

Impact of personality type, health behavior and life satisfaction on wishful thinking coping style among cardiovascular patients

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ABSTRACT

Potentially stressful life events affect everyone almost daily. The manner in which people tackle those stressful events depends significantly on whether and how they perceive and respond to the situations. Wishful thinking is one of the Emotion-focused coping strategy aims to reduce and manage the intensity of the negative and distressing emotions that a stressful situation has caused rather than solving the problematic situation immediately. These coping strategies thus help to feel better and decision making to solve the source of distress. Emotion focused coping increases the sense of pleasure, positivity and contentment and thus enables us to increase our ability to focus on that which one can change. An attempt was made in the present investigation to study the impact of personality type, health behavior and life satisfaction on wishful thinking coping style among cardiovascular patients. Sample of study consists of 320 cardiovascular male and female patients in the age group of 40-60 years and the subjects were drawn randomly from various Districts of Andhra Pradesh, India. Type A personality scale developed by Glazer (1978), Type D personality scale developed by Denollet (2005), Health behavior scale developed by Ramamurthi and Jamuna (2005), Life Satisfaction Inventory developed by Ramamurthi (1969) and coping styles inventory developed by Tobin et al., (1984) were used to assess Personality type, health behavior and life satisfaction and wishful thinking coping style among cardiovascular patients. Means, SDs and ANOVA were employed to analyze the data. Findings of the study revealed that personality type, health behavior and life satisfaction have significant influence on Wishful thinking coping style among cardiovascular patients. Hoping that the present study will provide information helpful to counselors, yoga practitioners, health professionals, social workers and psychiatrists to use interventional programs like yoga and meditation to enhance the wellbeing, decrease stress, depression and to use effective coping styles.

Keywords: *Personality type, Health behavior, Life satisfaction, Wishful thinking coping style, cardiovascular patients.*

India is one of the largest and most populated countries in the world with a population size of one billion people. Acute and chronic diseases have always been a serious threat to health in our country. Cardiovascular diseases have now become the leading cause of morbidity and

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mortality in India. A quarter of all mortality is attributable to CVD. An estimated 17.9 million people died from CVDs in 2016, representing 31% of all global deaths. Of these deaths, 85% are due to heart attack and stroke (WHO, 2017).

Wishful thinking describes decision making and the formation of beliefs based on what might be pleasing to imagine rather than on evidence, rationality or reality. It is a product of resolving conflicts between belief and desire. Some Psychologists believe that positive thinking is able to positively influence behavior and so bring about better results. This is called as Pygmalion effect. (Rosenthal et al., 1992).

Stress and coping as described by researchers such as Lazarus and Folkman implies a more specific process of cognitive appraisal to determine whether an individual believes he or she has the resources to respond effectively to the challenges of a stressor or change. The appraisal literature explains the response or coping process in terms of problem focused and emotion focused coping style and also referred to as active and passive coping styles. As well, approach and avoidance style measures of coping exist involving assertiveness or withdrawal. When faced with a challenge, an individual primarily appraises the challenge as either threatening or nonthreatening and secondarily in terms of whether he or she has the resources to respond to or cope with the challenge effectively. If the individual doesn't believe he or she has the capacity to respond to the challenge or feels lack of control, he/she is most likely to turn to an emotion focused coping response such as wishful thinking coping style. For example : I wish that I could change what is happening or how I feel.

RISK FACTORS OF CARDIOVASCULAR DISEASE

Behavioral risk factors

Stamler et al., (2005) found that there was association of behavioral risk factors with coronary heart disease. The most important behavioral risk factors for coronary heart disease are an unhealthy diet, a sedentary lifestyle and tobacco use (Borkoles et al., 2010; WHO, 2009). Research has also shown that the decline in careers that involve physical activity, the popularity of sedentary leisure activities for example watching television and the use of transport such as motor vehicles are important risk factors to consider as part of the growing epidemic of coronary heart disease (Stamler et al., 2005). Inadequate aerobic exercise may lead to a decline in cardiorespiratory fitness and the onset of coronary heart disease, especially in later adulthood. Finally, many studies have shown that there was a high significant positive relationship between daily cigarette smoking and the risk of dying from coronary heart disease.

Psychosocial risk factors

Over the last three decades research exploring the possible link between psychosocial factors and coronary heart disease has gained momentum (Kuper et al., 2005). Psychosocial risk factors are known to cluster together within certain individuals and to interact with established biomedical coronary vascular disease risk factors in generating unfavourable clinical outcomes (Pedersen et al., 2006).

Karasek (2004) stated that high work demands may add to an increased experience of anxiety and stress that may have long term detrimental effects on health. An individual's social support relates to the number and quality of the social contacts that a person has, as well as describing to what extent an individual experiences emotional support. Furthermore, social relationships may improve health behaviors such as going for regular medical check-ups.

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This improvement in health related behaviors may be brought about by friends and family encouraging health seeking behaviors similar to keeping up healthy eating and exercise habits (Kuper et al., 2005). Hence, social isolation might negate these healthy behaviors and may induce an unfavourable mental state putting the individual at risk for developing a poor health status (Kuper et al., 2005; Yu et al., 2010).

Psychological risk factors

One of the earliest psychological risk factors was Type A Behavior Pattern (TABP), identified by time urgency, hostility, competitiveness and impatience (Dimsdale, 1988). In a systematic review Kuper et al., (2005) identified a positive association between hostility and increased stress levels, however, in a meta-analysis performed by Chida and Steptoe (2009) anger and hostility were associated with a 20% increase in risk for coronary heart disease events occurring in a healthy population. Poor prognosis was also related to anger and hostility in patients with existing coronary heart disease.

Major depression is regarded as the most pathogenic risk factor for the development of sickness (morbidity) and mortality in patients with established cardiovascular diseases (Kupper et al., 2005). Denollet (2000) and Kop (1999) have linked psychological stress to an increased risk of coronary heart disease. Specifically, Type D or distressed personality is an emerging psychological risk factor that has been associated with increased psychological distress, symptoms of exhaustion, adverse health status, and adverse clinical outcome despite appropriate medical treatment.

Biological risk factors for cardiovascular disease

Biological risk factors of CVD are smoking, obesity, dyslipidemia and hypertension, diabetes account for a small portion of the variance in the development of such diseases. Thus, behaviorally minded researchers have been examining the impact of psychological factors such as personality and perceived social support on the disease process.

Psychological factors are known to affect biological processes involved in the progression of coronary artery disease. Although biological factors also contribute to cardiovascular disorders, psychological factors play an important role independently or in combination with other risk factors in pathophysiology of development of risk factors and cardiovascular diseases. Among these psychological factors that are important in CVD are chronic and sub-acute stress, low life satisfaction, adverse life events, poor social support, work stress, unemployment, low level job, depression, anxiety, type a and type D behavior, hostility, negative emotions (Rozanski et al., 1999).

Potentially stressful life events affect every one almost daily. The manner in which people tackle those stressful events depends significantly on whether and how they perceive and respond to the situations. Wishful thinking is one of the Emotion- focused coping strategy aim to reduce and manage the intensity of the negative and distressing emotions that a stressful situation has caused rather than solving the problematic situation immediately. These coping strategies thus help to feel better and decision making to solve the source of distress. Emotion focused coping increases the sense of pleasure, positivity and contentment and thus enables us to increase our ability to focus on that which one can change.

Compare et al., (2013) focused on association of Type D personality with the development of stress cardiomyopathy following emotional triggers. A case-control study with 37 stress

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cardiomyopathy (SCM) patients, 37 acute myocardial infarction (AMI) patients, who both experienced emotional triggering, and 37 SCM patients without emotional triggers was performed. The DS14 and Interview for Recent Life Events were administered. The results indicated that Twenty-eight SCM emotional trigger patients were categorized as type D compared with 13 SCM patients without emotional trigger and 12 AMI patients. SCM patients with emotional triggers had higher scores on the social inhibition subscale than the other patient groups.

Williams et al., (2008) explained the role of health related behavior and social support in type D individuals. 1012 healthy young adults (225 males, 787 females, mean age 20.5 years) completed measures of type-D personality, health behaviors, social support, and neuroticism. The prevalence of type-D was found to be 38.5%, significantly higher than that In addition, type-D individuals reported performing significantly fewer health-related behaviors and lower levels of social support than non-type-D individuals.

Williams and Wingate (2012) investigated whether Type D was associated with physical symptoms and perceived stress in a non-cardiac population, and if these relationships are mediated by coping and social support. In a cross-sectional study, 304 participants (110 males, mean age 22.1 years) completed measures of Type D, physical symptoms, coping, perceived stress and social support. Results showed that Type D, the interaction of negative affectivity and social inhibition (NA × SI), was positively correlated with physical symptoms, perceived stress, and avoidant coping, and negatively correlated with social support, problem-focused coping and emotion-focused coping. A series of bootstrapped multiple mediator tests showed that social support and avoidant coping fully mediated the relationship between Type D and physical symptoms. Furthermore, social support and emotion-focused coping partially mediated the relationship between Type D and perceived stress.

Jinling et al., (2016) investigated the effects of personality type and psychological stress on coping styles in coronary artery disease patients. Two hundred twenty patients with stable angina (SA) or non-ST segment elevation acute coronary syndrome completed type A behavioral questionnaire, type D personality questionnaire, Self-Rating Depression Scale (SDS), Self-Rating Anxiety Scale (SAS), Trait Coping Style Questionnaire (TCSQ), and Symptom Checklist 90 (SCL-90). The results found that patients with type A and type D personality had more anxiety, depression, lower level of mental health uses more negative coping styles and less positive coping styles. In conclusion, Personality type was closely associated with coping styles of cardiac patients.

Mohammad Babamir1 et al., (2014) investigated the relationship between stress, coping styles, negative automatic thoughts, life quality and happiness in hospitalized cardiovascular patients. A sample size of 100 patients with cardiovascular disease was randomly selected. Four questionnaires including Coping Inventory for Stressful Situations (CISS, to evaluate stress coping styles), healthy survey index, Automatic Thoughts Questionnaire (ATQ, to assess negative automatic thoughts) and Oxford Happiness Inventory were used. The results found that there was significant association between task-oriented coping style, emotional-oriented coping style, negative automatic thoughts, life quality and happiness in patients with cardiovascular disease. Findings suggested that improving stress coping styles, raising life quality and using interventional styles to reduce negative automatic thoughts may be accompanied with happiness in patients with cardiovascular disease and improve their health.

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Perez-Garcia et al., (2014) examined coping, depressive symptoms and subjective well-being (SWB) in patients with heart failure (HF). The study also analyzed whether depressive symptoms mediated the association between coping strategies and SWB. Participants (N = 60, 68.3% men, aged between 40 and 89 years old) diagnosed with HF were recruited from the cardiology service of a general hospital. Coping strategies were assessed with 16 items. The items were organized, according to theoretical and empirical data, into four types of coping: task-focused, seeking social support, maladaptive emotion-focused and acceptance coping. Depressive symptoms were assessed with the corresponding subscale of the Hospital Anxiety and Depression Scale. SWB was assessed considering the Satisfaction with Life Scale and the Positive and Negative Affect Schedule.

The results indicated that the multiple regression analyses carried out indicated that SWB was positively associated with task-focused coping and inversely related to maladaptive strategies and depressive symptoms. Gender was also a significant predictor of SWB, with male patients reporting higher well-being than female patients. The mediational analysis showed that depressive symptoms partially mediated the relationships between task-focused coping and SWB

Thus, there are certain lacunae in the literature pertaining to the sources of stress and coping styles among cardiovascular patients. Importance of effective use of coping styles to reduce stress levels to improve health status of individuals indicate the need to investigate the impact of personality type, health behavior and life satisfaction on stress and coping styles among surgical and non-surgical cardiovascular patients in Indian scenario.

In view of the above, the present investigation was carried out with the following objective

1. To find out the impact of personality type, health behavior, life satisfaction on wishful coping style among cardiovascular patients.

Hypotheses

1. Personality type would significantly influence wishful coping style among cardiovascular patients.
2. Health behavior would significantly influence wishful coping style among cardiovascular patients.
3. Life Satisfaction would significantly influence wishful coping style among cardiovascular patients.

Sample

The sample consisted of 320 (160 male and 160 female) cardiovascular patients in the age group of 40-50 years, drawn randomly from various districts of Andhra Pradesh, India.

Tools

The subjects were given demographic data sheet, type A personality scale developed by Glazer (1978), Type D personality scale developed by Denollet (2005), Health behavior scale developed by Ramamurthi and Jamuna (2005), Life Satisfaction Inventory developed by Ramamurthi (1969) and Coping styles inventory developed by Tobin (1984) to gather relevant information.

1. **Demographic data sheet:** It was prepared by the investigator to obtain the information relating to personal details viz. Name, Age, Gender and Nature of patients.
2. **Assessment of personality type A:** Personality type of the subjects was assessed by using Type A personality scale developed by Glazer (1978). It consists of 20

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statements with seven alternative responses. Therefore the maximum possible score is 140 and the minimum score is 20. High score that is more than 80 indicates Type A personality and low score indicates relaxed type of personality that is type B personality. The reliability of the instrument was measured by test-retest method and it is 0.86.

3. **Assessment of personality type D:** Type D personality scale was developed by Denollet (2005). It consists of 14 statements in which seven statements indicate negative affectivity and seven statements indicate social inhibition. For scoring statements 1 and 3 scores should be reversed. The maximum and minimum possible score is 0 and 56. Score of 10 or higher on both negative affectivity and social inhibition scales indicates type D personality. The reliability of the instrument was established by test-retest method and the value is 0.82.
4. **Assessment of Health behavior:** Health behavior of the subjects was assessed by using Health behavior scale developed by Ramamurthi and Jamuna (2005). It consists of 10 statements. Each statement has alternative responses that is yes or no. 1 mark was given to 'yes' response and 2 marks to 'no' response. The maximum possible score is 20. High score indicates poor Health behavior and low score indicates good Health behavior. The reliability of the instrument was measured by test-retest method and it is 0.78.
5. **Assessment of Life satisfaction:** Life satisfaction of the subjects was assessed by life satisfaction inventory developed by Ramamurthi (1969). It consists of 20 statements. Each statement has three alternative responses Agree, Disagree and Not sure. 2 marks were given to 'Agree', 0 marks to 'Disagree' and 1 mark to 'not sure'. For the statements 10, 13, 14, 17 and 18 the scores of agree and disagree responses were reversed. The minimum and maximum possible score is 0 and 40. High score indicates high life satisfaction and Low score indicates low life satisfaction. The reliability of the instrument was established by test-retest method and the value is 0.88.
6. **Assessment of Wishful thinking coping style:** Wishful thinking coping style of the subjects was assessed by using coping styles Inventory developed by Tobin (1984). It consists of 10 statements. Each statement has five alternative responses ranging from Not at all to Very much. For scoring the test, 0 mark was given to 'Not at all' response, 1 mark to 'A Little' response, 2 marks to 'Somewhat' response, 3 marks to 'Much' response and 4 marks to 'Very much' response. The maximum possible score is 40. High scores obtained on coping indicates that wishful thinking coping style is more frequently used by the individuals and low score indicates that coping style is less frequently used by the individuals. The reliability of the instrument was established by test-retest method and it is 0.74.

RESULTS AND DISCUSSION

Table-I: Means and SDs of Wishful Thinking coping style scores for eight groups.

Health Behavior		Personality type			
		Type -A		Type -D	
		Life Satisfaction		Life Satisfaction	
		Low	High	Low	High
Poor	Mean	6.10	5.82	8.10	6.25
	SD	2.85	2.40	3.74	2.51
Good	Mean	6.82	6.40	8.17	6.70
	SD	2.59	2.69	3.03	2.55

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Means of the groups variable wise

A close observation of table -I shows that the subjects with type D personality with good health behavior and low life satisfaction have obtained high score (M=8.17), indicating that these subjects used wishful thinking coping style more frequently compared to the other groups. Subjects with type A personality with poor health behavior and low life satisfaction have obtained low score (M=6.10) indicating that these subjects used wishful thinking coping style less frequently compared to the other groups.

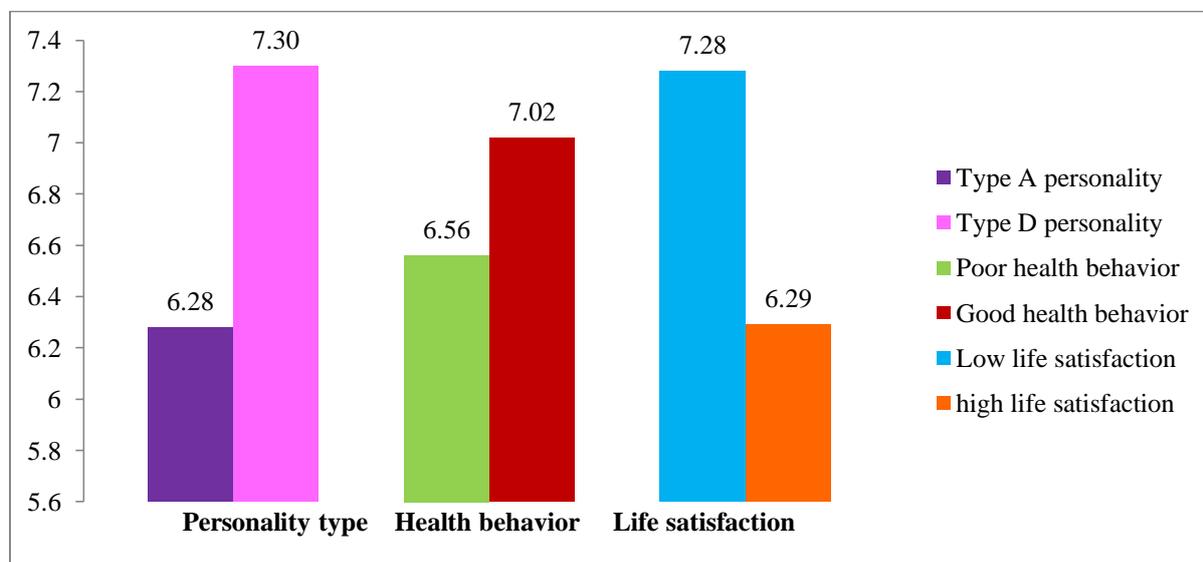


Figure-I Graphical representation of wishful thinking coping style scores in relation to personality type, health behavior and life satisfaction

Table-II: Summary of ANOVA for scores on Wishful Thinking coping style.

Source of Variance	Sum of Squares	df	MSS	'F'
Personality Type (A)	83.028	1	83.028	10.37**
Life Satisfaction (B)	81.003	1	81.003	10.11**
Health Behavior (C)	76.653	1	76.653	9.57**
(A x B)	34.453	1	34.453	4.30*
(A x C)	33.003	1	33.003	4.12*
(B x C)	42.253	1	42.253	5.27*
(A x B x C)	51.378	1	51.378	6.41*
Within	2498.025	312	8.006	--
Corrected total	2717.797	319	--	--

** - Significant beyond 0.01 level

* - Significant at 0.05 level

@ - Not significant

The first hypothesis stated that Personality type would significantly influence wishful coping style among cardiovascular patients. It is evident from table II that the 'F' value of 10.37 for personality type is significant at 0.01 level indicating that the personality type has significant influence on wishful thinking coping style among cardiovascular patients. As the F value is significant the hypothesis -1 is accepted as warranted by the results. Subjects with type D

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personality (M= 7.30) used wishful thinking coping style more frequently than the subjects with type A personality (M= 6.28).

Coping is regulatory process that can reduce the negative feelings resulting from stressful events. Personalities that are more negative are traditionally associated with greater distress and personality traits appear to play an influential role in using coping styles. Subjects with type D personality type are more vulnerable to increased psychological stress and social inhibition. They seem to be associated with passive and emotion focused coping styles.

The second hypothesis stated that Health behavior would significantly influence wishful coping style among cardiovascular patients. It is evident from table II that the obtained 'F' value of 9.57 for health behavior is significant at 0.01 level indicating that the health behavior has significant influence on wishful thinking coping style among cardiovascular patients. As the F value is significant the hypothesis -2 is accepted as warranted by the results. Subjects with good health behavior (M=7.02) used wishful thinking coping style more frequently than the subjects with poor health behavior (M= 6.56).

Wishful thinking coping style is helpful in greater use of positive reinterpretation and growth which entails looking for the positive in stressful situation.

The third hypothesis stated that Life satisfaction would significantly influence wishful coping style among cardiovascular patients. It is evident from table II that the obtained 'F' value of 10.11 for life satisfaction is significant at 0.01 level indicating that the life satisfaction has significant influence on wishful thinking coping style among cardiovascular patients. As the F value is significant the hypothesis -3 is accepted as warranted by the results. Subjects with low life satisfaction (M= 7.28) used wishful thinking coping style more frequently than the subjects with high life satisfaction (M= 6.29). The probable cause may be wishful thinking is conceptualized as a positive expectation for the future that is based on one's motivation to experience positive outcomes.

CONCLUSIONS

1. Personality type has significant influence on wishful thinking coping style among cardiovascular patients. Subjects with type D personality used wishful thinking coping style more frequently than the subjects with type A personality.
2. Health behavior has significant influence on wishful thinking coping style among cardiovascular patients. Subjects with good health behavior used wishful coping style more frequently than subjects with poor health behavior.
3. Life satisfaction has significant influence on wishful thinking coping style among cardiovascular patients. Subjects with low life satisfaction used wishful thinking coping style more frequently than subjects with high life satisfaction.

Limitations

1. The present study has examined the impact of personality type, health behavior and life satisfaction on stress and coping styles among surgical and non-surgical cardiovascular patients. In the present investigation, subjects were drawn from Andhra Pradesh state, which does not help to generalize things.
2. The investigation has focused only on cardiovascular patients but not the other chronic disease conditions such as cancer, AIDS and diabetes.

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3. The investigation has studied the influence of gender, age and nature of patients on stress and coping styles among cardiovascular patients, while examining the influence of gender, age and nature of patients, the investigator clubbed the eight groups to see the impact on stress and coping styles.
4. The present investigation examined the impact of personality type, health behavior and life satisfaction; demographic variables i.e. gender, age and nature patients on stress and coping styles without examining the influence of other variables namely socioeconomic status, education and locality.
5. Though there are various psychological variables such as anxiety, depression and neuroticism the study has focused only on personality type, stress and coping styles.

Implications of the Study

Interesting finding of the present investigation is nature of patients have significant influence on coping styles. There appears to be urgent need for psychologists, health workers, counselors, psychiatrists to extend their expertise in developing behavioral modification techniques and interventional programs for both surgical and non-surgical patients to reduce their stress levels.

Counseling psychologists and health professionals have to focus their attention to the following to reduce the stress and to cope effectively with situation. Since everyone has a unique response to stress, there is no “one size fits all” solution to managing it. There are many healthy ways to manage and cope with stress, but they all require change. The change can be brought either changing the situation or changing the reaction. Dealing with stressful situations; the four A’s are

Change the situation

- Avoid the stressor
- Alter the stressor

Change the reaction

- Adapt to the stressor
- Accept to the stressor

There appears to be need for psychologists, counselor’s and health professionals to reduce the stress by the following guidelines

1. Encourage to do deep breathing exercises
2. Mindfulness meditation
3. Yoga and Taichi
4. Imagery or visualization techniques
5. Foster optimism, positive outlook
6. Physical exercises
7. Body massage
8. Music therapy
9. Humor and laughter
10. Practicing progressive muscle relaxation
11. Maintaining healthy behaviors

Steps initiated towards this end would ultimately result in alleviating the problems of cardiovascular patients and improve their health status.

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Conflict of Interest

The author declared no conflict of interests.

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