

## KNOWLEDGE, ATTITUDE, PRACTICE (KAP) STUDY ON CORONARY ARTERY DISEASE

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*This study has investigated the awareness about coronary risks, attitude towards coronary disease and its rehabilitation and health related practices among a sample of adults (n = 466) in Chennai. The participants were assessed on Knowledge, Attitude and Practices Questionnaire, and Multidimensional Health Locus of Control Scale. They also rated themselves on health status, health concern and life style factors. Results indicated that social factors such as age, educational level, and income influence the awareness, attitude and health behaviour, respectively. Among the psychological factors health concern, subjective perception of health and specific life style factors predict the knowledge, attitude and practices pertaining to CAD. The findings are discussed in the light of models of health behaviour.*

**KEY WORDS: CORONARY ARTERY DISEASE, HEALTH BELIEF MODEL,  
KNOWLEDGE, ATTITUDE, PRACTICE**

The burden of Coronary Artery Disease (CAD) in the developing countries has been on rise and the projection for the next 20 years portray a further acceleration. This is viewed as a major challenge to public health. In addition to risk – reduction oriented approach, there has been a greater emphasis on the primary prevention through cost-effective, educational interventions. The international conference on “*Heart Health*” held at New Delhi (1999) unequivocally recommended creating awareness, and empowering people to adapt and continue life style changes. This was to be achieved through effective, public, professional, patient and school related educational programs.

The shift towards health-promotive approaches focuses to enhance positive health status through self-efficacy, autonomy and individual responsibility. The success of such promotions at individual level depends on availability of the information about heart health,

affordability of people to follow a healthy life style and also acceptance of healthy behaviours in daily life. This raises the issue that promotion of health cannot be achieved by merely shifting the responsibility, we have to understand the multiple socio-psychological factors, which facilitate and impede people’s progression towards health. Health education and promotive efforts have always emphasized on minimizing costly interventions, judicious screening and also providing life-term strategies.

Modern medicine has evolved a strong knowledge base, but not all individuals have the capacity or attitude to access this and apply in their daily lives. There are many barriers to make efforts to know and practice healthy habits. Family background, SES, cognitive barriers, emotional factors and lack of immediate threat may hinder people to empower themselves with positive healthy life styles (Taylor, 1995). Socio ecological model, (Grzywacz & Fuqua, 2000) tries to explain the interaction of person in his context deciding the health status. Recent studies in this area show the

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role of social net work, social support and education as moderators of health status of adults. Family composition (Rogers, 1996), social support in family (Adler, 1994), neighborhood (Rogers & Peters, 1998; Ross & Mirowsky, 2001), and education influence subjective quality of life and health behaviour (Ross & Willigen, 1997). Almost all the studies have identified the role of social factors and social contacts mediating the health status and vulnerability to diseases.

The Health Belief Model identifies the constructs such as health locus of control or sense of control, self-efficacy, motivation, susceptibility, and health concern or values. This model emphasizes that individual's cognitive beliefs and attitudes determine adherence to healthy behaviours, illness management, and health maintenance. The ecological perspective tries to integrate the socio-demographic factors such as age, gender, education, social status, type of neighbourhood etc. not only determining directly the health status, but also influencing a person's attitude, beliefs about health and health related behaviours. Thus, health education must include both intra cognitive as well as contextual factors. Epidemiological surveys in India identify a higher prevalence of all the coronary risk factors such as high blood pressure, cholesterol, smoking and diabetes. The prevalence rate of all coronary risks and the risk profile is higher among urban people than that of most of western countries (Sahani, 1998a,b). A lack of awareness about risk factors and its consequences seems to be stronger in rural India. The researchers advocate an intense educational campaign at school and college levels in addition to reaching rural population. A survey at New Delhi (Kenneoy, 1999) showed a clustering of risks among college students and lack of information about CADs. In the light of available evidence and acknowledging the importance of socio-psychological factors contributing to healthy life style, the present study tries to explore the level of awareness and attitude of people towards CAD.

## METHOD

### Participants

A sample of adult males and females from Chennai city (N=466) participated in the study. Their mean age was 40.82 years with an SD of 11.43. There were 64.4% males and 35.0% females. The females were younger than the males. The majority of them were highly educated (54%) and rest had completed their high school level (46%). Nearly, 60% of the participants were at the lower end of occupational scale working as mechanics, fitters, office assistances etc. Only 28% were well placed in white-collar job. Except 8% the rest were married and lived in a nuclear family.

### Measures

*Knowledge, Attitude and Practices (KAP) about CAD Questionnaire.* It was developed by the first investigator. It consisted of 55 Likert type items, where the respondents endorse the degree of agreement and disagreement to a statement. It elicited awareness about heart attack related risks, information about the psychological factors related to coronary condition, attitude towards the cardiac condition and rehabilitation. Finally, it included certain heart health related practices. Cronback alpha for the questionnaire was .62.

*Personal Data Sheet* It elicited health related information such as Subjective Rating of Health, Quality Of Life, Health Concern, Coronary Risks, Life Style Activity and Leisure Time Activities.

### *Multidimensional Health Locus of Control Scale*

This was originally developed by Wallston and Devellis et.al (1978).

### Procedure

Data were collected using the above mentioned measures and were analyzed separately to study the contribution of socio-demographic and psychological factors to knowledge, attitude and practices related to CAD.

## RESULTS AND DISCUSSION

### KAP Pattern

The mean scores for the knowledge, attitude and practices were  $13.22 \pm 3.76$ ,  $63.07 \pm 9.12$  and  $3.87 \pm 5.98$ , respectively. The total score on the scale was  $80.29 \pm 3.08$ . There was a significant positive association between knowledge component of scale with attitude ( $r = .164$ ) and practices ( $r = .250$ ). However, there was no significant association with attitudes and practices.

### Health Related Activities

Smoking habits were reported by 11.7 % of the sample and 58 % were non-smokers. About 50% of the participants were sedentary and only 58% were involved in some form of physical exercise. Good sleeping habits were reported by 80% of the sample.

### Subjective Perception of Health

One of the most frequently used measures of Self-Reported Health (SRH) is a single question asking the respondent to rate overall health on a scale from "excellent" to "very poor". There is a wide spread agreement that it provides a useful summary of the way people perceive their overall health status. Many studies have shown the predictive power of SRH (Fayers & Sprangers, 2002).

In this study, 53.3% of the total sample perceived health to be "very good" and 35% rated themselves having "average health". Nearly 70% of the participants were either slightly concerned or very concerned about their own health irrespective of perception of their own health status. There seems to be a small but significant negative association between subjective health status and health concern ( $r = -.137$ ). The more concern a person has about his own health, the lesser his own rating of health. Fear of vulnerability and threat of risk are found to be strongly expressed in the concern shown by the participants.

### Predictors of Perceived Health Status

The educational level positively predicted a better health status (Table 1) Higher the educational status better the health status. On the other hand, presence of coronary symptoms, and a sedentary life style indicated a poorer health status. The subjective health status was found to be significantly related to the health related practices. The correlation coefficient between the two variables was small ( $r = .14$ ,  $P > 0.05$ ), but statistically significant.

Table 1

*Predictors of Subjective Health Status*

Predictors	R	R <sup>2</sup>	F	Standardized beta
Morbidity	0.19	.03	13.75*	-0.191
Education	0.25	0.06	12.46*	0.168
Exercise	0.27	0.07	10.05*	-116

\*  $p < .01$

### Predictors of KAP

The data were analyzed to evaluate the influence of socio-demographic factors on knowledge, attitude, and practices related to coronary conditions. Step wise multiple regression was carried out by entering age, sex, education, occupation, and income as independent variables and knowledge, attitude and practices as criterion variables. The dependent variables were treated separately, as there was a weak association between attitudes and practices.

Table-2 shows that socio-demographic factors are significant predictors of knowledge, attitude and practices related to coronary health. Age contributed positively to enhanced awareness. Older adults in the study were better informed and aware of coronary risks. However, none of the other demographic factors contributed to the knowledge component. This finding does not confirm the view that people with higher number of years of education will have a greater knowledge of risk factors (Davis, *et.al.* 1995).

Table 2  
*Social Predictors of KAP*

Criterion variables	R	R <sup>2</sup>	p	F	Predictors	beta
Knowledge	0.151	.023	.003	8.94	Age	0.151
Attitude	0.153	.023	.003	9.17	Education	-0.153
Practices	0.114	.013	.025	5.06	Income	-0.114

The number of years spent in the academics did significantly predict the attitude of the sample towards CAD. Higher the educational level the more positive attitude held about coronary rehabilitation (M = 61, SD = 9.4). Less educated adults were more anxious and viewed coronary disease as debilitating (M = 64.76, SD = 9.4).

Income and economical status significantly predicted a lesser degree of healthy habits and practices. Eating pattern, sleep habits, and seeking medical help were significantly determined by the income and occupational status. The findings are in line with the evidence by Baker *et. al*, (2002) who reported that health seeking behaviour is not less among the underprivileged.

Psychological factors such as perception of health status, health values (concern), life style and habits were regressed upon knowledge, attitude and practices.

Table 3 shows that only attitude and practice components of KAP measure are influenced by the perception and activities of the people. None of the variables significantly predicted the knowledge or awareness about CAD risks. People having excellent health status and active physically and mentally had more positive attitude about CAD and its rehabilitation. On the other hand people who had greater degree of health concern had less positive attitude.

People who were more concerned about health and involved in varied types of leisure activities did show better health related practices. Those who scored high on health concern also reported more positive health related habits (M = 4.94) than less concerned

(M=2.68) But, smoking status predicted negative or detrimental health practices. Therefore higher value placed on health can to a large extent determine positive health habits.

Table 3  
*Psychological Predictors of KAP*

Criterion variables	R	R <sup>2</sup>	p	F	Predictors	beta
Attitude	0.135	.01	.006	7.78	Health status	-0.135
	0.184	.03	.01	7.31	Gen. Activity	-0.125
	0.206	.04	.05	6.20	Health concern	0.09
Practices	0.195	.03	.000	16.71	Leisure Activity	0.19
	0.231	.05	.000	11.88	Food habit	-0.124
	0.254	.04	.02	10.91	Health concern	0.10
	0.275	.05	.03	8.83	Smoking	-0.10

The present results are in line with the theoretical framework of health belief model, which suggests that, a fear of disease, and susceptibility to disease can enhance health concern, which in turn determine the attitude and practices. Lack of threat, positive orientation (optimism) and motivation determine the positive attitudes and related practices.

#### Health Locus of Control and KAP

The sample in this study was found to be more internally oriented in health related beliefs. The mean scores (Table-4) on internal locus (29.77 ± 5.02) were higher than powerful health locus of control and chance health locus of control showing a sense of responsibility and self-autonomy. There was no gender difference in any dimension of locus of control, except belief in chance and faith. Women were higher than men (21.38, and 18.41 P<0.001) in chance health locus of control (Table-5).

Indian women with their religious orientation always take recourse to destiny, faith and luck as miracle, which brings health and healing. For men health is a result of their own practices and they are aware of the habits such as smoking, drinking as risk factors. The finding here is in line with the gender difference in some aspects of health locus of control.

Table 4  
*Subjective Perception of Health and Health Locus of Control*

Variable	Rating on Health	M	SD	F
IHLC	2-Poor	27.76	4.79	1.20
	3-Average	29.52	5.41	
	4-Good	30.37	4.67	
	5-Excellent	29.28	5.01	
PHLC	2-Poor	25.84	5.74	0.462
	3-Average	25.43	5.98	
	4-Good	25.40	6.41	
	5-Excellent	24.92	6.66	
CHLC	2-Poor	20.92	6.29	5.84*
	3-Average	21.47	5.56	
	4-Good	17.74	5.52	
	5-Excellent	18.64	7.58	

\*  $p < .01$

IHLC = Internal Health Locus Of Control

PHLC = Powerful Other Health Locus Of Control

CHLC = Chance Health Locus of control

A higher score on powerful other locus of control and internal health locus of control did significantly predicted the scores on practice component of KAP measure. Thus, health related behaviours such as exercise, sleep, eating habits are more influenced by the type of attitude people hold about their own health or well being i.e. whether they are internal or powerful other oriented. The findings here do confirm the health belief model which states that beliefs of internal orientation can determine the motivation level and health related actions to improve the health status.

Table 5  
*Gender Differences in Health Locus of Control*

Variable (n = 118)	Male (n = 71)	Female	F	p	
IHLC	M	30.49	28.57	6.62	0.01
	SD	4.81	5.16		
PHLC	M	24.93	25.00	0.942	.005
	SD	6.23	6.15		
CHLC	M	18.41	21.38	1.18	.001
	SD	5.46	6.57		

But, none of the components of health locus of control predicted the knowledge or awareness of coronary risks and also attitudes people hold about CAD. The health locus is influencing the practices more than the attitudes or knowledge. The evidence extends the work of Steptoe and Wardle (2001) who demonstrated that powerful health locus of control and internal health locus of control as strong factors associated with some important health related behaviours such as eating fiber, exercise, salt intake, fat consumption.

It may be concluded that people's awareness and attitude towards CAD is influenced by certain demographic factors such as age, education and income and also partially influenced by their own concern about health and specific life styles. The knowledge and health related practices are significantly related to each other. But attitude towards CAD and rehabilitation is not related to either knowledge of risk or practices.

The subjective perception of health and concern has strong influence on health behaviours. Similarly health locus of control predicts the health behaviour than knowledge or attitudes. The finding implies that health education and promotion must consider the current status of knowledge and practices and evaluate the attitude of the people not only towards health but also about disease and its outcome. This information would make it possible to disseminate health related training according to the receptivity, acceptability, affordability of the patient and the community.

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## SUFFERING AND HEALING AMONG THE SURVIVORS OF BHUJ EARTHQUAKE

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*The use of diagnostic category of Post Traumatic Stress Disorder (PTSD) has not been very useful across cultures as it is based on the western cultural discourse that stress is an outcome of loss of control over nature. This paper provides a glimpse of suffering and healing among the survivors of earthquake that occurred in Bhuj on 26<sup>th</sup> January 2001. An ethnographic approach was used for this study conducted in rural and urban areas of Bhuj. It was found that a faith of the people that discharging their duties (karma) would lead them to peace and harmony with nature has resulted in better healing among the survivors in rural areas than among those in urban areas where life is guided mainly by the materialistic goals. It is proposed that suffering and healing help to understand culturally and historically rooted victimhood of the survivors better than PTSD.*

**KEY WORDS: BELIEF SYSTEMS; HEALING; SUFFERING; THEORY OF KARMA**

The earthquake which occurred in Gujarat on 26 January 2001 has accounted for about 20 thousand deaths out of which about 18.5 thousand deaths have occurred in Bhuj district itself\*. Also, it has not only damaged the material belongings, assets and physical health of the survivors but has also severely affected their psychological well-being. This study was an endeavor to understand the problems and formulate some kind of a programme of psychological rehabilitation for the survivors of the disaster. This paper reports a preliminary study undertaken by the author.

The research literature on the Post Traumatic Stress Disorder (PTSD) provides an account of the generalized symptoms which points towards the psychological

\* (Source: Krishi Control Room, Ministry of Agriculture, Government of India)

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effects, particularly of violence, natural disaster, etc., on the survivors (Barlow & Durand, 1995; Lazarus, 2000; Suar, Mandal & Khuntia, 2002). The available literature shows that socio-cultural belief systems and the processes of suffering and healing are closely linked (Anand *et al.*, 2002; Dalal, 1999, 2001; Kakar, 1982; Klieman, 1980, 1988; Misra & Varma, 1999; Palsane, 1990; Stacy, 1988; Suar *et al.*, 2002).

Against this backdrop a study was conducted between November 2001 and January 2002 as the first phase of an ongoing research. It aimed at studying the subjective experiences of suffering and healing amongst the survivors of Bhuj earthquake. In addition the role of cultural beliefs as factors influencing suffering and healing processes were also looked into. Finally, the significance of support networks in the healing process was explored.

### METHOD

#### *Participants*

Among the survivors, the data were collected at three levels, i.e., *individual, family, and community.*

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