

# Assessment And Impact of Fear Appeals on The Health Promotion Campaign

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## ABSTRACT

Many health practitioners believe that menacing health messages in health communication campaign is an effective tool to stop an individual from doing an unhealthy practice. Fear evoking messages in health promotion campaign are often referred to as fear appeals. Fear appeals are cogent messages tend to arouse fear in an individual if they fail to follow recommended messages. It emphasizes on health impairment act in order the change these behaviour. Although these messages are widely used in political, public health, and advertising campaigns in order to make the audience to give up risky attitudes, intentions, or behaviour. It threatens the audiences by narrating the consequences and severity that are likely to occur if they do not give up certain sinful habit. The present study aimed to assess and measure the impact of fear appeals in health promotion campaigns.

**Keywords:** Advertising, fear appeal, health promotion, behavioral response, warning, unintended consequences.

## I. INTRODUCTION:

Many health practitioners believe that menacing health messages in health communication campaign is an effective tool to stop an individual from doing an unhealthy practice. Fear evoking messages in health promotion campaign are often referred to as fear appeals. Fear appeals are cogent messages tend to arouse fear in an individual if they fail to follow recommended messages (Maddux and Rogers, 1983). It emphasizes on health impairment act in order the change these behaviour. Although these messages are widely used in political, public health, and advertising campaigns in order to make the audience to give up risky attitudes, intentions, or behaviour. It threatens the audiences by narrating the consequences and severity that are likely to occur if they do not give

up certain sinful habit. It is also referred as threat appeal.

Fear is a kind of sensitized reaction to a warning or hazard. Since the beginnings of mankind, this emotional state has evoked as a survival mechanism to protect humans from life-threatening situations. This is due to the circuits in our brain, fear is often times more powerful than reason. There are two types of fear: (i) anticipatory – elicited by exposure to vivid, horrible images; and (ii) inhibitory: resulting from arousing the individual's anticipation of what is likely to happen if they ignore the recommended message. Like anti-smoking communication campaign which announce about the physical danger that can occur if they do not give up the habit of smoking. Fear appeals are persuasive messages intended to frighten the

people by showing the dreadful things that will likely to happen if they do not follow-up the recommended messages (Witte, 1992).

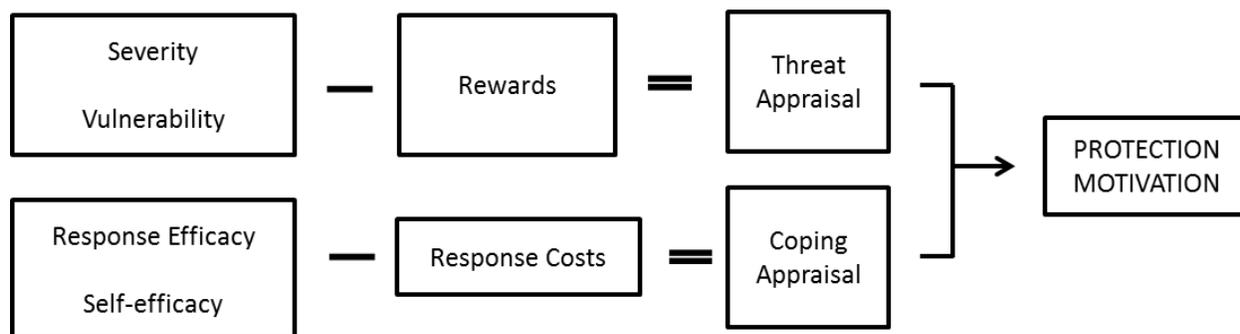
## II. LITERATURE REVIEW

Fear appeals are frequently used to communicate important health messages to the general public in order to change their wrong behaviour into right. A fear appeal is an influential message that attempts to divert ones' behaviour through the threat of doing certain actions. It is strongly associated with attitudes and behaviours. Fear appeals denote that fear can be described by mood adjectives, which motivate actions aimed at reducing unpleasant activities (LaTour, Zahra, 1989). Fear appeals tends to present the risk and influence the audience perceived vulnerability to the risk with or without announcing any self-protective measure (e.g. stop smoking). Fear arousal is a horrible state that evokes emotions which was generated by the perception of threatening stimuli (Belch G and Belch M. 2003).

Some practitioners believe that arousal of fear will motivate and persuade audiences to do act which is beneficial to themselves or others (e.g. Center for Diseases Control and Prevention, 2014; Xu et.al., 2015) and others say such messages were counter-arguing (e.g. Drug Free Action Alliance, 2013; Ruiter et.al., 2014). When an individual is scared, he/she may themselves engage in any one of the coping strategies that include: (i) Avoidance: ignoring the fear-arousal message and diverting ones attention to some other things (by changing the TV channel or turning-up the page in newspapers, magazines, etc.), (ii) Denial: believing that the harmful consequences portrayed by the fear-arousing stimuli are unlikely, or even impossible, (iii) Counter-arguing: Individuals might reject whole risk, in belief of the statement given in expert sources (for e.g., "I've had unprotected sex loads of times and I've never caught HIV", or, "It's just some do-goodness trying to stop me doing something I enjoy"), and (iv) Othering: an act of

deflecting the message away from themselves affirming that, 'This message is not meant for me'. Individuals whose fear was aroused may depict the message onto others who they feel are more likely to face the harmful consequences given their personal characteristics or behaviour (for example, 'This message is meant for older/younger/more promiscuous men').

Fear appeals focuses on message content, communication made to change the nature or behaviour of the audience and characteristics of the audience receiving such message. All these aspects (message, behaviour and audience) are well considered in the framework (Melanie B.Tannenbaum, et.al., 2015). Fear relies on an aspect of an individual's well-being that motivates them to prevent an unwanted outcome. According to Protection Motivation theory, a fear appeal evokes four different cognitive responses: the perceived severity, perceived probability, efficacy of the recommended preventive behaviour, and perceived self-efficacy. Protection motivation stems from both the threat appraisal and the coping appraisal (Rogers, R. W. 1975). The threat appraisal process consists of severity, the vulnerability of situation and rewards. It assesses the severity of the situation and examines how serious the situation is. It focuses on the source of the threat and factors that increase or decrease the likelihood of maladaptive behaviours. Severity refers to the degree of harm from the unhealthy behaviour. The vulnerability is one's likelihood to experience harm. Rewards refer to the positive aspect of starting or continuing the unhealthy behaviour. The coping strategy is adopted to check is ones' response to the message. It consists of the response efficacy, self-efficacy, and response cost. Efficacy is an individual's expectancy to remove the threat by carrying out the recommendation. Self-efficacy is the confidence level of an individual to execute the recommended course of action. The response costs are the associated costs with the recommended behaviour (Figure 1)

**Figure 1.1 - Cognitive process of protection motivation**

Source: Robert Rogers (1975).

### III. OBJECTIVES OF THE STUDY:

Based on the review of the past studies relating to fear appeals, the study aimed to assess and measure the impact of fear appeals in health promotion campaigns. The following hypothesis was postulated:

**H<sub>0</sub>:** Warning, Impact and unintended consequences in health promotion campaign do not have significant difference in influencing the behaviour among different socio-economic groups.

**H<sub>1</sub>:** Warning, Impact and unintended consequences in health promotion campaign have significant difference in influencing the behaviour among different socio-economic groups.

### IV. METHODOLOGY:

#### *Sources of Data Collection:*

Secondary data were collected through various books on social marketing, fear appeal, social advertising and social marketing, journals on advertising, marketing and behavioural

responses, magazines, newspapers and websites. Primary data collection was done through a structured questionnaire by face to face interactions with the respondents.

#### *Sample Design:*

Multi-stage sampling technique was followed for the study. *In the first stage*, Coimbatore District was purposively selected because of unique characteristics. Coimbatore is the third largest city in Tamil Nadu. It consists of the population of more than 15 lakhs. There are more than 40,000 tiny small, medium and large industries. Coimbatore is the manufacturing and educational hub of Tamil Nadu. Coimbatore is still known for its traditions and age old customs which are still held in high esteem.

Out of 12 blocks in Coimbatore district, 3 blocks were selected for the study in the second stage by following Stratified sampling technique. There were three strata of blocks identified namely, population above 2 lakhs, population between 1 – 2 lakhs and below 1 lakh in order to locate the high population density villages. Karamadai, Annur and Sulthanpet blocks have been selected at the end of this stage (Table – 1).

**Table 1**  
**Stratification of Population in Coimbatore District**

S.No.	Blocks in Coimbatore District	Total Population	Number of Villages	Rural Population
<b>Population Above 2 lakhs</b>				
1.	Madukkarai	355305	9	33,826
2.	Periyanaickenpalayam	347062	9	46994
3.	<b>Karamadai</b>	<b>260172</b>	<b>17</b>	<b>1,37,448</b>

4.	Sulur	243687	17	51108
5.	Anaimalai	217242	19	71,786
6.	Pollachi (N)	200562	39	93435
<b>Population 1 - 2 lakhs</b>				
1.	Thondamuthur	186620	10	48,271
2.	Sarcarsamakulam	181654	7	29,818
3.	Pollachi (S)	124755	26	65706
<b>4.</b>	<b>Annur</b>	<b>108673</b>	<b>21</b>	<b>92453</b>
5.	Kinathukadavu	104228	34	90,550
<b>Population below 1 lakh</b>				
<b>1.</b>	<b>Sulthanpet</b>	<b>77364</b>	<b>20</b>	<b>77,364</b>

Source: [www.censusindia.gov.in](http://www.censusindia.gov.in)

In the third stage, villages from each of these blocks have been purposively chosen due to the familiarity and the convenience of the

researcher. The distance of the village locations and sampling costs were the deciding factors of the sample villages (Table 2).

**Table 2**  
**Size of the Sample – Tara Yamane Method (95% Confidence level)**

Blocks	Population (N)	Identified Villages	Respondents (n)
Karamadai	137448	Chikkadasampalayam, Nellithurai, Thekkampatti	178 (137448x400/307265)
Annur	92453	Ambodi, Kunnathur, Pogalur	120 (92453 x400/307265)
Sulthanpet	77364	Kallapalayam, Jallipatti, Pachapalayam	102 (77364 x400/307265)
Total	307265		400

$$n = N/1 + N \cdot e^2 \quad n = 307265/1 + (307265 \times (0.05)^2) = 399.48 \text{ Rounded off to } 400$$

Where n = Corrected Sample size; N=Target Population; e=Margin of error, based on the research condition = 5 per cent

In the fourth stage, Tara Yamane Method was used to determine the total sample size of the respondents, which constituted to 400 (Table 2). Village wise proportion of the sample respondents was worked out by using Disproportionate Stratified Random Sampling Method.

#### Demographic Profile of the Respondents:

Among 400 respondents, female constituted more in the sample size which is upto 60 per cent. In age category, 154 respondents were in the age group between 26 – 35 years and 26 per cent of them were in the age group between 36 – 45 years. 62 per cent of them were married. 40.5 per cent of the respondents were professional degree holders and 33 per cent of them were holding a

degree. 28.2 per cent of the respondents were professionals; another 28.2 per cent of them were private employed. 36 per cent of the respondents were an annual income in the range between Rs. 1 – 2 lakhs.

#### V. RESULTS AND DISCUSSIONS:

##### Evaluation of Fear appeals in health promotion campaigns:

To evaluate the fear appeals in health promotion campaigns, factor analysis, the multivariate statistical technique was used to compress the information contained in a set of original variables into a subset of composite dimensions with minimum loss of information (Hair et al., 1995). The value of KMO is 0.827, which is greater than 0.7, revealing the adequacy of sample. Bartlett's test of Sphericity indicated the strength of the relationship among the variables.

A set of 13 statements were then considered to extraction of factor using principal component analysis method. The objective of using this method is to determine the minimum number of variance in data. Based on Eigen values, three factors were extracted using latent root criterion and varimax rotation that clearly supported the proposed constructs namely: F1: Impact (in bringing goodness in an individual); F2: Warning (an alarm voice from the mind when exposed to or doing certain act or someone doing unhealthy

practices) and F3: Unintended Consequences (behaviour when exposed to fear appeal).

The Eigen value represents the amount of variance accounted for by a factor and is significant. From the result obtained in the study, the index accounted for 69.178 of the total variance. For our sample of 400 respondents, a factor loading equal to and greater than 0.5 has been considered significant.

**Table 3 Summary of factor loadings**

Factor Number	Variable labels	Statement	Factor loadings
<b>F1</b>	<b>Impact</b>	Fear appeals in health promotion campaign creates worries for my sinful habits	.853
		Fear appeals in health promotion campaign creates fear of death	.755
		Fear appeals showed the self-image; and thereby I have reduced my bad habits	.704
		Fear appeals are emotive and adds compassion towards family	.685
		Fears appeals in health promotion campaign led me to obtain self-realization	.622
		Fear appeals fascinate when I see someone doing certain unhealthy act	.588
<b>F2</b>	<b>Warning</b>	Fear appeal in health promotion campaign arouses fear when I am doing certain habits	.819
		Graphical content in health promotion campaign invoke greater fear	.732
		I perceived likelihood of consequences when I do the particular act	.729
		I perceived severity of consequences when I am exposed to certain behaviour	.721
<b>F3</b>	<b>Unintended consequences</b>	I just leave the room when I'm exposed to high fear in health promotion campaign	.889
		I just change the channel when I'm exposed to high level of fear in health promotion campaign	.878
		I averted my attention to something else when I'm exposed to such fear appeal in health promotion campaign	.622

Three dimensions, which were determined from the factor analysis were evaluated using the results of descriptive analysis as shown in **table**

**4.** The mean value nearer to 1 and 5 indicates strong agreement and disagreement with the statement respectively.

**Table 4 – Warning, Impact and Unintended Consequences of fear appeal in health promotion campaigns**

Factor Number	Variable labels	Statement	Mean
F1	Impact	Fear appeals in health promotion campaign creates worries for my sinful habits	3.95
		Fear appeals in health promotion campaign creates fear of death	3.85
		Fear appeals showed the self-image; and thereby I have reduced my bad habits	4.03
		Fear appeals are emotive and adds compassion towards family	4.02
		Fears appeals in health promotion campaign led me to obtain self-realization	3.89
		Fear appeals fascinate when I see someone doing certain unhealthy act	3.88
		<b>Overall Mean (M) of Impact</b>	<b>3.94</b>
F2	Warning	Fear appeal in health promotion campaign arouses fear when I am doing certain habits	4.13
		Graphical content in health promotion campaign invoke greater fear	4.11
		I perceived likelihood of consequences when I do the particular act	3.89
		I perceived severity of consequences when I am exposed to certain behaviour	3.83
		<b>Overall Mean (M) of Warning</b>	<b>3.99</b>
F3	Unintended Consequences	I just leave the room when I'm exposed to high fear in health promotion campaign	3.09
		I just change the channel when I'm exposed to high level of fear in health promotion campaign	3.00
		I averted my attention to something else when I'm exposed to such fear appeal in health promotion campaign	3.67

		Overall Mean (M) of Unintended Consequences in them when	3.25
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(i) **Impact:** It has been found from the table 4, respondents strongly agreed that fear appeals in health promotion campaign showed the self-image and thereby helped to reduce his/her bad habits ( $M=4.03$ ) and are emotive and adds compassion towards family (4.02). Most of the respondents have agreed that fear appeals in health promotion campaign creates worries ( $M=3.95$ ) and fear of death ( $M=3.85$ ) and has led to obtain self-realization ( $M=3.89$ ). Most of the respondents opined that fear appeals in health promotion campaign fascinates in them when they see someone doing certain unhealthy act ( $M=3.88$ ).

(ii) **Warning:** Most of the respondents strongly agreed that fear appeal with graphical content invoked greater fear

they have certain habits ( $M=4.13$ ). Most of the respondents agreed that they perceived the likelihood of consequences when they do a particular act ( $M=3.89$ ) and severity of consequences when they are exposed to certain behaviour ( $M=3.83$ ).

(iii) **Unintended Consequences:** Most of the respondents slightly agreed that they leave the room ( $M=3.09$ ). They used to avert their attention to something else when exposed to high fear presented in health promotion campaign' ( $M=3.67$ ).

**Impact of fear appeals in health communication campaign on the socio-economic characteristics of the respondents:**

The following parameters were considered for measuring the impact of fear appeals in health communication campaign.

Unintended consequences, warning and Impact (i.e. changed behaviour) are the dependent variables and gender, age, educational

qualification, occupation status, and annual income are the independent variables. t-test and ANOVA were the test chosen to measure the impact of fear appeal in health promotion campaign on the independent Variable - gender, age, educational qualification, occupation status, and annual income.

**Table 5 - Results of t-test and ANOVA**

Socio-economic profile	t-value/F-value	Significance level
Gender	3.44	(0.01) Sig.
Age	4.34	(0.01) Sig.
Educational Qualification	14.07	(0.01) Sig.
Occupation Status	12.03	(0.01) Sig.
Annual Income	17.81	(0.01) Sig.

*Source: Statistically calculated from field data*

The result indicated that t-value 3.44,  $p = 0.01$  is significant in respect of gender. Further analysis reveals that mean score among male is high when compared to female. F-value 4.34,  $p = 0.01$  for respondents age group and is statistically significant. Also, it was found that fear appeal score was high among middle-aged group (26 – 45 years) when compared to young and old aged people. Whereas, in educational qualification, F-value is 14.07, strongly significant; however, mean score among the respondents who had school level education was high when compared to other educational group respondents. For occupation status, F-value 12.03,  $p = 0.01$ , and is strongly significant. The result also indicates that fear appeal score was high among the respondents who were farmers. The ANOVA value for annual income is 17.81,  $p = 0.01$  and is statistically strongly significant. Mean score were high among the respondents who were earning above Rs. 3 Lakhs (53.42).

## VI. IMPLICATIONS:

The present study measures the impact of fear appeal in health promotion campaign. The results revealed that fear appeals in health promotion campaigns is effective in bringing the right behaviour in human. Respondents strongly agreed that graphical content of the message invoked greater fear and created worries; even fear of death when doing certain act. It has showed self-image leading them to self-realization, in turn helping them to reduce

unhealthy practice. Also, fear appeal has made an individual to understand the consequences and severity that would likely to happen if they keep doing unwanted habitual behaviour. Fear appeal fascinated in an individual when he/she does any harmful act. This reflects recall ability. As far as the recall ability is concerned, fear appeal will definitely make a positive contribution in motivating the target audience to practice healthy act.

However, fear appeals in health promotion campaign, in particular, will be more effective if it is provided with the information on the significance of the threat, suggest the likelihood of its occurrence and advise practical steps to avoid the consequences in practicing habitual behaviour, which was lacking in some health promotion campaign. Also, health promotion campaign should provide information related to rehab centers, toll free or quit line number for consultation in order to support and give hand to those individual who wanted to give up their habitual behaviour. Those messages and campaign will educate and persuade the intended audience to give up the habitual behaviour and thus can create 'Healthy India'.

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