancer through pink

ribbon campaign was very low but highest positive change at all three levels of effects process was found in these women. Results showed that majority of the sample population got information on breast cancer through interpersonal communication. As pink ribbon campaign also disseminates its messages mostly through interpersonal communication so the success of pink ribbon can be considered as the effectiveness of interpersonal communication. However breast cancer information was also reached to the audience by sources other than pink ribbon campaign and the results showed that electronic media was more effective amongst other sources. Analysis of the data showed that demographic variables viz. age, education and employment status have affected the changes at all three levels differently. Knowledge was higher in the women of young age. Positive behavioral change was higher in the women of above 40 years age. Behavioral change was higher in employed women. Results also showed that differences on the basis of education are not statistically significant at all levels of the effects process.

It can be concluded that properly designed messages related to the breast cancer issue can definitely contribute positively and can secure the desired objectives if multiple channels of communication

are used for these communication appeals. Secondly knowledge level is already high regarding this issue; more extensive change is required at attitudinal and specifically behavioral levels.

Chapter 1

INTRODUCTION

1.1: Background

Health Communication campaigns are basically aimed to raise health standards in societies. To introduce innovations in the field of health, different ways of communication are used. As far as Pakistan is concerned, health care facilities are very poor here; however Ministry of Health Pakistan, WHO, UNICEF, other NGO's and national/international organizations have been launching prescriptive and proscriptive health communication campaigns. There are bulks of information regarding health issues on electronic and print media, internet and health journals. Illiteracy, poverty and lack of information and other resources, are major reasons impeding the effects of communication campaigns in Pakistan. Breast cancer is a challenging health issue in developing countries including Pakistan. It is one of the major reasons increasing death toll of women in Pakistan. There is a significant level of knowledge about the problem but majority of the women with breast cancer present late to the doctor. In our society, issues like breast cancer are taken as social taboos; therefore it is difficult to discuss this kind of issues openly. There is an urgent need to overcome this problem as diseases like breast cancer and HIV/AIDS

are invading here. Different communication vehicles are being used to create awareness about many health/social issues, basic target is to translate these messages into practices. Extensive efforts are made to spread awareness on various health issues, still it is imperative to expand this area of communication campaigns at larger extent especially for diseases like breast cancer, HIV/AIDS etc.

Breast cancer problem is increasing in Pakistan day by day and it is imperative to make the people fully aware about it. Breast self examination, cautious diet plan (as suggested in medicine researches), physical exercises and regular medical checkups are very important to be adopted as behaviors. Treatment of breast cancer is very expensive here in Pakistan and medical facilities are also not sufficient. So better care and self breast examination is the only way to avoid breast cancer or at least for early detection of the disease.

1.1.1: Public Communication Campaigns

Public Communication campaigns or social campaigns are designed to bring social change in society. Social campaigns are strategically designed to address any issue, securing favorable attitudes towards any idea and then translation of these attitudes into behaviors. These campaigns are part of Development Support Communication which is a multi-pronged process of information sharing about development

agendas and planned actions. In DSC different channels of media and other sources of communication (formal and non-formal means) are being used all over the world for development projects. In Pakistan social communication campaigns were started in 1970's, several communication campaigns were included in the late 1980's and 1990's (Yousuf Zai, 2001).

Public communication campaigns are an attempt to shape behaviors towards desirable social outcomes (Weiss & Tschirhart, 1994). Public communication campaigns use the media messaging and an organized set of communication activities to generate specific outcomes in a large number of individuals and in a specified period of time (Rogers & Storey, 1987).

Media has been recognized as an effective tool for social change. Public communication campaigns are constructed to bring social change in societies, identifying social problems, highlighting their solutions through media advocacy and other means of communication.

Rice and Atkin (1994) argue that "Mass media can be used to improve awareness and knowledge, to stimulate interpersonal communication, and to recruit others to join in".

According to Hymen & Sheastley (1947), "Even if all the communication barriers were known and removed there would remain many psychological barriers to the free flow of ideas"

To make these strategic efforts successful, construction of the messages and culture of the society needs to be taken into consideration. Basically these strategic communication messages are meant to change behaviors in a desired direction. The behaviors might include practical steps like breastfeeding, getting a mammography, change in eating habits, quitting smoking, to create an environment conducive to talking about an issue openly like HIV/AIDS, contraceptive use and family planning.

In Public communication campaigns different sources of communication other than media channels are used as supplements which increase the effectiveness of the campaigns. According to Henry, this mix of communication channels is called as the "air" and "ground" strategies.

1.1.2: Health Communication Campaigns

Health communication includes information on health promotion, diseases and health care services at a level appropriate to the general masses in a community or country (Groen, 2007). Health promotion campaigns using mass media is an effective form of persuasion (Stiff

and Mongeau, 2003) because they "usually reach a large number of audiences at a relatively low cost per person" (Piotrow *et al.*, 1997)

Health communication campaigns are designed to improve the health conditions of the individuals. In Pakistan Ministry of health, WHO, UNICEF and some NGOs are working on health issues and campaigns on measles vaccination, HIV/AIDS prevention, Family planning, Mother and child health care etc are being run using different sources of Mass media and other communication vehicles. These campaigns create awareness about specific health issues, diagnosis of diseases, prevention and cure of the disease.

"Health Communication is the dissemination and interpretation of health related messages. The disseminator may be an individual, an organization or a mass medium. The interpreter may be an individual, a group, an organization or an indiscriminate mass public" (Ray & Donohew 1990)

Flay and Burton (1990) say that "Applied to public health, communication campaigns can be defined as an integrated series of communication activities using multiple operations and channels, aimed at population or large target audiences usually of long duration"

The study of human communication processes and effects has combined with the study of almost every human endeavor and health

has been no different (Berger & Chaffee, 1987; Costello, 1977). The marriage of health and communication in a self-conscious inter-disciplinary relationship is generally regarded to have occurred in the mid 1970's although it was certainly a common law relationship long before (Cassata 1978; Costello, 1977).

Ruben argues that the relationship between human communication and health care is a very fundamental one. Communication is a process through which symptoms are described and interpreted, and the means through which treatment is provided and compliance encouraged.

Recognizing the pivotal role of television in "socializing individuals and stabilizing life styles", Gerbner, Morgen and Signorielli (1982) also noted that the success or failure of educational and informational health campaigns depends largely on the broader cultural context into which they are injected.

"Health campaign is a crucial element in a preventive approach to public health care because relevant health information empowers individuals to take charge of their own health" Kreps and Thorntorn (1984).

Mass media have been used in health promotion efforts for many years. Television, Radio, Newspapers, Magazines, Billboards, Posters and pamphlets have been used to encourage people on issues like seat belts

(Robertson et al., 1947), to quit smoking (Flay, 1987a), to use contraceptives (Udry, 1974), and most recently to "just say no" to drugs and to use condoms to protect against the spread of the AIDS virus (Backer, 1988).

Einsidel and Brown (1990) conclude, "The mass media might be seen most appropriately as another set of tools that can be used to promote desirable public policies and healthy individual behaviors. Although not a grand panacea for the problems of unhealthy lifestyles and the policies that support them, the mass media if used appropriately, can play an important role in moving us closer to better health for all. Effective use of the mass media requires thoughtful planning and goal setting, a clear understanding of the health issue and the audience, and continuing assessment of what works and does not work". (p.167)

Einsidel (1990) further adds about planning, research and environment of the society while launching any campaign that some general guidelines developed are considered as public health strategies that include the mass media. A number of these guidelines are drawn from experience in what is now called "social marketing". This approach originally articulated in the early 1970s (Kotler & Zaltman, 1971), borrows lessons learned by commercial product advertisers and applies them to social issues. It now has been applied extensively to a variety of health issues (Manoff, 1985).

The social marketing approach focuses attention on the audience and its social, political, and economic environment. From this perspective campaign planners are compelled to consider not only what it is they are really trying to get people to do but also why the audience might be motivated to comply with or might resist engaging in the desired behavior. At each step in the campaign process, from defining the problem and establishing realistic objectives to message design and media planning and implementation, the needs, motivations and resources of the audience are considered. Existing data, interviews with small groups and surveys of samples of the potential audience re used to learn more about the audience and its environment. Whenever possible existing structures, such as smoking cessation clinics and support group or rules and regulations that can supplement the media campaign are utilized. Although marketers rarely discuss the theoretical rationale of these principles of marketing, social scientific theories of learning undergird most of them (Einsidel & Cochrane, 1988).

Public and health communication campaigns can also be distinguished as commercial (seek to promote individual's benefit) and non-commercial communication campaigns (seek to promote benefits of the sponsoring agencies). In Commercial campaigns main focus of the campaign is to sell that specific health related product in the market.

However in non-commercial public and health campaigns basic target is to translate messages into practices aiming to build a healthier society.

1.1.3: Interpersonal communication as supplement

Interpersonal communication is defined as communication between two or more than two persons with or without any technical or mechanical device. In health communication campaigns this job is done by the experts, physicians and National lady health workers. They also play the role of opinion leaders which is very helpful for the success of campaign.

"If possible, media channels should be supplemented with interpersonal contact of some sort. In general interpersonal or non-mediated channels are more effective in delivering complex, emotionally volatile, and persuasive messages and in inducing complex behavior change, provided that the source is perceived as credible. They are also effective when there is a small, selective audience and when control over the presentation of the material is required" (Rogers, 1973a).

Rogers and Shoemaker (1971) claim that mass media are the powerful tools in creating awareness while interpersonal channels are more important when affective and behavioral changes are required.

Rogers (1973), in his book, *Communication of Innovations*, concludes that mass media and interpersonal communication play complementary roles in the diffusion of information.

Both mass media channels and interpersonal ways of communication are very important in diffusion of innovations. Mass media channels are very helpful in creating awareness at mass level but for attitudinal and behavioral change interpersonal communication is more effective. Alclay and Taplin (1989) write that "health educators have traditionally relied primarily on interpersonal and small group communication, it is increasingly important that they also be trained to use mass communication resources to reach large audiences effectively and to involve communities in health promotion activities"

Rice and Atkin (1994) also assume that mass media are used to increase the level of knowledge and to stimulate interpersonal communication about the issue. They claim that interpersonal contacts are essentially required for the behavioral change.

Pink Ribbon campaign is also supplemented with interpersonal communication such as seminars at different educational institutions, awareness session at factories where women are working. Health workers training related to the issue is also initiated by Pink Ribbon Pakistan.

Health campaigns like Pink Ribbon disseminate information about the prevention and cure of disease, seeking attitudinal and behavioral change. Around the world, health communication campaigns are launched to promote good health in the society. According to Chandrakandan, health communication campaigns are an integral part of public service programs and a considerable time and space is being given in media of developing and developed countries.

1.1.4: Definition of Knowledge

Knowledge, Cognition and Awareness are the words used for a same phenomenon in communication. Zajonc (1968) argues "No social psychologist honestly questions the general assumption that cognitions are organized wholes made up of interdependent parts". Baron, Byrne and Johnson note that social cognition involves all such processes through which we perceive information, interpret and remember them, and then utilize them in the practical world for personal benefits.

1.1.5: Definition of Attitude

Social psychologists define attitudes as "beliefs that predispose us to act and feel in certain ways". This definition has three components: (a) belief (b) feelings (c) dispositions to behave.

An attitude is the general predispositions, favorable or unfavorable, of a person towards other people, objects and issues. It has achieved its

prominent position in the research of influence because it is assumed that the attitude of a person is an important mediating variable between the acquisition of information and behavioral change (Petty and Priester, 1994). Early definitions of attitudes have been based on the concept that attitude is the readiness or predisposition towards responses of the person and there is a consistent relationship between attitudes and behaviors (Chafee and Roser, 1986). Thomas and Znaniecki (1918) define, "by attitude, we understand process of individual consciousness which determines real or possible activity of the individual in the social world"

1.1.6: Definition of Behavior

As discussed by Yousuf Zai (2004), behavior is the desired component in the effects process of all communication campaigns. Behaviors are a visible action of a person. For example to quit smoking is an action resulted as consistency in the belief that smoking is injurious to health.

1.1.7: PINK RIBBON PAKISTAN

Pink Ribbon campaign is a project of Women's empowerment group and vision 2015 working for Gender issues. WEG is an NGO registered as a trust working on Health, Economic Empowerment, Education, Gender Equity and Equality, Legal and Political Rights and Sustainable Development.

Pink Ribbon campaign has been working to bring awareness about Breast Cancer in the world since last fifteen years. Pink ribbon is being used as an emblem of hope for victims of breast cancer and for those who are working to fight against this disease. The National Breast Cancer Awareness campaign is a non-funded, self-sustained campaign, driven by a large number of volunteers all over the country. (Pink Ribbon Pakistan, September, 2008)

According to the report, Pink Ribbon Pakistan aims to significantly reduce Breast cancer mortality in the country by creating wide spread awareness on early detection and increased access to treatment. Ideological focus of the campaign is to inform people about the high level of incidence of Breast cancer in Pakistan, the disease which is curable if detected in time by simple self diagnosis.

Pink Ribbon Campaign was brought to Pakistan in 2004, when Women Empowerment Group observed the astonishing high breast cancer prevalence in Pakistan. When the campaign was launched it got severe refusal from the media, because of the social taboos. Gradually they made it acceptable to be discussed on media and media started giving coverage to Breast Cancer programmes from 2004.

In Pink Ribbon project different techniques are being used to address the issue. The campaign started off with a top to bottom approach by

involving Excellencies holding the office of Minister and Secretary of Ministry of Women Development, Ministry of Health and Ministry of Information and Broadcasting at Federal and Provincial levels, for support of the cause. Memorandums of understanding have also been signed with the ministries to establish Public Private Partnership in holding the cause. Using the strategy of celebrity endorsement in Pakistan they invited Mrs. Cherrie Blair in Pakistan to support the cause by talking to the females of Pakistan at Educational Institutions and to Government of Pakistan. Mrs. Blaire is also working to support the cause in UK.

This organization sets awareness booths in educational institutions, and then seminars are being conducted in which experts (doctors) are invited to talk to the females at different educational institutions. In the third step service delivery stalls are arranged in which mammography facility is provided, free of cost. Basically through young female students in universities and colleges they are trying to reach mothers directly or indirectly. Not only educated females at Institutions are focused but the janitorial staff as well.

Another very basic purpose of Pink Ribbon Pakistan is to meet young females at different institutions is to just create awareness and guidelines about self-examination as medically mammography is not recommended for the females under 40. So presentations are given

about how to self examine. They also distribute promotional items and brochures with basic information regarding Breast cancer and self-examination as self-examination is the only way to increase the chances of survival at very early stage of breast cancer.

Objectives of the campaign are

1. Make Breast cancer an acceptable topic in the public domain in Pakistan.
2. Create widespread awareness about Breast Cancer and key aspects-its high incidence. Its seriousness leading to fatality, impact on the life of the sufferers and the whole family, and also the good news, that if detected early Breast cancer may be cured.
3. Promote understanding and practice of self-diagnosis.
4. Evoke empathy in the right quarters to support the cause.
5. Motivate people to contribute funds for campaign execution.

Pink Ribbon Campaign Pakistan is using mix of Media and Interpersonal messages to create awareness on the issue. Seminars at different educational institutions such as Kinnaird College for Women, University Lahore, Lahore University of Management Sciences, Fatima Jinnah Medical College Lahore, King Edward Medical College Lahore, Lahore College for Women University Lahore, Punjab University, Department of Applied Psychology, Islamabad College for girls

Islamabad, International Islamic University Women Campus, Islamabad, Overseas Pakistani foundation School and college, Islamabad, Fatima Jinnah Women University, Rawalpindi and Agha Khan University Karachi, have been held to-date to give orientation bout the issue. The campaign has strategically developed alliances with different teaching hospitals, health related institutions such as Agha Khan University, Fatima Jinnah Medical College Lahore etc and healthcare professionals to spread out at a larger level.

1.2: Rationale of the Study

The researcher selected Pink Ribbon Campaign as case study in order to assess effectiveness of this health communication campaign for improvisation in health sector in Pakistan. Researcher aimed to evaluate whether and to what extent there is a consistency in females' knowledge, attitudes and behaviors towards this issue. In researcher's opinion, breast cancer is a very serious issue about which awareness needs to be propagated more. According to the research conducted by Pink Ribbon Pakistan, it is astonishing to know that in Asia Pakistan is the most affected country with Breast Cancer. 90,000 cases are diagnosed every year out of which 40,000 die due to late diagnosis. Every 5th women in Pakistan develops cancer after the age of 40. One of the basic reasons in increase of the disease is shyness in women to talk about this disease. Foremost purpose of Pink Ribbon campaign is

to make this issue openly discussed to overcome the arising problem in Pakistan. In October 2009, a seminar was conducted at International Islamic University, Islamabad as part of this awareness campaign on Breast cancer. Discussion in the seminar was about the reasons, symptoms and treatment of the disease. Presentation was given about self-examination which was very useful to diagnose the disease at early stage. It was also told that if diagnosed earlier the chances of survival are 95 percent. Keeping the above given facts in mind the researcher felt the need to evaluate whether on-going awareness raising efforts (campaigns) are doing an effective job.

According to Pink Ribbon Pakistan Report, 2008 in Pakistan only 0.5 percent of the GDP is spent on Health sector which is extremely low. And treatment of diseases like Breast cancer is very expensive which is not affordable for the people who are living under poverty line in Pakistan. Pink Ribbon Pakistan, does provide free mammography facility but first of all the issue needs to be addressed at more extensive level. All the facts about breast cancer were new for the researcher. However the issue needs to be addressed in all sectors of the society, as issues like breast cancer, family planning, HIV/AIDS are not acceptable even at discussion level in Pakistani culture.

1.3: Problem Statement

The present study aimed to evaluate the effectiveness of Pink Ribbon campaign in creating knowledge, attitude and behavior change in Pakistan. Researcher also aimed to check whether the demographics indicators (employment status and education) influence effectiveness of the campaign.

1.4: Objectives of the study

1. To find out the most effective channels of communication, used to reach the target audience. (As they are using different sources other than media to create awareness on this issue)

2. To what extent campaign is successful in achieving its objectives.

   (i) What is the level of awareness?
   (ii) What is the level of attitudinal change?
   (iii) What is the level of behavioral change?

3. To see whether demographic characteristics (education level and employment status) affect level of attitudinal and behavioral change.

1.5: Research Questions

RQ.1: How Pink Ribbon Pakistan is disseminating information about Breast Cancer?

RQ.2: What is the level of change in knowledge, attitudes and behaviors in women with regards to Breast cancer?

RQ.3: How the level of awareness, attitudinal and behavioral change is affected by the demographics (education level and employment status)

1.6: Hypotheses

H1: Campaign is successful in raising awareness about Breast cancer amongst women.

H2: Campaign is not successful in bringing attitudinal change about breast cancer amongst women.

H3: Campaign is not successful in bringing behavioral change about breast cancer amongst women.

H4: Level of change is affected by demographic characteristics.

H4.i: Higher the level of education higher is the knowledge.

H4.ii: Higher the socio-economic status higher is the knowledge.

H4.iii: Higher the level of education higher is the change at attitudinal and behavioral levels.

H4.iv: Higher the socio economic status higher is the change at attitudinal and behavioral levels.

1.7: Significance of the Study

Pink Ribbon campaign is a first campaign in Pakistan initiating at least a talk on a sensitive and critical health issue; breast cancer on media. Awareness sessions are being conducted in different areas of Pakistan with the help of media and interpersonal sources of communication in particular. It is for the very first time in Pakistan that the issue is discussed very openly and appropriately through programme production on electronic media. Pink Ribbon Pakistan claims to be a pioneer in having open discussions on media on this health problem. This is the first time a study on effectiveness of a breast cancer campaign through investigating changes in awareness, attitude and behavioral level being conducted. This study will help identify the difference in all these three levels of effects process which will make easier to analyze how and to what extent change regarding this health issue is taking place.

The study can help to observe the role of communication sources which are being used to spread information on breast cancer and it will

further help to identify the sources of communication which can help more in propagation of information on this particular issue to have positive results in a desired direction. Researcher observed that on such issues there is a significant percentage of population having information but this awareness is not followed by behavioral change which can be considered as a failure of any health communication campaign. By knowing the magnitude of change at all three levels of effects process, the extent to further expand the communication system/strategy can be predicted.

It is expected that study can help the concerns, especially Pink Ribbon Pakistan to know about the results of their efforts in contributing this cause. Study can help them to discuss on further improvement for the dissemination of their messages and to make the campaign more effective.

It can also help Health ministry of Pakistan to identify the ways through which breast cancer; the arising health problem could be overcome by making the public more aware and by making the issue acceptable to talk on in all segments of our society.

1.8: Limitations of the Study

The respondents participated in the research were from Rawalpindi and Islamabad only so results cannot be generalized. It was convenient for

the researcher to get responses from residents of these two cities. Researcher aimed to analyze effectiveness of Pink Ribbon campaign only because breast cancer is a bigger and rapidly increasing health problem in Pakistan these days. There are other health complications which are being addressed in campaigns by different health organizations, NGOs, health ministry etc. This issue is selected due to its significance and severity. Breast cancer is also being discussed through other means, but Pink Ribbon campaign is the only campaign which is disseminating information exclusively and innovatively on this health issue. It is an extensive programme to enhance awareness about the issue so contributions by any other organization will not be analyzed in this study. Longitudinal study must be conducted for this purpose as the issue is being discussed since a long time and there is a change in the public but due to time and financial constraints that was not possible for the researcher.

Chapter 2

LITERATURE REVIEW

2.1: Theoretical Framework

2.1.1: Theory of persuasion

Mass mediated persuasive messages are very important and critical in bringing about political and social change. Persuasion is defined as "Human communication designed to influence others by modifying their beliefs, values or attitudes (Simons, 1976 P.21). There are four models discussed to explain about the theories of persuasion and one of them is cognitive dissonance which explains about the relationship between attitudes and behaviors. Behavior is something which is followed by the beliefs. Persuasive messages, especially in media are designed strategically to change the attitudes of the audience. For these messages there are few things which are very important and the first one is the purpose or intentions of the senders. Interest of the receivers is also an important element while evaluating or designing any persuasive message. Same is with cultural and social values of the audience. Theory of persuasion basically deals with the messages aimed to influence the attitudes of the receivers.

Renee J. Bator and Robert B. Cialdini applied persuasion theory to the development of proenvironmental public service announcements. They talked about the Public service campaigns on media and concluded that for the success of any campaign or Public service announcements it is very important to first identify the interests, beliefs/attitudes of the public as attitudes correspond to change the behaviors ultimately and all persuasive media campaigns are aimed to change the behaviors actually.

Regarding pro-environmental messages they described that if effects of media campaigns/messages are not considered or neglected then it will be a failure for the designers of pro-environmental messages. Effects of public communication campaigns are being studied by many researchers and proper guidelines to design effective messages to get positive results in desired direction are given by many social scientists. Many factors like structure of the messages, beliefs of the receivers, channel of communication, source and purpose of those messages are very important in determining the success of any campaign.

2.1.2: Theory of Diffusion of Innovation

Diffusion of innovation explains that how new ideas, practices and objects become known and then spread to the whole social system.

Rogers defines innovation as "An idea, practice or object that is perceived as new by an individual or other unit of adoption"

In detailed model of diffusion of innovation Rogers explains that this process takes place in four stages.

- Invention
- Diffusion (Dissemination)
- Time
- Consequences

In this process opinion leaders play an important role. A new idea on different channels of media like use of condoms to be protected from sexually transmitted diseases, advising breast feeding etc is spread through different sources of communication. Opinion leaders exert influence audience behavior. Moreover change agents and gatekeepers also influence the process of diffusion.

This theory is significant in most of the Health communication campaigns as it highlights the adoption of new ideas notwithstanding inconvenience. In health communication campaigns new ideas or piece of advices are disseminated to be prevented from diseases. Like in the campaign for mother and child care, breast feeding is advised with its benefits to be prevented from consequential diseases if breast feeding is not practiced. As far as the breast cancer campaign is concerned,

the campaign transmits the importance of breast self examination for in time detection of the disease.

The theory deals with the dissemination of ideas and adoption by the audience in a systematic way. Application of this theory is seen in health communication campaigns; family planning campaigns, immunization campaigns and other health related messages.

2.2: Conceptual Framework

2.2.1: Consistency of Knowledge, Attitude and Behavior

Knowledge, attitude and behaviors are the three components of effects of mass communication process. Earlier it was assumed audience is the passive target of media messages but now different researches have simplified that responses of the target audience to different media messages are different in accordance with their involvement in that specific subject. It is evident that media is being used purposefully and involvement of the audience is active. On the other hand media exposure is one of the factors determining the effects of messages on media.

Media messages have different effects varying across domains, individuals and conditions. Most of the time information on any topic leads to the formation of attitudes and then practices or behaviors.

Attitude formation is an intermediate process between information/knowledge and behaviors. Sometimes behaviors are based on experiences not on knowledge or attitudes and sometimes practices are because of some beliefs rather than resulting on the basis of knowledge or in formation.

Consistency in knowledge, attitude and behavior is seen as individual difference and as a response to different situations. This approach in effect differs between two classes of variables: knowledge, attitudes, behaviors and the degree of consistency among them. In the first group there are three univariate variables (K, A and B) for media effects analysis. The second consists of three bivariate relationships, (K-A, K-B, and ~~A-B~~). Each of these bivariate relationships represents different media campaign effects.

While studying the effects of a media campaign on knowledge, attitude and behavior consistency, involvement of the individuals is something very important. If an individual is more involved in a topic then there will be a higher consistency in effects process of communication. Sometimes the effects are otherwise because of the lower involvement of individuals.

People process and respond to information differently according to their level of involvement with a message (Batra and Ray, 1984; Ray et

al., 1973). High involvement can lead to greater K-A-B consistency. The hierarchies of effects presented by Ray are

Low involvement hierarchy

Knowledge----Behavior-----Attitude

Dissonance or attribution hierarchy

Behavior----Attitude----Knowledge

Learning Hierarchy

Knowledge----Attitude-----Behavior

Chaffee discussed about the proposition that consistency in knowledge, attitudes and behaviors of the audience are according to their level of involvement in the messages. A health communication campaign on heart problems was taken as case study. Open ended questionnaire was used to gather data from the respondents. He found that K-A, K-B and A-B correlations were found only when the cognitive response was high. Consistency in K-A and B is not found on the basis of knowledge regarding the disease.

As far as health communication campaigns are concerned, a consistency is observed in the effects process if there is a high involvement of the audience in the messages related to a specific

health issue. Sometimes people adopt some behaviors related to a health issue on the basis of their own needs. Attitudes are sometimes developed just because of personal experiences. People can have a specific practice towards an issue without any information on that. However according to Ray's integrated model of effects process in the learning hierarchy attitudes are a more reasoned product of knowledge. Strongest correlations among knowledge, attitudes and behaviors can be expected if there is a highest level of individuals' involvement in the messages. If somebody perceives a low risk of a particular disease then strong involvement will be unnecessary.

Health Communication is a vast area and massive research has been conducted on health communication especially on different media campaigns. Atkin and Arkin (1990) discuss about rapid expansion of academic research examining mass media and public health which is going on since last few decades and this area of research is expanding gradually. Kline (2003) discusses that health related messages are very common on media but it is very important to consider the values, beliefs and norms associated with health.

Proper research, planning, authentic information, appropriate construction and presentation of messages are some of the important elements through which any communication campaign is evaluated. Huge amounts of money are used in Pakistan as well to bring social

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change through strategic communication ways. Different sources of communication as Television, Radio, Print Media and other communication sources are used to create awareness on different issues in the society. However for success of any campaign, selection of media channel and the way messages are disseminated in a particular setup are very important to consider.

Rice and Atkin (1989) said, “Campaigns must make their messages available through a variety of communication channels that are accessible and appropriate for target audience. But the message must also communicate specific information, understandings and behaviors that are actually accessible, feasible and culturally acceptable”

According to Hannan, while addressing issues like HIV/AIDS, the success of the campaign depends upon the extent to which communicators address the audiences for the behavioral change. In his paper he critically analyzes the construction of messages to address the issue of HIV/AIDs in different campaigns run for disseminating information about the disease and cure of the disease. He concludes that regional, national, local and the government, community and the opinion leaders’ participation plays a pivotal role for the success of a communication campaign. He sums up that by providing a forum of discussion and communication, creating supportive environment for positive behavior change, creating knowledge about the services

available in target population are, mainstreaming and putting the issue on news agenda, social mobilization with the help of opinion leaders and sharing sources and capacity building especially with the government departments, NGOs and, media outlets can make the campaign more effective.

Fishbein and Ajzen (1975) exemplified theory of reasoned action which assumes, “people consider the implications of their actions before they decide to engage/not engage in a given behavior”. Azjen (1990) expanded the model into a ‘theory of planned behavior’ and has indicated person’s perceptions/beliefs of control over behavior. Sometimes some people adopt behaviors as a result of their attitudes/beliefs.

In some media campaigns if awareness is created and a successful change has been also made at attitudinal level still it will not necessarily change into practice. There are many reasons of failure of any campaign. People might not practice that change because of economic, religious or social reasons. For example, most of the educated house wives do have information about breast cancer and they believe that it’s a fatal disease. But they might not go for regular checkups because of shyness, their socio-economic status or some other reasons. Education is one of the most important factors in bringing behavioral change on any issue. It is the well established

tendency that the better educated segment of the population requires more information about more topics than those with less educated segment (Tichenor, Donohue and Olien 1983.

Yousuf Zai (2001) discusses that Knowledge-Attitude and Behavior, is affected by demographic characteristics such as locality, gender and education. In his research health campaigns selected for the study were about Vaccine course, Iodized salt, O.R.S and family planning. He also highlights different semantic, socio-religious and structural barriers that affect the success of campaign. Effects were examined on the residents of Dera Ismail Khan, Pakistan by dividing them on the basis of their income and education. He finds that education significantly influences the knowledge, attitudinal and behavioral level but not in all issues. For example his research tells that in case of iodized salt education just affects the attitudinal level. But in other three campaigns knowledge and behavioral, both levels are affected. He concludes that three levels of effects process are affected by different demographics differently.

Porto (2007) studies effects of a Public Communication Campaign in Brazil on AIDs. It was about the use of condoms in adolescent women in that region, to be protected from sexually transmitted diseases. Cross Sectional Survey was conducted with the members of target group. Researcher found that exposure to that issue through media

sources and different communication vehicles supplemented with the interpersonal communication made the campaign successful. Awareness level increased because of extensive exposure to the issue as well.

Yousuf Zai and Hao (2007) conducted research on affect of education on level of cognition about four communication campaigns, Vaccine Course, Iodized salt, O.R.S and Family planning. 300 respondents were interviewed from Dera Ismail Khan equally divided on locality and gender. Stratified specification for characteristics of low and high income was done and convenient sampling was executed for collection of data. They found that health communication messages through these campaigns are discriminated at all levels of effects process (K-A-B) in different campaigns differently because of education. Study reveals that regarding communicated messages sometimes people do not have any knowledge about a particular phenomenon but they behave in a specified direction. Reasons can be their own beliefs, culture, needs etc. And sometimes people have attitude regarding any issue but they do not behave accordingly again due to some reasons as culture, traditions, needs etc. Inconsistency can be observed in effects process in health related messages as well. But demographics like education play a very important role in effectiveness of any health

communication campaign. But it does not necessarily make positive changes at all levels of effects process.

Farrior (2005) discusses in his paper that education leads to greater awareness, attitude change and then to responsible behavior. However researches also recognize that education does not necessarily precipitate an increase in behavioral change. Researcher identifies some barriers in effects process; however awareness and attitudes are not enough to effect behavioral change.

Okobia, Bunker & Osmine discussed change in at cognitive, conative and affective levels in Nigerian women regarding breast cancer. A cross-sectional study was conducted to assess the knowledge, attitude and behavior of the Nigerian women. Closed ended interview based questionnaire was distributed amongst the women from a semi-urban area in Nigeria. Study revealed that the respondents of the study had a very low knowledge on the breast cancer issue and positive behavioral change towards breast cancer was marginal. A few women showed practicing self breast examination and visits to doctor for checkups. Education and socio-economic status were found as important determinants of level of knowledge and behavioral change in the women.

Researchers conducted a KAP study by involving the breast cancer patients in Holy Family hospital in Islamabad, also concluded that despite of the fact that there is a change in knowledge and attitude of the females regarding breast cancer, they do not adopt desired practices towards the problem. The determinants revealed in the study were education and socio-economic status. Consistency was not found in K, A and B due to different reasons.

Chapter 3

RESEARCH METHODOLOGY

3.1: Overview

The study aimed to explore the contribution of Pink Ribbon Campaign in enhancing awareness on breast cancer in women. In order to get answers to the research questions dependent and independent variables were identified and operationalized.

Quantitative research was conducted in which survey method was adopted. Data was collected on the basis of a closed ended questionnaire. Questions correlating to the objectives of the study were constructed.

3.2: Research Design

Research was quantitative in nature and involved a survey from the women residing in Rawalpindi and Islamabad. Results were put into SPSS and correlation test was performed to analyze the data. Aim of the research was to find out the consistency in knowledge, attitudes and behaviors of the women regarding this issue.

3.3: Sample

Sample is a division of the population. According to Babbie (1992) "A sample is a special subset of a population observed for purposes making inferences about the nature of the total population itself".

Due to lack of resources and shortage of time researcher went for stratified convenient sampling. However, the questionnaire was distributed amongst two strata; employed and unemployed. 200 questionnaires were distributed amongst employed women and 200 were amongst unemployed women. Total 400 residents from Islamabad and Rawalpindi voluntarily participated in the study. Questionnaire was distributed in different sectors of Islamabad i.e H-8, I-10, I-8, I-9, G-9, G-10, G-11 sectors of Islamabad, and some areas of Rawalpindi.

3.4: Instrument/Questionnaire

Initially, a pretest of the questionnaire was administered to a sample of 30 women to explore the validity and reliability of the questionnaire. Analysis of the pretest results included a review of the means of important variables as well as the question wordings such as the options given alongside the questions. Minor changes in wording were made to the questionnaire and the pretest data was not used in the analyses.

Questionnaire constructed was of 25 items in which four items were in simple question form and remaining were the combination of negative and positive statements. Relevant demographic information was also the part of the questionnaire. Respondents to this questionnaire were females only. Questionnaire was divided into two parts basically. In first part the information on demographics and general questions about identification of the Pink Ribbon campaign and other sources of Information on Breast cancer was asked. Second part of the questionnaire comprised of statements which was further categorized into three sections.

For demographic profile of the respondents, five groups were determined for age, six for education and three options were given for employment status.

To judge the general information level on Pink Ribbon campaign, four questions were asked. Two were about the sources of information on Breast cancer and Pink Ribbon campaign. Statements in second part of the questionnaire were constructed after monitoring the information on breast cancer by Pink Ribbon campaign through different sources of communication.

Researcher aimed to check the difference in the continuum of effects process on the basis of two demographic variables; education and

employment status so other than this demographic information statements addressing knowledge, attitude and behavior were developed on likert scale. Five options were given for all the statements as under:

Strongly agree=5, Agree=4, Neutral/Undecided=3, Disagree=2 and strongly disagree=1

Nine of the twenty one statements were about cognition, three were related to attitude and four statements were to address behavior. Remaining five items were general statements about the media sources to propagate information about the issue.

To determine the level of change at cognitive level respondents were asked to respond to the statements related to the facts on breast cancer. They were asked whether breast cancer is a big health issue in Pakistan. Statements were also posed to have answers on whether the disease is inherited, smoking a reason of breast cancer, fact that breast feeding can help prevent breast cancer. They were also asked if they know that self breast examination is the best way for early detection of the disease. Through the campaign women are compelled to do self breast examination to avoid late detection of the disease. Another statement was about the fact that men and women both can suffer from breast cancer. Similarly the statements regarding risk of breast cancer

after age of 40 years and importance of mammography after this age even if no change is found in breasts were placed in the instrument.

Beliefs regarding any issue are sometimes the result of the relevant information and sometimes on the basis of personal experiences or other reasons. To ascertain the attitudes of the respondents, three statements were presented in the questionnaire. Statements on the belief that breast cancer is a bigger health issue in Pakistan and shy feeling to discuss the issue, confidence that issues like breast cancer should be discussed openly were placed to measure the attitudes.

Most important part of the instrument was the statements measuring behaviors of the respondents. Many researches in medicine suggest that cautious food habits and physical exercises are helpful to avoid the disease. Secondly regular checkups and self breast examination are also very important to be the practice in women's lives. Statements addressing all these behaviors were presented in this part of the questionnaire.

Categorization of the statements is as under;

Statements to measure change at Cognitive level

Sr. No	Statements
1.	Breast cancer is a major health issue for women in Pakistan
2.	Men and women both can suffer from breast cancer
3.	Self examination is a good way for early diagnosis of breast cancer
4.	Breast feeding can help prevent breast cancer in women
5.	After age of 40 risk of breast cancer is higher in women
6.	Mammography is a must after age of 40
7.	Breast cancer is a hereditary disease
8.	Tightly fitted undergarments can cause breast cancer
9.	Smoking causes breast cancer

Statements to measure attitudes of the respondents

Sr. No	Statements
1.	Issues like breast cancer should not be discussed openly
2.	Breast cancer is not a big issue; there are bigger health issues in Pakistan
3.	I feel shy to discuss about breast cancer in front of others

Statements to measure change at behavioral level

Sr. No	Statements
1.	I do monthly examination of my breasts as suggested through Pink Ribbon campaign
2.	Whenever I feel even a slight change in my breasts I immediately visit my doctor
3.	I am very conscious about regular physical exercises to avoid complications like breast cancer
4.	I am very much cautious about my food habits to avoid breast cancer

3.5: Variables

- **Independent variable**

Independent variable is defined as a variable systematically varied by the researcher (Wimmer & Dominick, 200). Information on breast cancer is taken as an independent variable.

- **Dependant variable**

Wimmer and Dominick (2000) define dependent variables as variables which are observed and their values presumed to depend on the effects of the dependent variables. In this study awareness, attitude and behavior are taken as dependent variables.

- **Conceptual definition of health communication campaign**

Ray & Hew (1990) say that health communication is the dissemination and interpretation of health related messages (p.4). So strategic efforts designed to communicate on health issues using different communication vehicles are health communication campaigns.

- **Operational definition of health communication campaign in this research (Breast cancer campaign)**

Pink Ribbon Campaign Pakistan is disseminating information about reasons, symptoms and treatment of Breast cancer through programme production on electronic media, writing in print media supplements and interpersonal sources of communication.

- **Conceptual definition of Awareness/Knowledge**

Baron, Byren and Johnson (1998) note that "Social cognition involves the processes through which we notice, interpret, remember and later use information about the world"

- **Operational Definition of Awareness/Knowledge**

In this research Awareness is actually the information about breast cancer. It includes its reasons, symptoms and treatment.

- **Conceptual Definition of Attitude**

Tomas and Znaneicki (1918) define this concept as "By attitude we understand process of individual consciousness which determines real or possible activity of the individual in the social world"

"The attitude construct achieved its preeminent position in research of social influence because of the assumption that a person's attitude is an important mediating variable between the acquisitions of new information on the one hand and behavioral change on the other" (Pretty and Priester 1994)

- **Operational Definition of Attitude**

Here attitude is the belief that breast cancer is a fatal disease and a serious issue.

- **Conceptual Definition of Behavior**

Behavior is an observable activity. It is also defined as the aggregate responses to the external and internal stimuli. (Online Dictionary)

- **Operational Definition of Behavior**

Behavior in terms of Breast Cancer is practice of Self-examination in women as prescribed by the doctors, regular check-ups and mammography if required.

CHAPTER 4

RESULTS

The number of questionnaires distributed was 400, out of which 360 were returned which showed that response rate was 90%. Out of those 360 questionnaires 333 were selected for analysis as some important information was missing in the remaining 27 questionnaires. All respondents were females that were the target population for the study.

The respondents ranged in age from 21 to 40 years old. Out of 333 respondents 201 respondents were of 21 to 30 years age. 82 respondents were between 31 to 40 years age and 50 women were of above 40 age group.

10.5 percent of the total respondents were not educated, 20.4 percent were falling in low education category and 69.1 percent of the respondents were highly educated.

Out of these 333 respondents 50.2 percent of the respondents were employed and remaining 49.8 respondents were unemployed.

Table: 4.1 Demographic characteristics of the respondents

Total number of respondents	Age		Education		Employment Status	
333	21-30 years	60.4%	No education	10.5%	Employed	50.2%
	31-40 years	24.6%	Low education	20.4%		
	Above 40	15.0%	High education	69.1%	Unemployed	49.8%

For the purpose of this research, questions of different nature were posed in the questionnaire. A question about recognition of Pink Ribbon campaign was asked, in response to which 37.5 percent of the respondents did not know what Pink Ribbon campaign is for. However 62.5 percent of the respondents knew that Pink Ribbon campaign is a breast cancer awareness campaign.

Another question was asked to check the extent to which respondents are confident about their information level on breast cancer, in response to which only 36 respondents claimed that they had full information on Breast cancer, 227 respondents had a little information about the issue and 67 respondents had no information on Breast cancer.

Data revealed that 21.9 percent of the respondents had Pink Ribbon campaign as source of information on breast cancer. Print media was the source of information for 23.4% of the respondents, 60% of the

respondents got information through Interpersonal communication and 43.3% of the respondents had electronic media as source of Information on breast cancer.

Table 4.2: Source of information on breast cancer

Source of Information on Breast cancer	No. of respondents	%
Pink Ribbon Campaign	73	21.9%
Electronic Media	132	43.3%
Interpersonal Communication	183	60%
Print Media	78	23.4%

Statements to measure change at cognitive, attitudinal and behavioral levels were placed randomly in the questionnaire. Respondents were given five response options; strongly agree, agree, neutral/indecisive, disagree, and strongly disagree. For this research analysis researcher merged these 5 response categories into 3 categories; yes, neutral and no.

The first statement was on information whether the breast cancer is a major health issue for women in Pakistan. 270 respondents replied in yes, 17 disagreed with the notion and 44 were indecisive on the issue. Second statement presented the information that men and women both can suffer from breast cancer. This statement also measures the information level of the respondents. 39% of the respondents agreed on that, 35.7% disagreed and 25.2% of the respondents were indecisive.

Third statement was to get a general view of the respondents on propagation of information of breast cancer. 80.4% of the respondents were in favor of propagation, 16.3% were unable to decide about it and only 3.3% of the respondents were against propagation of information on breast cancer.

Fourth statement aimed to investigate about the shyness factor in women regarding discussion on the issue of breast cancer. This statement measures the attitudinal change in the respondents. 49.5% females were of the view that breast cancer issue should be discussed openly, while 35.7% women said that it should not be discussed openly. Percentage of the respondents who were indecisive on it was 14.7.

Statement 10 addresses knowledge level of the respondents regarding self examination for early diagnosis of breast cancer. 77.8% were aware of the fact that self examination is a good way for early detection of the disease. 15.6% had no answer on that and only 6.6% replied in no.

Another statement was again on the information level. It was about the fact that breast feeding can help prevent breast cancer. 78.7% of the women knew about it, while 16.8% were indecisive and 4.5 percent did not know about it.

To measure the attitudinal change another statement was posed in which respondents were asked to tell whether they feel shy to discuss about breast cancer. 36.6% answered in positive, 17.7% were neutral and 45.6% were confident that they do not feel shy to discuss on breast cancer.

Another statement was about the fact that breast cancer is a hereditary disease. Only 30.6% of the respondents were aware of the fact, 30% were indecisive and 39% respondents denied the fact that breast cancer is a hereditary disease.

Statement 18 was to check the behavioral change in the respondents. In response to the statement about monthly examination of breasts at home, only 26.1% agreed that they do monthly examination of their breasts. 50.8% of the sample replied in negative and 23.1% were indecisive.

One more statement was on behavior which asks that if any change is felt in breasts do they visit the doctor immediately or not. 42.3% of the respondents replied in positive, 14.1% was neutral and in majority of the respondents (43.5%) this behavioral change was not found.

Statement 20 was about the practice of physical exercises which should be performed regularly to avoid complications like breast cancer. This behavior was found just in 32.1% of the respondents. 42.9% of the

respondents did not have this habit and 24.9% were neutral on the issue.

Last statement was on food habits. Only 33.3% of the respondents were found cautious about their food habits, 41.1% were not careful about their diet and 25.5% were indecisive.

Table 4.3.i: Positive response towards statements measuring cognition

Statements	% of positive response
Breast cancer is a major health issue for women in Pakistan	81.6%
Men and women both can suffer from breast cancer	39.0%
Self examination is a good way for early diagnosis of breast cancer	77.8%
Breast feeding can help prevent breast cancer in women	78.7%
After age of 40 risk of breast cancer is higher in women	58.1%
Mammography is a must after age of 40	54.4%
Breast cancer is inherited	30.6%
Tightly fitted undergarments can cause breast cancer	54.1%
Smoking causes breast cancer	42.9%

Table 4.3.ii: Positive response towards statements measuring attitude

Statements	% of positive responses
Issues like breast cancer should be discussed openly	49.5%
Breast cancer is a bigger health issue in Pakistan	33.6%
I feel shy to discuss about breast cancer in front of others	36.6%

Table 4.3.iii: Positive response towards statements measuring behavior

Statements	% of positive responses
I do monthly examination of my breasts as suggested through Pink Ribbon campaign	26.1%
Whenever I feel even a slight change in my breasts I immediately visit my doctor	42.3%
I am very conscious about regular physical exercises to avoid complications like breast cancer	32.1%
I am very much cautious about my food habits to avoid breast cancer	33.3%

Data revealed that Interpersonal communication was the source of information on Pink Ribbon campaign for 63 percent of the respondents. 36.9% got to know about Pink Ribbon campaign through electronic media; radio, TV and internet. Print media was the source of information on pink ribbon campaign for 58.9% of the respondents.

Table 4.4: Source of Information on Pink Ribbon Campaign

Source of Information on Pink Ribbon Campaign	Percentage
Print Media	58.9%
Electronic Media	36.9%
Interpersonal Communication	63%

Out of 333 respondents Pink Ribbon campaign was the source of information on breast cancer for only 73 respondents which is just 21.9% of the total population. Out of these 73 respondents 4 were in no education category, 3 were in low education category and 66 respondents were highly educated. As far as the employment status of these 73 respondents is concerned, 40 respondents were employed and 33 respondents were unemployed. 67.1% of this 21.9% sample was 21 to 30 years old. 15 females were in the age range of 31 to 40 years while 9 respondents were of above 40 years age.

Table 4.5: Demographic characteristics of the respondents who had Pink Ribbon Campaign as source of information on breast cancer

Number of respondents	Age		Education		Employment Status	
73	21-30 years	67.1%	No education	5.5%	Employed	54.8%
	31-40 years	20.5%	Low education	4.1%		
	Above 40	12.3%	High education	90.4%	unemployed	48.2%

90.6% of the respondents, who got information on breast cancer through Pink Ribbon campaign, were of the view that breast cancer is a major health issue for women in Pakistan. Information level of these respondents was lower on the fact that men and women both can suffer from breast cancer. 32 out of 73 respondents knew that it can happen. Majority of the Pink Ribbon audience agreed on that Information on Pink ribbon needs propagation and they were in favor of propagation

of this issue with the help of almost all available sources of media. 64.4% of this segment of respondents was of the view that this kind of health issues should be discussed openly.

66 respondents knew that self examination is the best way to detect this disease at early stages. 89% of these respondents also knew that breast feeding can help prevent breast cancer. 52.1% claimed that they do not feel shy to talk on this topic.71.2% of these respondents had information about the fact that after age of forty, risks of this disease are greater in women. 47 out of these 73 respondents knew that mammography is a must after age of 40. It is also one of the facts that breast cancer is a hereditary disease and 47 respondents of this segment of respondents agreed with that. Tightly fitted undergarments can also cause breast cancer in women. 56.2% of these respondents agreed with the notion. Only 30 respondents knew that smoking can also be one of the reasons of breast cancer.

24 out of these 73 respondents claimed that they do monthly examination of their breasts at home. 36 respondents claimed that they immediately visit the doctor if any difference is felt in their breasts. 33 respondents were regular in physical exercises to avoid complications like breast cancer. And 34 respondents were cautious about their food habits.

260 respondents were those who got information on breast cancer from sources other than pink ribbon campaign. In these respondents, percentage of positive change at cognitive level was 82.5%. Out of 260 respondents 122 (46.9%) had positive attitudinal change regarding breast cancer.

On the other side positive behavioral change also existed in those women who were not exposed to pink ribbon campaign for information on breast cancer. 36.5% of 260 respondents had positive behavioral change. Again the difference here on the basis of category of respondents was not that much higher. Significant difference in change at all levels of effects process was not observed in results of the research.

Now the data can also be analyzed on the basis of positive change at cognitive, attitudinal and behavioral levels. It is also revealed from the data that the respondents who showed positive change at these three levels are different in demographic characteristics. At cognitive level 282 of the 333 respondents had maximum positive change. 282 respondents claimed that they are aware about the information on breast cancer. Out of these 282 respondents 174 are within the age range of 21-30, 63 females were of 31-40 age range and 45 respondents were of above 40 years age.

As far as education of the respondents with positive cognitive change is concerned, 84 out of 282 were in low education category and remaining 198 respondents were highly educated. It shows that positive cognitive change was also present in the respondents who were not highly educated, however majority of the respondents having positive cognitive change were highly educated. Furthermore, 51.1% of these respondents were employed and 48.9% were not employed.

24.8% (70) of the respondents had Pink ribbon as a source of information, while 75.2% (212) of the sample respondents had other sources of information for breast cancer. It shows that there is not a significant difference in change at cognitive level whether source of information is pink ribbon or not.

The respondents who showed positive attitudinal change were 171 in number. Results showed that positive change at cognitive level was observed in 282 respondents which is a significant percentage, but at attitudinal level the number of respondents with positive change, decreased. 171 out of 333 respondents had developed positive attitudes towards breast cancer. Those 171 respondents had different demographics such as, 90 of these respondents were employed and 81 were unemployed. Though the number of respondents is not significantly different regarding employment status but employed women are greater in number. It shows that employment status is again

not a significant factor in bringing positive attitudinal change towards breast cancer. Educational status of the respondents with positive attitudinal change is also different such as; 9 respondents were in no education category, 27 respondents were in low education category and 135 respondents were highly educated. 49 respondents had pink ribbon campaign as source of information on breast cancer, while majority of the respondents had sources of information other than pink ribbon campaign.

132 respondents had positive behavioral change concerning breast cancer. 57 out of these 132 were unemployed while 75 were employed. 75 women here were of 21-30 years age group, 34 females were of 31-40 years age group and 23 were of above 40 years age. Positive behavioral change is observed in women of all age groups. 9 respondents were in no education category, 21 were in low education and 102 respondents were in high education category. Here the source of information for breast cancer was Pink ribbon, for 37 respondents while 95 respondents were exposed to the sources of information other than pink ribbon campaign.

Out of 333 respondents there are only 32 females who claimed that they did not have any information on breast cancer. 59.4% of these females were of 21-30 years age group, 34.4% were of 31-40 years age

group and 6.3% was of above 40 years age. 12 females were employed and 20 were unemployed.

The percentage of sample with no change at attitudinal level is 29.2%. Out of these women 89 were those who did not have pink ribbon as source of information. 8 respondents had pink ribbon campaign as source of information. 18 females were in no education category, 25 were in low education category while 54 females were highly educated. Age of these respondents is as; 51 females of 21-30 years age group, 33 were of 31-40 years age group while 13 females were of above 40 years age. 49 respondents were working women and 48 were unemployed.

48.6% of the respondents did not show positive behavioral change. 24 of these females had pink ribbon as source of information while 138 had other sources of information on breast cancer. Women who were even exposed to pink ribbon campaign also did not show positive behavioral change. Amongst these respondents 89 women were not employed, while 73 were working women. Out of these 162 women 105 were highly educated, 21 were not educated and 36 were in low education category. 64.2% of this sample was in 21-30 years age group, 34 were of 31-40 years age group while 24 were above 40 years age group.

Out of 333 respondents only 73 females had Pink ribbon campaign as source of information positive change at cognitive level was 95.5% which is a significant positive change. Change at attitudinal level is lesser which is 67.1% is and at behavioral level the positive change is 50.7%.

78 out of 333 respondents had Print media as source of information. At cognitive level the change is 87% which is a significant change. At attitudinal level the change is 61.5% while at behavioral level the change is more less which is 47.4%.

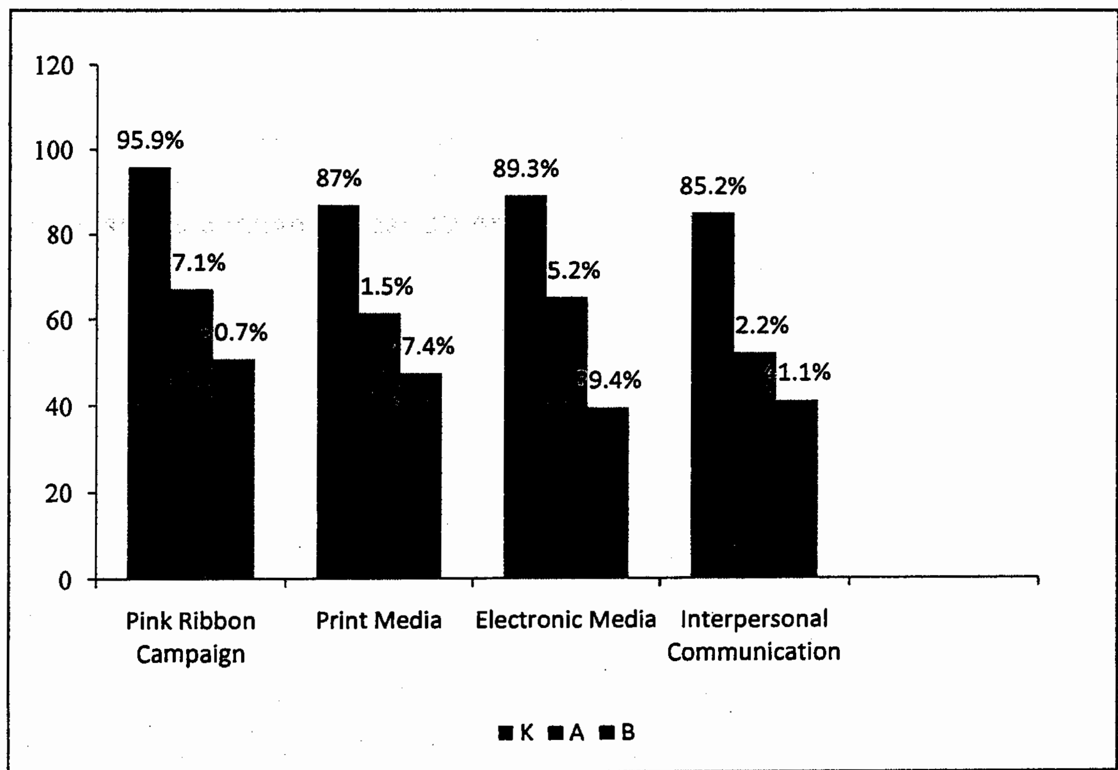
Next source of information in data was electronic media and 132 respondents claimed that they got information on breast cancer through Electronic media. At cognitive level the positive change is 89.3% which is again a significant change. At attitudinal level the change is 65.2% while at behavior level the positive change is just 39.4%.

Another source of information was Interpersonal communication. Respondents who got information on breast cancer through interpersonal communication were 183. In these women change at cognitive level was significant, which is 85.2%. Positive change in the attitudes of these women is 52.2%, while at behavioral level positive change is 41.1%.

Table: 4.6: Percentage of positive change on the basis of sources of information on breast cancer

Source of Information on breast cancer	Positive change at cognitive level	Positive change at attitudinal level	Positive change at behavioral level
Pink Ribbon Campaign *(for 73 respondents)*	95.9%	67.1%	50.7%
Print Media *(for 78 respondents)*	87%	61.5%	47.4%
Electronic Media *(for 132 respondents)*	89.3%	65.2%	39.4%
Interpersonal Communication *(for 183 respondents)*	85.2%	52.2%	41.1%

Change at all three levels of effects process on the basis of sources of information



Women who were in the age group of 21 to 30 years were 201 in number and positive change at cognitive level was 87% according to the responses. At attitudinal level the change was less and it was 53.5%. This age group showed minimum positive change at behavioral level which was 37.3%. Second age group was 31-40 years and 82 respondents fell in this age group. Change at all levels was different in this age group as well. At cognitive level positive change was 77.8%, 48.8% at attitudinal level while 41.5% positive change was observed at behavioral level. There was another age group of above 40 years. Women of this age group showed 91.8% positive change at cognitive level. Attitudinal change was 48 % while change at behavior level was 46%.

Education was another demographic variable in the study. Three groups of respondents on the basis of education were made; no education, low education and high education. Data revealed different percentage of change, in women of different educational backgrounds. 230 women who participated in the study were highly educated. 86.8% positive change was observed in highly educated women. At attitudinal level the change was 59%, while at behavioral level change was. 44.3%. So the significant level of change was at cognitive level. Respondents in low education category also showed a percentage of positive change at all three levels. In low education category there was

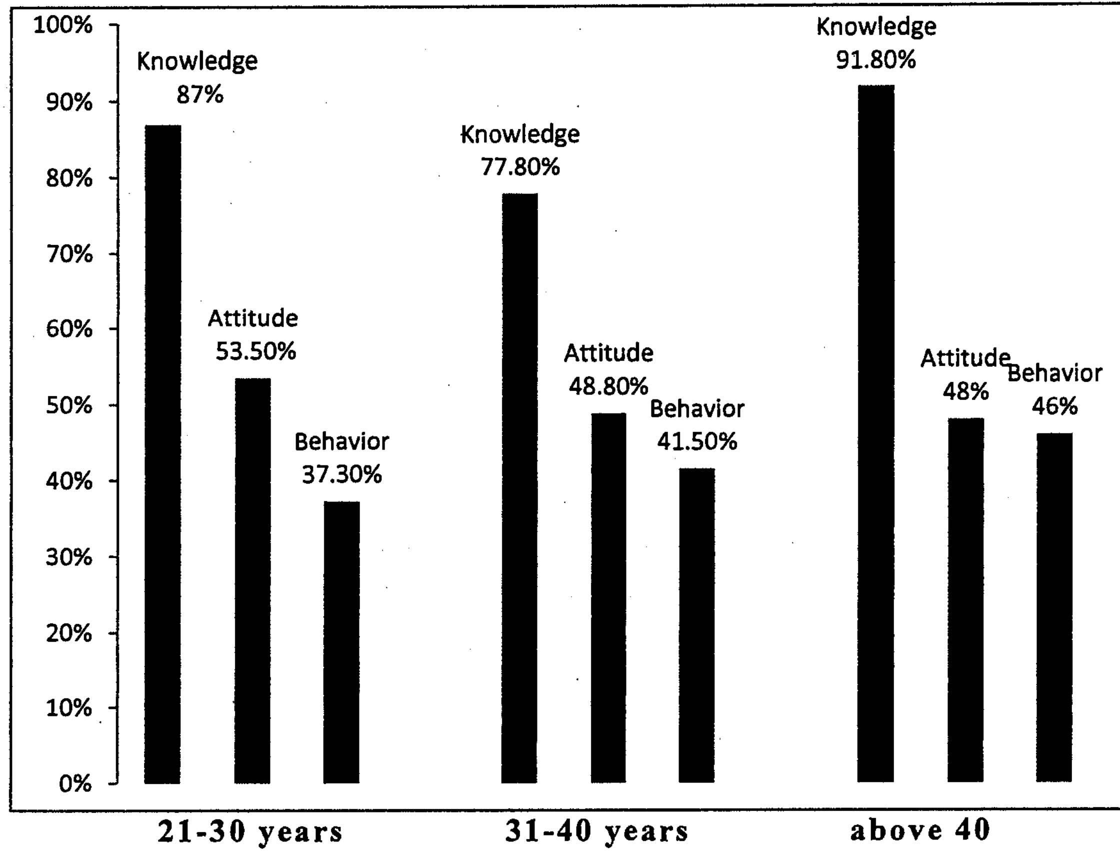
68 women. At cognitive level the positive change was 85.1%, attitudinal change was 39.7% and behavioral change was 30.9%. Women in no education category who were 35 in number showed 77.1% positive change at cognitive level. 25.7% positive change was observed at both attitudinal and behavioral levels.

An important demographic variable for this study was employment status of women. There were two groups; employed and unemployed women. 166 respondents were employed and 167 were unemployed women who participated in the study. Unemployed women showed a significant level of change at cognitive level which was 84.1%. At attitudinal level the change was 48.8% while at behavioral level positive change was 34.3%. The change was a little higher in employed women. 86.7% positive change was revealed at cognitive level. 54.2% positive change was at attitudinal level while behavioral change was 44.9%.

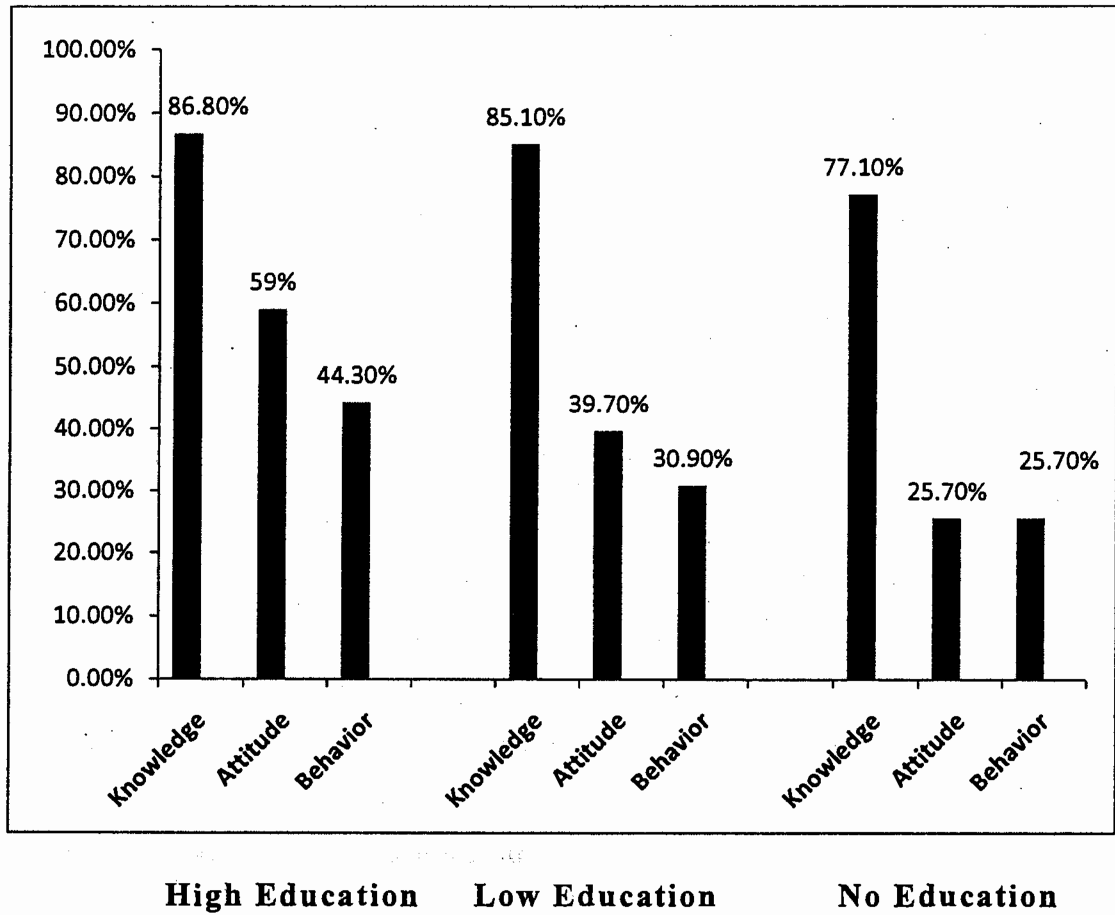
Table: 4.7: Change on the basis of demographic characteristics

Demographic Variables	Positive change at cognitive level	Positive change at attitudinal level	Positive change at behavioral level
Age			
• 21-30 (201 respondents)	87.0%	53.5%	37.3%
• 31-40 (82 respondents)	77.8%	48.8%	41.5%
• Above 40 (50 respondents)	91.8%	48.0%	46.0%
Education			
• Highly Educated (230 respondents)	86.8%	59.0%	44.3%
• Low Education (68 respondents)	85.1%	39.7%	30.9%
• No Education (35 respondents)	77.1%	25.7%	25.7%
Employment Status			
• Unemployed (166 respondents)	84.1%	48.8%	34.3%
• Employed (167 respondents)	86.7%	54.2%	44.9%

Discrimination in the effects process of communication on the basis of age group

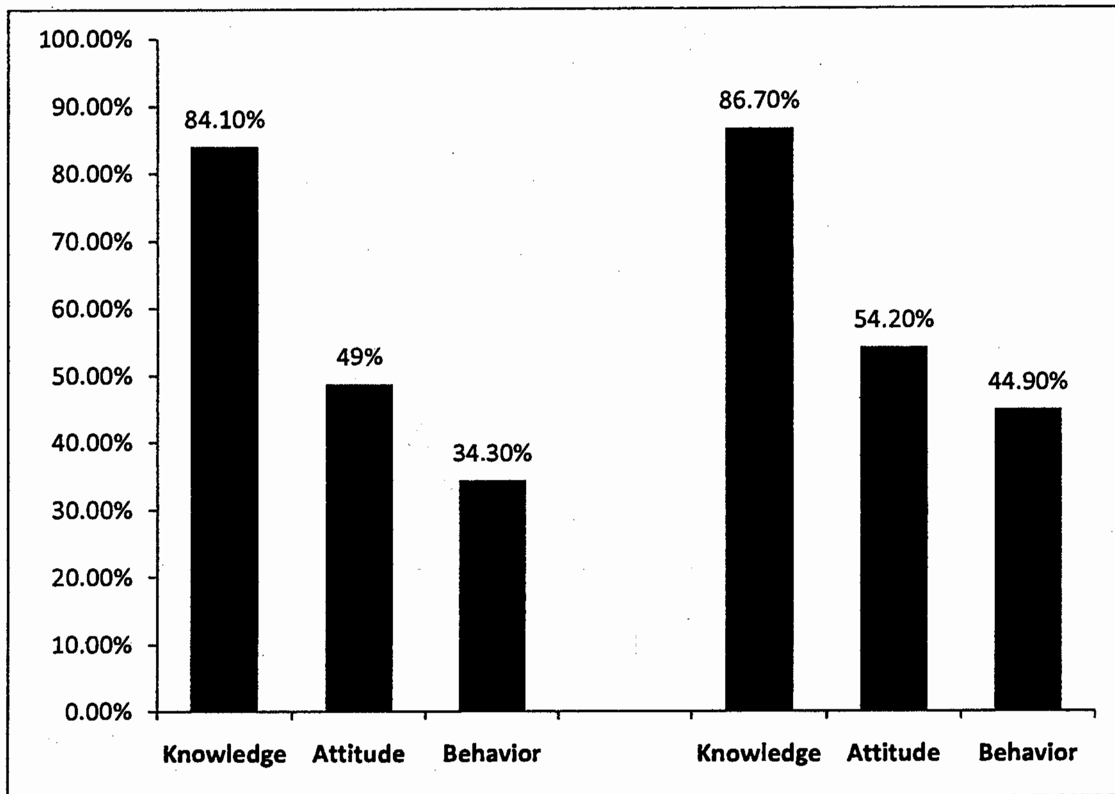


Changes at cognitive, attitudinal and behavioral level on the basis of Education



High Education Low Education No Education

Discrimination in the effects process on the basis of employment status



Unemployed women **Employed women**

HYPOTHESIS TESTING

Hypothesis 1

Campaign is successful in raising awareness about breast cancer amongst women.

H1 hypothesized that Pink ribbon campaign is successful in bringing positive change at cognitive level. It means that exposure to Pink ribbon campaign increases the knowledge level of the respondents. To determine this, respondents were asked to respond to a few statements measuring the knowledge of the respondents on breast cancer issue. The results showed that 73 respondents out of 333 got information on breast cancer through pink ribbon campaign and out of these 73 respondents positive change at cognitive level was 95.9%. Pearson's correlation test was computed to assess the relationship between the exposure to pink ribbon campaign and cognitive change. There was a correlation between two variables at significant level. Results ($r=.151^{**}$, $p>0.01$) show that there is a positive and significant relationship between the knowledge level and pink ribbon campaign in respondents who had been exposed to pink ribbon campaign to have information on breast cancer. Furthermore there was a very small percentage of respondents (2.7%) who did not show positive cognitive change despite the fact of exposure to the pink ribbon campaign. Thus

H1 is proven that Pink ribbon campaign is successful in bringing positive change at cognitive level. Positive change at cognitive level in respondents who got information on breast cancer through pink ribbon campaign is higher.

Table: 4.8

Relationship of exposure to Pink ribbon campaign and change at cognitive level

	Positive change at cognitive level
Source of Information is Pink Ribbon campaign	.151**

N= 330, **P <0.01 (two tailed)

Hypothesis 2

Campaign is not successful in bringing positive attitudinal change towards breast cancer.

H2 hypothesized that Pink ribbon campaign is not successful in bringing positive change at attitudinal level. To determine this, respondents were asked to respond to a few statements measuring the attitudinal level of the respondents. As mentioned earlier, only 73 respondents out of 333 got information on breast cancer through pink ribbon campaign and in these 73 respondents positive change at

attitudinal level was 67.1%. Pearson's correlation test was computed to assess the relationship between the exposure to pink ribbon campaign and attitudinal change. There was a correlation between two variables at significant level. Results (r=.207**, p>0.01) show that there is a positive and significant relationship between the respondents' exposure to pink ribbon campaign and attitudinal change. Negative attitudinal change was 11%. Though positive change at attitude level is less than the change at cognitive level, however the relationship between exposure to pink ribbon campaign and positive change in developing desired attitudes on breast cancer issue is strong. So H2 does not stand proven. Here it can be interpreted that even pink ribbon audience is very small in number but this segment of the respondents had developed positive attitudes towards breast cancer problem.

Table: 4.9

Relationship of exposure to Pink ribbon campaign and change at attitudinal level

	Positive change at attitudinal level
Source of Information is Pink Ribbon campaign	.207**

N=332, **P>0.01 (two tailed)

Hypothesis 3

Campaign is not successful in bringing positive behavioral change towards breast cancer.

H3 hypothesized that Pink ribbon campaign is not successful in bringing positive change at behavioral level. To determine this, respondents were asked to respond to a few statements measuring the behavioral level. Positive change at attitudinal level in respondents who got information on breast cancer through pink ribbon campaign was 50.7%. Pearson's correlation test was computed to assess the relationship between the exposure to pink ribbon campaign and behavioral change. There was a correlation between two variables at significant level. Results ($r=.152^{**}$, $p>0.01$) show that there is a positive and significant relationship between exposure to pink ribbon campaign and behavior of the respondents. Negative behavioral was 32.9%. Though positive change at behavior level is less than the change at cognitive and attitudinal levels, however the relationship between exposure to pink ribbon campaign and positive change in practices towards breast cancer issue is significant. So H3 does not stand proven.

Table: 4.10

Relationship of exposure to Pink ribbon campaign and change at behavioral level

	Positive change at behavioral level
Source of Information is Pink Ribbon campaign	.152**

N=333, **P>0.01 (two tailed)

Hypothesis 4

Change at cognitive, attitudinal and behavioral levels is affected by demographic characteristics:

Hypothesis 4.i: Higher the education, higher is the change at cognitive level

H4.1 hypothesized that higher is the level of education higher is the change at cognitive level. In the data, responses of women were categorized on the basis of three education levels; high education, low education and no education. Data showed that 230 respondents were in high education category, 68 females were in low education category while 35 respondents were in no education category. Pearson's

correlation test was computed to assess the relationship between the level of education and cognition. There was no correlation between two variables at significant level. Results (r=.064) show that significant relationship does not exists between the variables education and cognition. Respondents' education level had no effect on knowledge level. Respondents with low or no education also showed positive change at cognitive level. H4.1 does not stand proven so the notion that education affects the effects process of communication is not reinforced in this case. Results revealed that there was no significant difference in breast cancer knowledge of educated and uneducated women. Percentage of change in the women with high education was 86.8%, 85.1% was in the women with low education and 77.1% positive change was revealed in the women with no education. So it is proved that regarding breast cancer issue, there is no discrimination at cognitive level on the basis of education.

Table: 4.11

Relationship education status and change at cognitive level

	Positive change at cognitive level
Education	.064

N= 333

Hypothesis 4.ii: Higher the education, higher is the change at attitudinal and behavioral levels

H4.ii hypothesized that higher the level of education higher is the change at attitudinal level. As mentioned earlier, in the data, responses of women were categorized on the basis of three education levels; high education, low education and no education. Data showed that 230 respondents were in high education category, 68 females were in low education category while 35 respondents were in no education category. Again Pearson's correlation test was computed to assess the relationship between the level of education and attitudinal change. There was a correlation between two variables at significant level. Results ($r=.240^{**}$, $p>0.01$) show that there is a significant correlation between the variables education and attitude. Respondents' education level had a positive effect on attitudes of the respondents. Percentage of change at attitudinal level reduces as the level of education reduces in the data. Women with high education had high level of positive attitudinal change. So H4.ii stands proven. Educated and uneducated people show different attitudes towards the breast cancer issue.

Table: 4.12

Relationship education status and change at attitudinal level

	Positive change at attitudinal level
Education level	.240**

N=333

**P>0.01 (2 tailed)

Second part of H4.ii hypothesized that higher the level of education higher is the change at behavioral level. Again Pearson's correlation test was computed to assess the relationship between the level of education and behavioral change. There was a correlation between two variables at significant level. Results (r=.127*, p>0.01) show that there is a significant relationship between the variables education and behavior. Respondents' education level had a positive effect on their practices regarding breast cancer. Percentage of change at behavioral level reduces as the level of education reduces in the data. Women with high education had high level of positive behavioral change. So H4.ii stands proven.

Table: 4.13

Relationship education status and change at behavioral level

	Positive change at behavioral level
Education level	.127*

N=333

**P>0.05 (2 tailed)

Hypothesis 4.iii: Change at cognitive level is higher in employed women.

H4.iii: hypothesized that employed women have higher level of positive change at cognitive level. In the sample 167 respondents were employed and 166 were unemployed. Again Pearson's correlation test was computed to assess the relationship between the level of change at cognitive level and employment status. Results ($r=.062$, $p<0.01$) show that there is no correlation between the level of change at cognitive level and employment status of the women. There was no significant difference in knowledge of the employed and unemployed women. So H4.iii is also not proved.

Hypothesis 4.iv

Change at attitudinal and behavioral levels is higher in working women

The first part of H4.iv hypothesized that employed women have higher level of positive change at attitudinal level. Again Pearson's correlation test was computed to assess the relationship between attitudinal change and employment status. Results (r=.028, p 0.01) show that there is no correlation between attitudes and employment status of the women. Percentage of positive change in attitudes of employed women is not significantly different from the women who are not employed. It shows that employment status does not have any considerable affect in developing beliefs of women. The change is almost same in both categories. So this part of hypothesis is not proved.

Second part of H4.iv hypothesized that employed women have higher level of positive change at behavior level. Results clearly showed that percentage of behavioral change is higher in employed women. Behavioral change is 34.3% in unemployed women while the positive change is 49.3% in employed women. A significant difference is there in the behaviors of the respondents on the basis of their employment status. Again Pearson's correlation test was computed to assess the

relationship between behavioral change and employment status. Results (r=.109*, p>0.01) show the correlation between behavior and employment status of the women. Respondents' employment status had a positive effect on their practices regarding breast cancer. So this part of H4.vi stands proven.

Table: 4.14

Relationship between employment status and behavioral change

	Positive change at Behavioral level
Employment Status	.109*

N=333

Correlation is significant at the 0.05 level (2-tailed).

CHAPTER 5

DISCUSSION AND CONCLUSION

Breast cancer is one of the challenging health issues in Pakistan these days and awareness is being enhanced on the issue through different channels of communication. Pink Ribbon Pakistan is the most prominent campaign, playing an important role in creating awareness in this regard. The research aimed to check the effectiveness and contribution made by Pink Ribbon campaign in creating change at all the three levels of effects process. Breast cancer is one of the issues which are taken as social taboos in Pakistani society and it is a very difficult task to talk about these issues at public level. However the results of the research revealed that there is a considerable change in the desired direction in the audience who gets information on breast cancer through Pink Ribbon campaign.

The respondents in the study had different sources of information on breast cancer issue. Results of the research showed that 21.9% respondents had Pink Ribbon campaign as source of information on breast cancer. Although it is a small percentage of the sample population however changes at all levels of effects process are higher in this segment of respondents (Table 4.6). Results clearly showed that

the respondents who had Pink Ribbon campaign as source of information on breast cancer, responded differently and they were more aware as compared to the respondents who had other sources of information on breast cancer.

Different sources and channels of communication, other than Pink Ribbon campaign, are being used to address the issue in Pakistan. Other sources being used are electronic media, print media and interpersonal communication. Positive change is also observed at all levels of effects process, in the respondents who had sources of information on breast cancer other than Pink Ribbon campaign. But the percentage of positive change was low than in those who were exposed to Pink Ribbon campaign. Maximum positive change at all levels of effects process is because of Pink Ribbon campaign. It is followed by electronic media, print media and interpersonal communication consecutively (Table 4.5)

In a number of researches the notion is reinforced that effects process is determined on the basis of education but in case of breast cancer awareness, education has not affected the level of change significantly. Uneducated respondents also showed positive cognitive, attitudinal and behavioral changes. They had developed positive attitudes towards the matter and they also showed positive change in their practices such as food habits, daily exercises, regular checkups, self examination etc.

Education is not creating any significant impact here and the most likely reason is that the information on breast cancer is reaching to the audience frequently through different sources of communication. Secondly Pink Ribbon campaign is reaching the audience more frequently through interpersonal communication which is an efficient way to address issues of this nature. Pink Ribbon campaign reaches to the uneducated segment of the society as well which includes the women working in factories etc.

It is clear from the results that at all levels of effects process there is a positive change but it is squeezed at attitudinal and behavioral levels. Women have information about this serious issue but attitudes and behaviors are not changed in desired direction on the basis of information received. Maximum change is found at cognitive level and minimum positive change at behavioral level. It is generally believed that higher is the information level higher is the change at attitudinal and behavioral level in the desired direction. But findings do not follow this popular notion here.

If the effects of sources of information on breast cancer are compared, then at cognitive, attitudinal and behavioral levels Pink Ribbon campaign showed maximum positive results. As far as print and electronic media and interpersonal communication are concerned then electronic media created maximum positive change at cognitive and

attitudinal levels. But at behavioral level maximum positive change is found because of print media.

First hypothesis was about the success of Pink Ribbon campaign in creating awareness amongst women regarding breast cancer. It was revealed that in 73 (21.9%) respondents who had pink ribbon campaign as source of information cognition was 95.5%. Though the number of audience is very small here but it assures that pink ribbon campaign can enhance awareness level in women if it reaches to the maximum audience. Pink Ribbon campaign needs to expand the efforts to reach maximum audience in Pakistan. Second and third hypothesis were about effects of pink ribbon campaign at attitudinal and behavioral levels. Results showed that even the percentage of positive change is lesser than the change at knowledge level but the effects of pink ribbon campaign in making desired changes at attitudinal and behavioral levels are higher than other sources of information. Campaign needs to work more efficiently in convincing people to change their attitudes and practices because information is already there and practices are required to be developed to avoid breast cancer.

Fourth hypothesis was about the importance of interpersonal communication in bringing positive change. According to the data, most of the respondents got information on breast cancer through interpersonal communication. The finding showed that interpersonal

channel is the most effective channel regarding this issue. On being asked about the most effective channel to communicate about this issue, majority of the respondents replied in favor of interpersonal communication. More likely reason of this approach is the sensitivity of the issue and shyness factor in women. Secondly Pink Ribbon campaign is most of the time using interpersonal interaction to reach the masses so importance of interpersonal communication is reinforced keeping in view the success of pink ribbon campaign. Moreover in societies like Pakistan where literacy rate is very low and where male chauvinism is evident, interpersonal communication can work as a very effective tool especially in rural areas.

Hypothesis five was related to the effects of demographic variables. Demographic variables also had effects at all three levels of communication but again maximum positive change was at cognitive level. Employed women showed more positive results but the difference was not statistically significant. However at behavioral level there was a significant difference because of socio-economic status. It seems that financial status and confidence in working women are highly functional variables. They are more confident, financially independent and stable which can be the reason of higher positive changes in practices towards breast cancer. As far as education of the women is concerned, results showed that education has not

significantly affected the changes at levels of communication process. Data revealed that positive changes are also developed in the women who are not educated.

On the basis of information gathered from some hospitals of Islamabad and Rawalpindi (Al-Shifa, PIMS, NURI) it is found that there is a huge number of patients (both men and women) suffering from breast cancer. Majority of the patients approach the doctor when the cancer is at critical stage. However there is a change in the society and people are getting conscious about the issue. There is a need to find out and to remove the barriers in effectiveness of communication on this issue.

All media sources have their own importance and influence in the society so maximum information should be transmitted by suing all communication vehicles. Strategically designed messages should be transmitted through electronic and print media as well. Electronic media is considered and used as the most important source of information so it should also be used extensively in a creative manner. Information is there because of the intensity of the disease but the change is required at attitudinal and behavioral levels. There is a need to develop some important practices which can help prevent the disease.

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APPENDIX-I

EFFECTIVENESS OF PINK RIBBON CAMPAIGN

Survey Questionnaire

Personal Information

Age:	a: 21-2s5	b: 26-30	c: 31-35
	d: 36-40	e: Above 40	
Education:	a: up to primary	b: Matriculation	c: Intermediate
	d: Graduation	e: More than graduation	
Employment Status:	a: Unemployed	b: Employed	c: Self employed

1. Do you know what Pink Ribbon campaign is for?

   a: AIDs b: Breast Cancer c: Human Rights d: Polio e: Don't know

2. Do you already have any information on breast cancer?

   a: Full information b: To some extent c: No information

3. What is your source of information on breast cancer? *(select all relevant)*

   a: Internet b: Doctor c: Pink Ribbon campaign d: Radio e:TV

   f: Family members/friends g: Magazines h: Newspapers

   Other *(please specify)*: _____________

4. What is your source of information for Pink Ribbon campaign? (Select all relevant options)

   a: TV b: Radio c: Newspapers d: Pamphlets e: Magazines

   f: Seminars/Interpersonal communication

   Other *(please specify)*: _____________

S.No	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5.	Breast cancer is a major health issue for women in Pakistan					
6.	Men and women both can suffer from breast cancer					
7.	Information on breast cancer needs propagation					
8.	Issues like breast cancer should not be discussed openly					
9.	Breast cancer is not a big issue; there are bigger health issues in Pakistan					
10.	Television is the best medium to enhance awareness level about breast cancer					
11.	Radio is the best medium to enhance awareness level about breast cancer					
12.	Print Media is the best medium to enhance awareness level about breast cancer					
13.	Interpersonal communication is the best medium to enhance awareness level about breast cancer					
14.	Self examination is a good way for early diagnosis of breast cancer					
15.	Breast feeding can help prevent breast cancer in women					
16.	I feel shy to discuss about breast cancer in front of others					

17.	After age of 40 risk of breast cancer is higher in women					
18.	Mammography is a must after age of 40					
19.	Breast cancer is a hereditary disease					
20.	Tightly fitted undergarments cause breast cancer					
21.	Smoking causes breast cancer					
22.	I do monthly examination of my breasts at home as suggested through Pink ribbon campaign					
23.	Whenever I feel even a slight change in my breasts I immediately visit my doctor					
24.	I am very conscious about daily physical exercises to avoid complications like breast cancer					
25.	I am very much cautious about my food habits to avoid breast cancer