Discussion
CHAPTER V
DISCUSSION

The chapter deals with the detailed discussion on the findings of the study interpreted from the statistical analysis. The findings are discussed in relation to the objectives, need for the study, related literature of the study and theoretical framework. It is also presented in line with the objectives of the study and hypotheses.

- The first objective was to describe the socio-demographic characteristics of study subjects diagnosed with MI.

Table 4.1 to Table 4.94 describes the socio-demographic characteristics of study subjects (N=300) diagnosed with MI.

**General Information: Age & Gender**

4.1 projected that the majority of subjects 271 (90.3%) were from the age group of 36-65 years (Middle adult) and only 11 (3.7%) of the subjects were from age group of 66-75 years of age (Young Old); considering gender, majority of the subjects 234 (78%) were males and only 66(22%) were females.
People with middle adulthood to young old age group are placed with variety of roles to play with like spouse, parent, and employer and exposed to age related health problems like menopause in women and postretirement depression in men causing stress to develop MI.

*Edell-Gustafsson, Ulla, Svanborg, Eva, et.al. (2006)* carried out a study on a gender perspective on sleeplessness behaviour, effects of sleep loss, and coping resources in patients with stable coronary artery disease at University Hospital. Multiple stepwise regression analysis showed that sleeplessness behaviour, depressed mood, female gender, and pharmacologic treatments with inflammation inhibitors significantly (P < .0001) accounted for the variance of poorer sleep quality.

Similarly another study conducted by *Evangelista Lorraine S, Kagawa-Singer Marjorie, DracupKathleen et.al. (2001)* on gender differences in health perceptions and meaning in persons living with heart failure at Los Angeles and San Francisco, California. The main findings were women had higher health perceptions than men did; they also demonstrated better psychosocial adjustment to illness.

*Kristofferzon ML, Löfmark R, Carlsson M et.al (2003)* made a review on gender differences in coping and social support among patients with myocardial infarction at Uppsala University. Computerized search was
conducted on forty-one articles, published between 1990 and October 2002 using the key words 'myocardial infarction', 'coping', 'gender differences' and 'social support'. Two studies reported that women used more coping strategies than men. Several qualitative studies found that women used a variety of coping strategies. Women minimized the impact of the disease, tended to delay in seeking treatment and did not want to bother others with their health problems. Household activities were important to them and aided their recovery. Men were more likely to involve their spouses in their recovery, and resuming work and keeping physically fit were important to them. Women tended to report that they had less social support up to one year after a myocardial infarction compared with men. They received less information about the disease and rehabilitation and experienced lack of belief in their heart problems from caregivers. Further, they received less assistance with household duties from informal caregivers. Men tended to report more support from their spouses than did women and concluded that, traditional gender-role patterns may influence the recovery of patients who have experienced myocardial infarction. Caregivers may need to be more sensitive to gender-specific needs with regard to risk profiles, social roles, and the patient's own role identity. For many women, especially older ones, household duties and family responsibilities may be an opportunity and a base for cardiac rehabilitation.
**General Information: Marital Status and education**

Table 4.2 projected that majority of the subjects 271 (90.3%) were married while only 8(2.7%) were unmarried; majority of the subjects 210(70%) were literate and only 90(30%) of subjects were illiterate.

It was found that married people with more MI illnesses could be due to the reason that they were exposed to additional responsibilities of caring spouse, in-laws, children and wider circle of relatives yielding to more stress causing MI.

*Luttik, Marie Louise, Jaarsma Tiny, VeegerNic, et.al. (2006)* carried out a study on marital status, quality of life, and clinical outcome in patients with heart failure at Groningen. The main findings were 96 (54%) were married or were living with a partner. Married patients had 12% less events in the 9-month follow-up period compared with patients living alone (P = not significant) and concluded that most patients with heart failure who are living alone are mostly elderly women with a low socioeconomic status, who are at risk for recurrent events and a worse quality of life. In this study, one could conclude that spouse’s assistance as a factor for MI relapse prevention whereas, living alone causing loneliness and recurrence of MI

*Schmaltz HN, Southern D, Ghali WA (2007)* examined living alone, patient sex and mortality after acute myocardial infarction at University of
Calgary, Canada, using historical cohort study on 880 patients discharged with a primary diagnosis of AMI. Men living alone had the highest mortality risk (adjusted HR 2.0, 95% CI 1.1-3.7), followed by women living alone (adjusted HR 1.2, 95% CI 0.7-2.2), men living with others (reference, HR 1.0), and women living with others (adjusted HR 0.9, 95% CI 0.5-1.5) and concluded that, living alone, an easily measured psychosocial factor, was associated with significantly increased longer-term mortality for men following AMI.

**General Information: Occupation & Income**

Table 4.3 highlighted that the majority of subjects 100 (33.3%) were having business and only 40 (13.3%) subjects were housewives; considering Income, majority of the subjects 222 (74%) were earning less than Rs. 45000 per annum.

In the present study majority of the patients diagnosed with Myocardial infarction were seen among occupational group of business, it could be due to the reason that they had an uncertainty in the business, therefore the illness of MI was more common among them, comparing to all the categories of occupation, business category people ranked number one among myocardial infarction.

Similarly another study by *Keleş I, Onat A, Toprak S* (2003) on family income a strong predictor of coronary heart disease events but not of overall
deaths among Turkish adults at Turkish Society of Cardiology and found that family income in the Turkish community was not predictive of overall mortality, but was strongly predictive of future CHD events independent of age, sex, and three major factors, posing a huge coronary risk on the individual and the society.

With regard to income, the present study had shown that one who had low income was having MI. It could be inferred that level of stress could be more in low economic group to cause the morbidity of MI more.

**General Information: Place of Residence and Earning Members**

Table 4.4 depicted that majority of the subjects 130 (44.3%) were from urban community; majority of the subjects 177(59%) were having one earning member in the family.

Since the study was carried out in an urban tertiary heart centre, majority of the subjects admitted were from urban community comparatively to rural and semi-urban community. As well as the stress more found in urban community due to industrialization and increased change in the society patterns demanding the individual to adapt to the changing society, failure to adapt might have resulted in the increased myocardial infarction illness.
With regard to number of earning members in the family when only one person earned for many members in the family, MI morbidity seem to be more. As the earning members in the family are less, family income also becomes less causing increase in the burden on a single person which leads to increased stress and stress causes Myocardial Infarction.

**General Information: Having debts or loans and Amount spent on treatment for last 3 months:**

Table 4.5 highlighted that the majority of subjects 179 (59.7%) were having debts/loans and only 121 (40.3%) of the subjects were not having any loans/debts; considering amount spent on treatment last 3 months majority of the subjects 192 (64%) had spent less than Rs.1500 per month for the treatment and only 10 (3.3%) had spent between Rs.3001 to Rs.6000 for the same.

Debts/loans might have given rise to increased financial burden in turn would have caused myocardial infarction.

With regard to spending money for treatment, majority had used less than Rs.1500 per month. Comparing to developed countries, the cost spent by Indian MI patients were less only. As the majority of the cardiac drugs are manufactured in India, MI patients in India needed to spend less only.
**Religion and Caste**

Table 4.6 highlighted that the majority of subjects 220 (73.3%) belonged to Hindu religion and only 12 (4%) subjects were Christian; considering the caste majority of the subjects 214(71.3%) were from other than the caste of SC/ST, BC & OBC.

Indians are predominantly Hindustanis which meant India is basically people of Hindu religion. That was the reason that present study had Hindu subjects mostly.

**Clinical Profile: Habits**

Table 4.7 highlighted that the majority of the subjects 157(52.3%) were having history of smoking and only 143(47.7%) of subjects were non smokers; with regard to drinking majority of the subjects 221(73.7%) were not consuming alcohol.

With regard to smoking, it was found that, Pfiffner D, Hoffmann A (2007) conducted a study on cigarette smoking and myocardial infarction in young men and women at Harokopio University, Athens, Discriminant analysis showed that pack-years of smoking was the strongest discriminator for MI among all the investigated factors (lambda-Wilks=0.85) and concluded that, cigarette smoking seems to play the most important role for having a MI in individuals under the age of 36 years.
Table 4.8 projected that majority of the subjects 252 (84%) were non smokers and non drinkers and only 48 (16%) were smokers and drinkers. With regard to any other habits, majority of subjects 287(95.7%) were not having any other habits.

Although high risk factors like alcohol and smoking were not present among the majority of the subjects of the present study, the stressors from various sources of life could be considered as a causative factor for their MI illness.

**Clinical Profile: Hobbies**

Table 4.9 highlighted that most of the subjects 189 (63%) were having the hobby of listening to music and only 111 (37%) of the subjects were not.

Table 4.10 highlighted that the majority of the subjects 176 (58.7%) were not having any hobby of reading and only 124 (41.3%) of subjects were having the hobby of reading books; majority of the subjects 254 (84.7%) were spending more time in watching TV/ movie.

As there was an increased accessibility to television, majority of the subjects were having a hobby of listening to music. Considering reading books majority were not reading books instead majority of the subjects had hobby of watching TV/ movie as it involves many senses like visual and auditory would
have created more interest than reading books. Majority of the subjects were not got into any sports which might be one of the contributed factors for myocardial infarction.

Table 4.11 majority of the subjects 182 (60.7%) were not got into the sports and only 118(39.3) were playing daily. Majority of subjects 277 (92.3%) were not having any other hobbies.

Hobbies helped the individual to engage in constructive activities which inturn becomes the diversional therapy for nullifying the stress and preventing the occurrence of MI.

With regard to spending more time in watching TV could be inferred that, since sitting in one place and watching TV can physically make a person to have low basal metabolic rate causing accumulation of fats in blood vessels resulting occlusions further leading to MI.

Table 4.9, 4.10 and 4.11 had shown majority of the subjects had no habits (95.7%), no hobby of reading (58.7%), watching TV(84.7%), no sports participation (60.7%) and no other hobbies (92.3%) suggestive of sedentary life style, which is a high risk factor for MI.
Clinical Profile: History of MI in family

Table 4.12 projected that majority of the subjects 251 (83.7%) were not having any family history of Myocardial Infarction and only 49 (16.3%) subjects were having family history of myocardial infarction, with regard to relationship to patient based on family history it was seen that the history of Myocardial Infarction routed from father for majority of the subjects 16 (5.3%).

Family history alone could not become the main cause of MI. when combination of many other factors like obesity, sedentary work, smoking and drinking habits along with family history of MI might be considered as a high risk factor for MI.

Clinical Profile: Age of Onset.

Table 4.13 depicted that majority of the subjects 226(75.4%) had the onset of MI from age of 31 to 60 years and only 7 (2.3%) of the subjects had the onset less than 30 years of age.

The age of 31 to 60 years is the period where an individual is exposed to various demands and challenges in personal, marital, occupational, emotional and social life leading to excessive level of stress causing MI. Present study findings indicated that need for stress management and guidance to MI subjects.
Current Symptom of MI:

Table 4.14 highlighted the Current symptom. Majority of the subjects 220(73.3%) experienced chest pain and only 1(0.3%) subject experienced current symptom either as breathlessness, forearm pain, back pain or palpitation.

Ryan Catherine J, ZerwicJulie Johnson (2004) conducted study on knowledge of symptom clusters among adults at risk for acute myocardial infarction at Chicago using descriptive research design on 63 subjects of acute myocardial infarction survivors. Q methodology showed that people with known coronary artery disease and their significant others had varied expectations of acute myocardial infarction symptoms. New and various strategies need to be developed to help patients accurately identify acute myocardial infarction symptoms.

Clinical Profile: Duration of Illness.

Table 4.15 depicted that the majority of the subjects 281(93.7%) were having less than 5 years of illness behaviour and only 2 (0.7%) subjects had 11 to 15 years of illness duration.

With regard to the duration of illness, subjects were with less than 5 years could be due to the reason that either they were there for their regular follow up treatment or for their aggravated symptoms. Even if there was a
warning signal for heart attack, patients do come to hospital for treatment, however this finding helps to postulate a hypothesis that there will be significant number of MI patients come for regular treatment in the first 5 years after their illness being diagnosed.

The above findings stress upon that majority of subjects need psychological counselling for illness crisis since they were on first time hospitalization. Similarly majority of them were on acute phase of adjustment with hospitalization, because majorities were on duration of hospitalization as 3 days. Nurses play a vital role in assisting the MI patients with crisis counselling and stress management.

Clinical Profile: Hospitalization:

Table 4.16 highlighted number of times hospitalized, majority of the subjects 284(94.7%) were hospitalized for less than 1 time and only 2(0.7%) subjects were hospitalized more than four times; considering duration of current hospitalization, majority of the subjects 240(80%) were having less than 3 days and only 4(1.3%) subjects were having 9 days and above.

Table 4.17 highlighted that the majority of the subjects 291(97%) were expressing 1 week as the longest duration of hospitalization where as only 9(3%) subjects were saying that 2 weeks as the longest duration of hospitalization. Considering perceived stage of disease, majority of the subjects
283(94.3%) perceived their disease stage as ‘early’ and only 5(1.7%) subjects perceived their stage of disease as ‘late stage’.

When subjects were away from home, work, friends and from routine life they perceived the duration of 1 week and 2 weeks of hospitalization as longest period, due to the feeling that their responsibilities were kept in abeyance. With regard to perception of their illness as ‘early stage’ could be due to the reason that they would like to have long life and it is one of the coping mechanisms of ‘denial’.

**Diagnostic Tests:**

Table 4.18 projected that, majority 296(98.7%) of subjects had undergone blood tests; considering X-rays majority 197(65.7%) of subjects have not undergone x-rays and only 103(34.3%) of subjects had undergone x-rays.

With regard to blood tests and X-rays, it could be inferred that abnormal blood chemistry such as urea, creatinine etc is considered to be the vital sign to diagnose the stage of MI, than ‘cardiomegally’ that is seen in x-ray chest.

Table 4.19 highlighted that most of the subjects 294(98%) had undergone ECG investigation where as only 6(2%) subjects had not; considering the echocardiogram, only 129(43%) subjects had undergone
echocardiogram where as majority of the subjects 171(57%) had not undergone echocardiogram.

While comparing the ECG and echocardiogram, the ECG investigation is less expensive and ECG alone is sufficient enough to diagnose MI. Echocardiogram becomes necessary when patient is suggested for CABG or develops Sequel of symptoms and syndromes.

Table 4.20 highlighted that majority of the subjects 204(68%) hadn’t undergone coronary angiogram (CAG) and only 96(32%) of the subjects had undergone coronary angiogram.

When MI patients have high risk factors like diabetes and obesity, CAG becomes one of the needed investigations to rule out coronary artery blood vessel block, its site and number of vessels blocked. More over CAG investigation is costly. No investigation is required when patient can report their symptoms accurately.

**Clinical Profile: Treatment**

Table 4.21 highlighted that, majority of the subjects 221(73.7%) had no surgery; considering pharmacotherapy, majority of the subjects 253 (84.3%) were on pharmacotherapy; with regard to symptomatic treatment, majority of the subjects 290(96.7%) were on symptomatic treatment where as only
10(3.3%) subjects were not on symptomatic treatment.

If patients can reach hospital soon after their primary symptoms and later adhere to treatment compliance, no surgery is required for MI. With regard to chemotherapy, drugs play a vital role to regulate vital organs like heart, kidney and liver in MI patients. That’s why it was obvious that majority of the subjects were on chemotherapy.

**Clinical Profile: Alternative medicine**

Table 4.22 projected that majority of the subjects 288(96%) were not on ayurveda. With regard to Unani, none of the subjects were on Unani.

Table 4.23 regarding homeopathy, majority of the subjects 297(99%) were not on homeopathy; and none of the subjects were using sidha as treatment.

It is based on scientific evidence that MI patients have structural damage to heart leading to inadequate functioning of the heart resulting in inadequate functioning of many other vital organs. Periodical investigations like blood test and urine test and patients complaints etc are adequate enough to treat MI patient symptoms. With regard to alternative medicine Ayurveda, homeopathy, sidha and Unani were not used by MI patients since the study was conducted in allopathic setting, the findings were justifiable.
**Clinical Profile: Primary Effect**

Table 4.24 depicted that majority of the subjects 297(99%) had chest pain whereas only 3(1%) did not have chest pain; considering palpitation majority of the subjects 197(65.7%) were having palpitation.

With regard to symptoms of chest pain and palpitation, pain could be easily addressed than palpitation and that could be the reason majority reported chest pain.

Table 4.25 highlighted the data pertaining to primary effects, majority of the subjects 267(89%) had sweating; considering tightness in the chest, majority of the subjects 234(78%) had tightness in the chest.

With regard to symptoms of sweating and tightness of the chest, most of the MI patients perceive these symptoms as unusual and typical of heart attack and report these observations without fail.

Table 4.26 projected data related to primary effect, majority of the subjects 161(53.7%) were having choking sensation; related to other symptoms. With regard to other symptoms, majority of the subjects 268(89.3%) did not experience any other symptoms during the course of illness.
With regard to symptom of choking and other symptoms experience; choking was reported by majority of subjects due to the reason that choking experience is more life threatening.

**Clinical Profile: Secondary Effect**

Table 4.27 highlighted the secondary effects of MI, majority 178(59.3%) were not having prolonged symptoms and only 122 (40.7%) had prolonged symptoms as the secondary effect.

With regard to secondary effects, majority did not have prolonged symptoms due to the better efficacy of treatment protocol.

Table 4.28 highlighted that, majority of the subjects 229(76.3%) were not having any anxiety or fear of impending death; considering nausea majority of the subjects 184(61.3%) were not having the secondary effect of nausea due to MI.

With regard to death anxiety and fear, the findings prove the efficiency of treatment team, who were able to retain the confidence of patient about survival. Further nausea does not appear when patient complies treatment.

Table 4.29 portrayed that, majority of the subjects 171(57%) had breathlessness and only 129(43%) subjects were not having breathlessness as
secondary effect of MI; regarding vomiting majority of the subjects 172(57.3%) were not having vomiting.

“Breathlessness” is a symptom of “want of oxygen” and an indicator of heart dysfunctioning. This urges the patient to rush to cardiac centre or go for immediate rest, whereas vomiting is more of side effect of drugs and not the secondary effect of MI. However the antiemetic drugs are prescribed along with cardiac drugs and the patients do not develop vomiting.

Table 4.30 highlighted the following; considering sweating, majority of the subjects 196(65.3%) were having sweating; considering syncope, majority of the subjects 151(50.3%) were not having syncope.

Table 4.31 highlighted that majority of the subjects 185(61.7%) had loss of weight; considering symptoms lasting longer, majority of the subjects 265(88.3%) had no long lasting symptoms.

Loss of weight could be due to the diuretics “lasix” this antidiuretics is given to MI patients for cardiac rest. But this takes away the interstitial fluids and increases the urinary output. Thereby MI patients reduce their weight. Further salt free, fat free, rich fibrous food with restricted calorie intake also makes the patient to reduce weight. With regard to long lasting symptoms
decline could be due to the efficient treatment and the patient’s adherence to treatment.

In MI, there is coronary arteries spasm, and systemic peripheral vasoconstriction due to increase in sympathetic stimulation, leading to sweating and other systemic manifestation. The sympathetic stimulation occurs due to a reflex baro-receptor action and renal ischemia (Renin-Angiotensin Mechanism). Whereas ‘syncope’ is more related with cardiomegally and coactation of aorta.

**Psychosocial Stressors:**

Table 4.32 examined the occupational status as a consequence of disease, majority of the subjects 155(51.7%) had no change in their occupational status; considering the change in habits, 217(72.3%) of subjects had change in habits as a consequence of disease.

This could be due to health education, guidance and counselling that patient received from the multidisciplinary team about the consequences of continuing unhealthy habits and also the severity and the seriousness of disease prevented in continuing their habits.
Table 4.33 portrayed that, majority of the subjects 192(64%) had to change their hobbies as a consequence of disease and majority of the subjects 251(83.7%) found that treatment was expensive.

Hobbies are meant for spending leisure time, those hobbies require not only time, but also money, when the patient needs money for heart treatment, it is justifiable that MI patient changing to least expensive hobbies as a consequence of illness.

with regard to treatment found as expensive, it could be due to the reason that majority of the study subjects were from low income group and from only one member earning family, naturally they feel treatment as expensive.

Table 4.34 described that, majority of the subjects 212(70.7%) did not receive any financial assistance from government and majority of the subjects 297(99%) did not receive any financial assistance from voluntary organization.

MI patients while on chemotherapy, the cost incurred for treatment is within their capacity and may not require financial assistance either from government or from voluntary organizations.
Table 4.35 portrayed that majority of the subjects 181(60.3%) had past savings as financial assistance and majority of the subjects 159(53%) took private loans for financial assistance.

Since the procedure does not require financial assistance from government or from non governmental agency, MI patients try to manage from their savings and get loans from people or bank.

Table 4.36 highlighted that majority of the subjects 269(89.7%) were not depended on sale of jewellery/ property for financial assistance and majority of the subjects 166(55.3%) were depended on the income of other family members for financial assistance.

The study subjects were those taking treatment from a governmental hospital, which extends free drug service and also the cost towards certain investigations are low under such circumstances, subjects had not sold the jewellery or property. One of the dominating cultural features of India is that when a family member becomes sick other family members willingly share their finance and in this study also it was found that MI patients depended on the income of other family members for financial assistance.

Table 4.37 highlighted that, majority of the subjects 297(99%) were not dependent on public charity for financial assistance.
When the past saving and the other family members share their income for MI patients treatment they don’t depend on public charity and also not looked forward for any other source of financial assistance.

Table 4.38 highlighted that majority of the subjects 299(99.7%) said that no voluntary organization/ private body neither helped them nor extended physical assistance.

With regard to “no organizations helped them physically and emotionally” could be due to the reasons that neither the subjects had not reached them for help, nor the family members failed to extend needed support to MI patients. Therefore ‘no necessity to seek for help’ was the reason for these findings.

Table 4.39 portrayed that none of the subjects were emotionally assisted by voluntary organization/ private body; considering the financial assistance, majority of the subjects 298(99.3%) were not financially assisted by voluntary organization/ private body.

Since the study was carried out in a cardiac hospital run by state government of Karnataka, the emotional support or financial assistance from voluntary organizations were not accessible to study subjects.
Table 4.40 highlighted that all of the subjects 300(100%) did not like to get any rehabilitation support from voluntary agency and private body; majority of the subjects 218(72.7%) did not like to get any help from other sources.

When cardiac centre, run by government is good enough to meet rehabilitative needs of MI patients, none of them took help from private body; neither they liked help from any of them due to low confidence.

Table 4.41 highlighted that majority of the subjects 211(70.3%) were not in need of any monetary assistance for treatment; majority of the subjects 224(74.7%) did not wanted assistance in terms of physical aids / appliances.

Based on the findings in the area of “financial assistance” majority of the study subjects expressed that past savings were sufficient enough for treatment and therefore, this finding were justifiable. With regard to physical aids, since majority of the study subjects were in early stage of MI, they did not require to have physical devices like “pace maker”.

Table 4.42 portrayed that majority of the subjects 222(74%) said that they had no help in raising funds/ donations for treatment similarly majority of the subjects 298(99.3%) were not getting any voluntary help in terms of volunteers.
Help for raising funds, donations and volunteer services are more required for MI patients who are in advanced stage of illness, since majority of the subjects in this study are first time admitted and are in early stage of MI, the cardiac team would have not initiated for such kinds of assistance.

Table 4.43 projected that, majority of the subjects 234(78%) preferred treatment at hospital; regarding accompanies on visit to hospital, majority of the subjects 208(69.3%) preferred their spouses.

When MI patients suffer with chest pain, they prefer hospital treatment to ascertain the chances of survival. With regard to spouses accompany the MI patient is the reflection of Indian culture where spouse has an obligation to assist the life partner and another reason is that the couples are usually bonded emotionally and like to have their spouses accompanying them wherever they go.

Table 4.44 projected that majority 281(93.7%) of subjects required further financial aid for medicine and majority of the subjects 227(75.7%) thought that their disease was serious.

When MI onset is acute and sudden, most of the patients require financial aid for medicine as they will be on rest and cannot make efforts to arrange financial assistance. With regard to patients perception that MI is
serious, heart is a vital organ and pumps out blood which carries oxygen throughout body for survival of human being. When MI is occurred, it is quite natural that patient thinking MI disease is serious, because the disease is related to heart.

**Patient and Society**

Table 4.45 examined that majority of the subjects 266(88.7%) felt other family members need to take responsibility and majority of the subjects 185(61.7%) expressed that they were able to take care of personal self.

The religion of love is the base of any civilized culture and Indian families taking care of sick member at the time of need and sharing the responsibility during hospitalization of MI patients is nothing but reflection of culture and humanity.

MI patients do not become physically disabled, only thing they are restricted to carry-out certain physical activity. So MI patients are able to take care of personal self.

Table 4.46 stated that, majority of the subjects 207(69%) felt that their spouses helped mostly considering the attitude of spouse/parents/siblings after diagnosis, majority of the subjects 295(98.3%) felt that spouse/parents/siblings showed more concern after diagnosis.
As discussed earlier, spouses helping MI patients merely the reflection of societal and cultural norms and also the emotional attachment to each other makes the healthy spouse to show more concern towards MI patients.

*Moser DK, Dracup K* (2004) conducted a study on role of spousal anxiety and depression in patients' psychosocial recovery after a cardiac event at College of Nursing, University of Kentucky, USA using descriptive research design on 417 patient-spouse pairs hospitalized for either acute myocardial infarction or coronary revascularization. Patients' psychosocial adjustment to illness was worse when spouses were more anxious or depressed than patients, and it was best when patients were more anxious or depressed than spouses, whereas psychosocial adjustment to illness was intermediate to these 2 extremes when patient and spouse anxiety and depression levels were similar (p =.001) and concluded that, spouses often experience greater anxiety and depression and less perceived control than patients themselves. Attention to the psychological distress experienced by spouses of patients who have suffered a cardiac event may improve outcomes in patients.

*Greenberg S, Almaro N, Keren G, Sheps D* (2004) examined the effect of spouse participation in cardiac rehabilitation program on patients' compliance and exercise level at , Tel Aviv Sourasky Medical Center Israel using experimental research design on 14 couple who had suffered a myocardial infarction (Group 1--Rehabilitation program) and 10 couple with
myocardial infarction (Group 2--secondary prevention). Outcome was measured by number of sessions attended, basic and final physical training level and found that, rehabilitation groups, the participants attended a larger number of sessions (87.3 + 17) compared to control (47.7 + 6) (p < 0.05). There was no difference in the basic training level between the groups (3.5 + 0.2 METS; compared with 3.4 + 0.2 METS) (P = 0.5) and both groups had similarly improved their training level by 0.79 + 0.1 METS compared with 0.6 + 0.1 METS in the control group (p = 0.2). In the secondary preventive groups, the control group attended a larger number of sessions (51 + 13 compared with 31.2 + 6 sessions) (p < 0.02). There was no difference in the basic training level between groups 3.7 + 0.3 METS compared with 4.2 + 0.2 in the control group (p = 0.2). However, at the end of the training period, the control group showed greater improvement in their training level by 0.7 + 0.2 METS compared to 0.3 + 0.1 METS (p < 0.05). The spouses themselves had attended a greater number of sessions (45 + 10 compared with 37 + 6 in the control group) (p = 0.2). There was no difference between those groups in the training level at baseline and at the end of training period and concluded that, active support during the rehabilitation program may improve the rates of participation but in the secondary prevention program active spouse support may encourage early dropout.

Table 4.47 highlighted the feeling of being a burden to the family members while many subjects 203(67.7%) did not feel that they were burden to
the family members whereas only 97(32.3%) subjects felt they were burden to
the family members.

With regard to perception of burden to the family members, majority of
the subject’s perceived family member were concerned about patient. Study
subjects, before becoming MI patients, they were ‘contributors’ to the family
members and therefore family members reciprocate their love when patient
became sick and never made patient to feel that he is a burden.

Table 4.48 displayed that majority of the subjects 235(78.3%) said they
preferred to discuss their problems of disease whereas with regard to
preference, majority of the subjects 178(59.3%) preferred spouse/parent/sibling
to be as usual while discussing their problems of disease.

One of the therapeutic approach with MI patients is ‘talk out’ to
ventilate their feelings which inturn will reduce the stress and MI patients are
also found adhering to this guidance.

MI patients depend on their spouses for all kinds of assistance and want
them to be as usual unaffected physically and emotionally so that they are
available for service.
Table 4.49 highlighted that, majority of the subjects 297(99%) felt spouse/parent/sibling to be helpful and only 3(1%) of the subjects felt them to be unhelpful; considering family over worried because of patient’s health, majority of the subjects 290(96.7%) said yes.

The findings are on par with the societal and cultural norms that a sick family member has a right to expect help from other family members. When a life threatening illness like MI is seen in one family member, it is expected that other members in the family over worried about MI patients for want of patient to be alive and long live.

Table 4.50 stated that majority of the subjects 178(59.3%) said that they should be told that ‘you are cared for, loved and esteemed’; majority of the subjects 178(59.3%) did not wanted to acknowledge their beliefs, feelings and interpretations.

No mentally healthy human being wanted to be asocial, neglected or disowned, similarly MI patients are mentally healthy and the MI is only physical illness. But there is a body, mind relationship and the individual when he becomes sick, he uses the coping mechanism of ‘regression’ and wants to have overtly expressed love and concern.
When MI patients are not physically disabled, they remain with self-confidence unchanged and don’t want to acknowledge other’s beliefs, feelings and interpretations.

Table 4.51 highlighted that majority of the subjects 250(83.3%) had expressed that none in the family given up education: Majority of the subjects 249(83%) said they had not taken up job.

Indian government policy is that higher the education higher the post, so one aspires to get highly qualified to get higher post and higher salary. Because of MI, the study subjects did not stop the education of their offspring’s.

Due to the MI disease, patient might have not asked their family members to take up the job, with due concern on them and allowed them to continue their routine life.

Table 4.52 portrayed majority of the subjects 201(67%) were not taking care of home after their disease and majority of the subjects 259(86.3%) expressed that they had not overworked.

In joint family the household works are shared. In nuclear family, both spouses going for work is a necessity and all family members share work, but under the circumstances of MI illness patient would have not been given the
responsibility of taking care of home. It could be due to the fear of consequences of overwork on cardiac functioning, MI patients do not allowed to overwork.

Table 4.53 highlighted that majority of the subjects 293(97.7%) were not careless; majority of the subjects 297(99%) were not negligent towards their disease.

Carelessness and negligence about one’s own health is unusual among physically ill person unlike psychiatric patients who have no insight about their illness.

Table 4.54 showed that majority of the subjects 166(55.3%) expressed that they did not have any plans to be fulfilled to family.

In the presence of efficient medical support, the symptoms of MI comes under control and the homeostasis in the family becomes unaltered, and as one learns that MI is treatable, patients feel that planning for the future of family is not required during hospitalization.

Table 4.55 highlighted that, most of the subjects 183(61%) felt that educational needs of the family members were to be met; considering the
marriage of any of the family members majority of the subjects 153(51%) said ‘no’.

The subjects included in the study are young adult to early old age, where their children are school going or college going and not reached economically independent enough to get married. Therefore they wanted the education of family members to be met and not the marriage.

Table 4.56 highlighted that majority of the subjects 242(80.7%) did not have medical treatment for family members; majority of the subjects 233(77.7%) said no investment / savings that they had.

When a healthy life style is followed the illness are kept away. For any minor ailments, many Indians consider their grandparent’s homemade medical preparations with herbs are adequate and they don’t go for allopathic treatment or to any hospitals.

An average Indian earning is just sufficient to meet the basic requirements, although they know savings are important, they cannot or invest for future. Further, in a government hospital, patient’s population do not declare their assets, savings or investments for want of getting treatment ‘free of cost’.
Table 4.57 showed that majority of the subjects 255 (85%) felt they did not fail to fulfil ambitions as against 45 (15%) of subjects.

With regard to did not fail to fulfil ambition, could be inferred with their personality traits. The findings of various scientific studies had found out that ‘personality (type A)’ people are more prone for MI. They have the characteristics of completing the tasks then and there and no procrastination of the work. They keep always rushing towards completion of work, present study also had seen that subjects had no feeling of failure of fulfilment of ambitions because they had been rushing and fulfilling their ambitions.

Table 4.58 projected that majority of the subjects 157(52.3%) perceived that their spouses reaction to conjugal life as very smooth. With regard to avoid hurting the spouse, majority of the subjects 255(85%) said that they avoided hurting of spouses.

One of the characteristics of a mentally healthy individual is live for present and MI patients are physically ill, not mentally ill and therefore plan for future is not at all considered.

It is a typical Indian culture where marriage bondage goes on well with conjugal life whether spouses has MI or not.
When MI patient find spouse and other family members show more concerns towards him, he tolerates other’s limitations and does not want to hurt others. Moreover hurting others is a sign of anger. The emotion of anger is not advisable to MI patients as the anger stimulates cholinergic function and accelerates heart beat.

Table 4.59 portrayed that majority of the subjects 164(54.7%) never had coitus after the illness and majority of the subjects 264(88%) expressed that their spouses had fear that coitus would lead to death.

It could be due to the reason that ‘coitus’ involves emotions and excitement and MI patient fears about heart functions getting accelerated during coitus and remains totally abstinent.

Fear and death could be easily associated with myths and misconceptions about MI, the findings compasses the need for family counselling, in general and to spouses in particular.

Table 4.60 portrayed that majority of the subjects 222(74%) were living in nuclear family and only 78(26%) of subjects were living in joint family.

Table 4.61 depicted that majority of the subjects 205(68.3%) had family composition of less than 5 members; considering the utility of living in a joint
family in a situation with illness, majority of the subjects 266(88.7%) found it was helpful.

Joint family has more number of members living under one roof and that helps when MI patient gets into hospitalization, the family runs as usual even in his absence with the support of others.

Table 4.62 depicted that majority of the subjects 257(85.7%) said they needed physical aid and majority of the subjects 276(92%) said they needed emotional support.

Physical assistance is demanded while the cardiologist recommend for bed rest and restrictions to certain physically straining work.

Fear, anxiety, uncertainty about treatment-outcome and additional expenditure act upon an individual. It is quite justifiable that MI patient’s need for emotional support.

Table 4.63 projected that majority of the subjects 225(75%) needed financial support and only 75(25%) of subjects were not in need of financial support.
When the illness of MI is chronic in nature, demanding constant, continuous, ever continuing treatment, MI patients need financial support.

When illness is under control, patient may feel that other types of supports are not required.

Table 4.64 thrown light that majority of the subjects 296(98.7%) said they did not have any interference from family; majority of the subjects 293(97.7%) did not find their family members were unhelpful.

When family is with more empathy and concern about the wellbeing of MI patients, naturally, MI patients perceive that the family members are not obstacle for their treatment.

Family is a primary group. They share happiness as well as stressors and worries. When a family member becomes sick, other members in the normal healthy family would extend more help than usual.

Table 4.65 examined that majority of the subjects 293(97.3%) were not considered as a burden by the family; majority of the subjects 299(99.7%) said that their disease was not a curse of god.
Family is a source of support to each other especially at the time of any problem or illness. This is a reflection of cultural norms.

Today people are living in a scientific era; Mass media is a major source of information. People learn about MI from various scientific sources and they don’t consider that disease is a curse of God.

Table 4.66 highlighted that majority of the subjects 298(99.3%) said that there was no impediment or hindrance to treatment.

Since MI is perceived as a physical illness and require long-term cardiac rehabilitation programme, patients do not quote any reasons that are impediment to the treatment.

Table 4.67 depicted about decision making concerning patients health in their family, majority of the subjects 199(66.3%) said they themselves made decisions concerning their health; majority of the subjects 271(90.3%) said that their opinion needed to be considered while making decisions.

The study subjects are adult and therefore their decision for taking treatment for MI is self-made.
Health is human right. MI patient has a right to decide about his treatment as well as expect others to discuss with him about his treatment.

Table 4.68 delineated that majority of the subjects 215(71.7%) felt that their relatives visited ‘as usual’ and similarly considering frequency of friends visit, majority of the subjects 169(56.3%) said that it was ‘as usual’

Relative’s visit to patients during and after hospitalization remained as usual could be due to the reason that patient is not perceived as a burden to withdraw, nor MI is contagious where relatives are scared of visiting him.

Like relatives, friends also visited MI patients as usual because neither patient has not put up any demand on friends, nor patient is a source of threat to them.

Table 4.69 highlighted the data pertaining to apprehensive of social rejection majority of the subjects 223 (74.3%) said that they were not apprehensive of social rejection.

With regard to ‘no apprehension for social rejection, could be due to the reason that when family gives adequate support, subjects do not worry about social rejection.
Table 4.70 depicted that majority of the subjects 199(66.3%) said that relatives did not render any help physically as well as financially.

Very understandable relatives are great source of help to MI patients. Help in time strengthens the bondage among relatives.

Table 4.71 highlighted that majority of the subjects 215(71.7%) felt that relatives provided emotional support. Whereas in the area of financial assistance, majority of subjects 169(56.3%) felt that relatives did not provide financial assistance.

Friends and relatives are good source of emotional support because they express their concern about the patients well being.

Financial aid from others is considered as an obligation and below one’s own dignity.

Table 4.72 highlighted that majority of the subjects 180(60%) said that relatives assisted the family during hospitalization; majority of the subjects 190(63.3%) said relatives did not facilitate treatment procedure.

When psychological supports are extended by relatives, patient’s response to treatment becomes very positive.
Since the family being assisted by relatives, patients might have felt psychologically comfortable.

Table 4.73 depicted that most of the subject 226(75.3%) said friends don’t provide financial support. With regard to extending help to family to ventilate to family members, majority of the subjects 198(66%) said their friends do not help the family to ventilate.

When patient is self sufficient financially, the friends do not provide financial support.

When worries are shared, it is lessened, family, relatives and friends are the good source to ventilate. But when they feel that they are ill-equipped they encourage patient’s family to discuss with cardiac team.

Table 4.74 highlighted that, majority of the subjects 215(71.7%) said that their friends did not offer themselves to stay with patient in hospital and majority of the subjects 241(80.3%) said friends do not facilitate financial assistance.
One of the policies of the hospital is that no one to stay with MI patients during hospitalization because presence of other people with patients, increases the verbal conversation and decreases the quantity of sleep and rest.

While the cost of treatment is low and cheap, patients need no financial assistance from friends.

Table 4.75 depicted the data with regard to frequency of visit expected from relatives. Majority of the subjects 213(71%) said that they expect them visiting ‘as usual’ and similarly majority of the subjects 159(53%) felt that frequency of visit expected from friends was also ‘as usual’.

Table 4.76 shown that majority of the subjects 270(90%) felt that friends and relatives provided emotional support and similarly majority of the subjects 223(74.3%) said that they provided financial assistance.

Extending emotional support and financial assistance are the ‘sign’ of love for fellow human being, when a relative or a friend is diagnosed to have MI, all the friends and relatives consider as opportunity to prove their love.

Table 4.77 highlighted that majority of the subjects 213(71%) relatives assisted the family during hospitalization similarly with regard to facilitation of
treatment procedure, majority of the subjects 186(62%) were facilitated by their relatives for treatment.

Family being assisted by relatives, treatment procedure being facilitated by relatives are the indication of strong social support and MI patients need such kind of social support.

Table 4.78 projected that majority of the subjects 290 (96.7%) greatest source of social support was family members, similarly majority of the subjects 170 (56.7%) their source of social support was relatives.

Family was considered as a great source of support in spite of support from relatives could be due to the reason that patient might have felt that taking support from own family as their ‘right’, whereas relatives support even if it is smaller in quantity but would be perceived as ‘big’ help because the support from relatives was unpredictable.

Table 4.79 highlighted that majority of the subjects 208(69.3%) said that the great source of support were friends and with regard to feel after the visit of friends and relatives, majority of the subjects 289(96.3%) were consoled by the visit of friends and relatives.
Friend in need is friend in deed is the common say. MI patients perception of friends were the great source of support and their visits consoled them is because that the majority of the patients are from nuclear family, urban domicile, relying on friends support is quite natural.

Table 4.80 portrayed that majority of the subjects 279(93%) felt that they were relieved off after the visit of their friends and relatives similarly majority of the subjects 271(90.3%) expressed that they were not tensed after the visit of friends and relatives.

When friends and relatives visit, patients perceive the social support as strong and would have got more relief from unknown fear. Similarly patients did not get tensed after the friends visit, because friends would have expressed their concern, love, desire of patient’s fast recovery etc.

Table 4.81 portrayed that majority of the subjects 283(94.3%) were not angry after the visit of relatives and friends similarly majority of the subjects 259(86.3%) felt encouraged after the visit of friends and relatives.

Anger is the reflection of ‘internal’ disturbances. When friends and relatives are source of support, there is no reason for patients to get angry, instead patients felt encouraged after the visit of friends and relatives because patients were given various kinds of support by them.
Table 4.82 represented that majority of the subjects 235(78.3%) felt hopeful after the visit of friends and relatives similarly majority of the subjects 286(95.3%) expressed that other MI patients were not the source of comfort.

Friends and relatives visits make the patients to feel more hopeful, because mostly, they give positive information about hospital, definite recover and good prognosis. Whereas other MI patients keep expressing their negative feelings about their illnesses, the study subjects would have not considered them as source of comfort.

Table 4.83 highlighted that majority of the subjects 296(98.7%) were relieved when others tried to cheer them up similarly majority of the subjects 279(93%) were cheered up when others tried to cheer them.

Getting cheered up indicates the mind-set of subjects that they are more confident about their recovery subjects also felt relieved when others tried to cheer them up because humour makes the mind to become tense-free.

Table 4.84 portrayed that majority 261 (87%) subjects felt sad when others tried to cheer them up. With regard to dejected being sick. Majority of the subjects 290(96.7%) felt that they were not dejected being sick.
When MI patients is anxious about his life, his future, disability due to MI, he remains sad and when people try to cheer him up, it may be difficult for him to distance from reality and at the same time he did not feel that he is not being dejected, because he is aware of support from others.

Table 4.85 highlighted that, majority of the subjects 72(24%) felt that the reaction of employers/ superiors was sympathetic similarly majority of the subjects 77(25.7%) like their employers/ superiors to react ‘normal’.

Superiors of MI patients showed sympathy due to their concern to the wellbeing of patients. Patients also wanted their employers to react ‘normal’ and not to be over worried. Both employer and patient expressed their concern for each other mutually.

Table 4.86 delineated that majority of the subjects 127(42.3%) reaction to colleagues was co-operative; similarly most of the subjects 98(32.7%) said their colleagues reacted normally.

The above findings showed that colleagues were friendly, concerned, caring and extended their support through their cooperation and their reactions toward MI illnesses and patient were more of sympathetic and consoling.
Patient and Spirituality:

Table 4.87 highlighted that majority of the subjects 291 (97%) were believing that there is god / almighty power; majority of the subjects 237 (79%) believed in some kind of afterlife.

Since the majority of study subjects belonged to Hindu religion, the above finding is justifiable. According to Hindu mythology, people take rebirth, the type of life that they have in the present birth and in future births depend upon their deeds (karma). God is the creator of all. He blessed people as per their ‘deeds’.

Table 4.88 portrayed that majority of the subjects 286 (95.3%) said prayer was helpful to them; majority of the subjects 220 (73.3%) were attending special prayers/ poojas.

Prayer is one of the ways of interacting with God. During prayer, people especially, those who are suffering from ill-health, ventilate their feelings to God with the faith that God heard them and would heal them.

Table 4.89 described that majority of the subjects 244 (81.3%) were not attending any sessions for miraculous cure; most of the subjects 232 (77.3%) had visited holy places/ shrines.
The scientific knowledge about MI makes the patients to understand the importance of taking medical treatment, rather than investing energy on other miracles to occur. Whereas they visited holy places with the aim of getting diverted from the fear of death, and with the belief that visiting holy places, shrines would wash off their sins.

Table 4.90 highlighted that many subjects 276 (92%) would like to visit holy places/shrines; majority of the subjects 169 (56.3%) felt that disease is not a result of past deeds.

As discussed earlier that MI patients have the desire to visit holy places and visited the holy places could be different ways of preparing themselves to death. At the same time they felt their disease is not due to past deeds, but due to functional disability of heart.

Table 4.91 it was found that majority of the subjects 237 (79%) did not pray in other faiths; majority of the subjects 167(55.7%) said that the disease was not a will of god.

Faith is the ideology that is passed from one generation to another. What is being believed from childhood gets strengthened when the illness occurs. MI patients also carried their own faith and believed in that faith and did not pray in other faith. Generally people look at God as ‘protector’ and God does not
give diseases and kill the people. It is applicable to MI patients also and they said their disease was not a will of God.

Table 4.92 portrayed that majority of the subjects 194 (64.7%) said disease is not to test them by god; majority of the subjects 258 (86%) said that, disease was not the punishment given to them by god.

In continuation of our discussion of the previous table findings, it could be inferred that MI patients do not blame God for their illness and do not think that God is testing them for punishing them. Rather patients develop scientific understanding about MI and do not blame God.

Table 4.93 highlighted that majority of the subjects 283(94.3%) said god didn’t love them more; majority of the subjects 218 (72.7%) were more religious.

Hughes JW, Tomlinson A, Blumenthal JA et.al (2004) investigated Social support and religiosity as coping strategies for anxiety in hospitalized cardiac patients at Kent State University, USA using descriptive research design on 228 (71% male, 29% female) hospitalized with CHD. Found that higher levels of social support were related to lower levels of state and trait anxiety (state anxiety, r = -.26, p < .01; trait anxiety, r = -.30, p < .01;).

Religiosity was related to lower state anxiety (r = -.27, p < .01) but only
modestly related to lower trait anxiety (trait anxiety, $r = -.18$, $p < .01$). The relationship between religiosity and trait anxiety was no longer significant after controlling for social support ($p = .26$) and concluded that, religiosity and social support provide a buffer against anxiety in CHD patients and that higher levels of social support may account for the relationship between religiosity and trait anxiety. These findings underscore the importance of social support and religiosity as buffers against distress, with possible implications for prognosis in a patient group where high levels of anxiety appear to confer increased risk of mortality.

Table 4.94 highlighted that majority of the subjects 167(55.7%) felt like giving up the battle for life; most of the subjects 201(67%) were not having fear of death.

With regard to giving up the battle for life, findings go in hand with age group of study subjects as majority of them were belonging to the age group of middle adulthood (36 years to 65 years). Already they have burdened with heaps of responsibilities and finding the illness as added burden. With regard to ‘not having fear of death’ could be due to the reason that they were ready to give up the battle for life and so there is no fear also towards death.
To assess the level of stress among the subjects

Table 4.95 projected the level of stress of the study subjects. It was found that majority of the subjects 146 (48.7%) had mild level of stress, 101 subjects (33.7%) had moderate stress and 53 (17.7%) subjects had severe stress.

The findings indicated that moderate level of stress and severe level of stress were not required to develop MI and mild level of stress alone could be sufficient to develop MI. If mild stress is not intervened the recurrence of MI and increased severity of stress are possible.

Pedersen, Susanne Schmidt, Middel, et.al. (2003) presented a report of the study on posttraumatic stress disorder in first-time myocardial infarction patients at Aarhus University Hospital, Denmark using experimental research design on 112 consecutive patients and 115 healthy controls selected randomly using structured questionnaire and data was collected from the patients' medical records and interviews and the main findings were persons with posttraumatic stress disorder are at increased risk of cardiovascular diseases, cardiac patients with the PTSD may be at a higher risk of recurrent cardiac events. Although longitudinal studies were needed to confirm such a relationship, this disorder should not be overlooked because of its potential role in reinfarction and mortality.
**Death Anxiety**

Table 4.96 projected the level of death anxiety of the study subjects. It was found that majority of the subjects 178(59.3%) had moderate level of death anxiety and only 33(11%) of subjects had severe death anxiety.

MI patients developing cardiac arrest and having ‘silent death’ is a fact that caused majority of the subjects had moderate level of death anxiety. The findings strongly recommends for psychotherapeutic counselling to handle death anxiety and health education to prevent cardiac arrest.

*Tel, Havva, Hatice* (2006) conducted study on the effect of individualized education on the transfer anxiety because of fear of death of patients with myocardial infarction at Sivas, Turkey using experimental research design on 90 patients with myocardial infarction who were admitted to the CCU and found that the patients in the CCU experienced anxiety on the second day of admission and on the day of transfer and concluded that patients in the CCU and their relatives experience anxiety. An individualized education program is effective in decreasing the anxiety of patients and their relatives when the patients are transferred from the CCU to the general care unit.

*Frazier, Susan K, Moser, Debra K, et.al.* (2002) conducted study on management of anxiety after acute myocardial infarction at Mount Carmel Health, Columbus, Ohio using descriptive, correlational research design on 101
subjects with acute myocardial infarction to evaluate the use of pharmacological and non-pharmacological anxiety management strategies. 72 subjects received anxiety management, and the use of anxiety. A small but significant relationship was found between the anxiety score and the use of pharmacological anxiety management ($\lambda = 0.10; P = .03$) but no association was found between anxiety score and the use of non-pharmacological anxiety management ($\lambda = 0.6; P = .50$). Critical care clinicians need a comprehensive understanding about the importance of anxiety to patient outcome in addition to objective, reliable, and valid anxiety measures and a useful repertoire of evidence-based management strategies to effectively manage anxiety. Effective management of anxiety positively influences patient outcome and should be a goal for all critical care MI patients.

**Family Burden:**

Table 4.9 projected the level of total family burden of the study subjects. It was found that majority of the subjects 115(38.3%) had mild family burden and only 83(27%) subjects had moderate family burden, whereas 102(34%) subjects perceived severe burden.

It could be inferred that all MI patients had family burden and only the level of burden differed. Since majority had mild level burden this finding reflects one of the unique features of the Indian culture, that is family members extending timely support to the sick individual (MI patients), similarly friends
and relatives also extend their support in such a way that the patient doesn’t perceive family burden at all.

Nurse’s planned, structured stress preventive education programme for MI patients to improve emotional well being would be a great help to cope with family burden. The researcher of the present study has brought out a Patient Information Booklet on Stress Management and Coping for Heart Attack (Appendix-VI and Appendix-VII). This could be placed in all the wards of heart hospitals for the needy MI patients.

Keleş I, Onat A, Toprak S (2003) examined family income a strong predictor of coronary heart disease events but not of overall deaths among Turkish adults at Turkish Society of Cardiology, when family income was adequate in the Turkish community was not predictive of overall mortality, and when income was inadequate it was strongly predictive of future CHD events independent of age, sex, and three major factors, posing a huge coronary risk on the individual and the society. In this study low income was perceived as one of the cause of family burden.

Another study of Greenberg S, Almaro N, Keren G, Sheps D (2004) highlighted the effect of spouse participation in cardiac rehabilitation program on patients' compliance and exercise level at , Tel Aviv Sourasky Medical Centre Israel using experimental research design on 14 couple who had
suffered a myocardial infarction (Group 1--Rehabilitation program) and 10
couple with myocardial infarction (Group 2--secondary prevention). Outcome
was measured by number of sessions attended, basic and final physical training
level and found that, rehabilitation groups, the participants attended a larger
number of sessions (87.3 + 17) compared to control (47.7 + 6) (p < 0.05) and
concluded that, active support during the rehabilitation program may improve
the rates of participation but in the secondary prevention program active spouse
support may encourage early dropout. This study highlighted that, support from
family members reduces burden to the MI patients.

_Dracup Kathleen, Evangelista, Lorraine S et.al._ (2004) conducted study
on emotional well-being in spouses of patients with advanced heart failure at,
Los Angeles, California using descriptive research design on 69 spouses of
patients with advanced heart failure. Perceived control (P = 0.001) and age (P =
0.046) were associated with emotional well-being. In spouses with higher
levels of control, emotional well-being was significantly higher than in spouses
with lower levels of control (P = 0.003). Older spouses had higher levels of
emotional well-being compared with younger spouses (P = 0.01) and concluded
that, health care professionals must assess the level of control perceived by
spouses of patients with advanced heart failure and provide information and
counselling directed toward increasing their sense of control. Younger spouses
are particularly at risk for decreased emotional well-being and may require
special intervention. This findings demand the cooperation from other members
in the family to help MI patients to maintain their sense of control over the activities that are happening in the family over the activities that are happening in the family. Nurses could extend family counselling to help MI patients to gain control.

**Social Support:**

Table 4.98 projected the level of Perceived Social Support based on the total scores obtained by the study subjects. It was found that majority of the subjects 188(62.7%) had satisfactory social support appraisal and only 3(1%) of subjects had good social support appraisal whereas 109(36.3%) subjects had poor social support appraisal.

Poor social support would make MI patients to feel helpless and that stress can make illness condition worse. Satisfactory social support is not adequate as the MI patients advance in their illness. Therefore, “self help group” could be encouraged.

**Quality of life:**

Table 4.99 projected the level of total quality of life of the study subjects. It was found that majority of the subjects 241(80.3%) had satisfactory quality of life and 18(6%) of subjects had poor quality of life. Whereas 41(13.7%) subjects had good quality of life.
Satisfactory level of quality of life need to be improved to good quality of life with regular treatment and making modification in life style behaviour.

**Coping:**

**To identify the coping behaviour seen among subjects**

Table 4.100 projected the level of coping behaviour of the study subjects. It was found that majority of the subjects 174(58%) had moderately effective coping and only 14(4.7%) of subjects had highly effective coping behaviour. Whereas 112 subjects (37.3%) had less effective coping.

An organism learns to cope up with day to day hassles to adjust in the life. Those coping mechanisms may be effective or may not be effective. Present study findings showed that all the MI patients used coping behaviours and majority of the subjects had moderately effective coping.

An illness is an event, any event demands additional energy and adjustment to the changes in life style as a consequences of that event. Adjustment is to accommodate the changed life style. The change in life style brings disturbed internal homeostasis. When the mind is disturbed, individual tires to cope with the situation by using mental mechanisms like denial, projection, displacement and suppression. These mechanisms are defence mechanisms or also called as coping behaviour, since MI illness is an event requiring changes in life style
like cessation of smoking, drinking, salt, and water and oil intake. The subjects of the present study showed effective coping at moderate level for these modifications. But they need to learn high effective coping strategies. Nurses could give them guidance in these areas. Researcher has brought out a ‘patient information booklet on stress management and coping for heart attack’ suggesting specific coping strategies. The benefit of the book needs to reach all MI patients by making it available in all cardiac centres.

Strickland, Ora Lea, Giger, Joyce Newman, et.al.(2007) focused on the relationships among stress, coping, social support, and weight class in Premenopausal African American women at risk for coronary heart disease at Los Angeles, California using perceived stress scale, the Norbeck social support questionnaire, and the Jalowiec coping scale, Data was collected by using structured interview schedule. Major findings were confrontive coping was shown to be used more often to a "high" degree in normal-weight African American women than in overweight and obese African American women ([chi]2 = 24.024; P = .0001). confrontive coping was the only independent predictor of weight class in a regression model that included perceived stress, life events, social support, and optimistic, self-reliant, and evasive coping strategies and concluded that, African American women who use confrontive coping to a high degree were more likely to confront problems, such as weight control issues, and prevent occurrences of coronary heart disease.
Confrontation coping encourages to use problem solving method. Nurses could teach life skills like problem-solving and decision making to their MI patients.

*Hughes JW, Tomlinson A, Blumenthal JA* et.al (2004) examined Social support and religiosity as coping strategies for anxiety in hospitalized cardiac patients at Kent State University, USA using descriptive research design on 228 (71% male, 29% female) hospitalized with CHD. Found that higher levels of social support were related to lower levels of state and trait anxiety (state anxiety, \( r = -0.26, p < .01 \); trait anxiety, \( r = -0.30, p < .01 \)). Religiosity was related to lower state anxiety (\( r = -0.27, p < .01 \)) but only modestly related to lower trait anxiety (trait anxiety, \( r = -0.18, p < .01 \)). The relationship between religiosity and trait anxiety was no longer significant after controlling for social support (\( p = 0.26 \)) and concluded that, religiosity and social support provide a buffer against anxiety in CHD patients and that higher levels of social support may account for the relationship between religiosity and trait anxiety. These findings underscore the importance of social support and religiosity as buffers against distress, with possible implications for prognosis in a patient group where high levels of anxiety appear to confer increased risk of mortality.

*Edell-Gustafsson, Ulla, Svanborg, Eva, et.al.* (2006) carried out a study on a gender perspective on sleeplessness behaviour, effects of sleep loss, and coping resources in patients with stable coronary artery disease at University Hospital, Sweden using comparative-correlation and predictive design on 47 women and
88 men with CAD showed that sleeplessness behaviour, depressed mood, female gender, and pharmacologic treatments with inflammation inhibitors significantly (P < .0001) accounted for the variance of poorer sleep quality. Compared with men, women with stable CAD shown poor coping skills in terms of experiencing poor sleep quality, even when sleeplessness behaviour and pharmacologic treatments with inflammation inhibitors are controlled. It is also possible that they may be more at risk of depressed mood.

**Stress and Coping:**

**To identify the relationship between the stress and coping**

Table 4.101 highlighted the correlation between stress and coping. It revealed that the coping behaviour and stress were negatively correlated. This implied that as the stress increased. Coping behaviour decreased. The correlation was statistically significant at 99% level of confidence.

It could be inferred that when the level of stress increases, the level of coping comes down. Patients have to be cautious about the implications of stress on their body physiology especially on heart functions. They need to identify the sources of stressors and cope effectively for which nurses can play a vital role in teaching. So that tachycardia, ventricular fibrillation and damaging the heart further can be prevented.
Moser, Debra K, Riegel, Barbara, Sharon (2007) presented their findings of a study on impact of anxiety, stress and perceived control on In-Hospital complications after acute myocardial infarction at Sydney and Royal North Shore Hospital (S.M.), Sydney using descriptive research design on 536 hospitalized for acute myocardial infarction. The main findings were Patients' mean anxiety level was double that of the published mean norm. Patients with higher levels of perceived control had substantially lower anxiety (p = .001). Patients with higher levels of anxiety had significantly more episodes of ventricular tachycardia, ventricular fibrillation, and reinfarction and ischemia (p < .01 for all). This relationship is moderated by level of perceived control such that the combination of high anxiety and low perceived control is associated with the highest risk of complications.

Stressors of any kind bring threat to biological and “ego integrity”. Effective coping, problem focused coping and confronting coping can occur only when the integrity among the variable of ‘ego system’ presents when a subject is suffering from chronic, dreadful disease like MI, it is unlike to use healthy, effective coping behaviours to bring back internal homeostasis and gives up life to the destroy and gets ready to face death rather using more and more coping behaviour.

disorder after myocardial infarction at Tel Aviv University, Israel using experimental research design on 116 MI patients and 72 matched control subjects. Repressors endorsed less acute stress disorder and post traumatic stress disorder than non-repressors. The contribution of repressive coping style to post traumatic stress disorder was unique and beyond the implications of severity of MI, perceived threat, and immediate acute stress disorder and concluded that, findings support the role of repressive coping style as a stress-buffer.

Yet another study of Barry Lisa, Lichtman Judith, John A et.al. (2007) on patient satisfaction with treatment after acute myocardial infarction at Atlanta, GA using descriptive research design on 1847 acute myocardial infarction patients social support (Wald χ² = 35.02, p < .001) and dispositional optimism (β = 1.42; 95% CI 0.24, 2.60). Participants with mild (-3.10, 95% CI -5.77, -0.44), moderate (-4.77, 95% CI -8.16, -1.38), moderately severe (-8.49, 95% CI -13.47, -3.52), and severe (-11.65, 95% CI -18.77, -4.53) depression had significantly worse treatment satisfaction compared with the non-depressed participants and concluded that Assessing psychosocial variables, such as social support, dispositional optimism, and depression severity before hospital discharge, may indicate who is likely to be more satisfied with post-hospitalization cardiac care 1 month following acute myocardial infarction. Without controlling for psychosocial status, treatment satisfaction may be a biased indicator of quality. Future studies should evaluate
whether psychosocial intervention after acute myocardial infarction can improve satisfaction.

_Cowan MJ, Pike KC, Budzynski HK_ (2001) emphasized Psychosocial nursing therapy following sudden cardiac arrest at School of Nursing, University of California, USA using experimental, longitudinal research design on 129 survivors of out-of-hospital ventricular fibrillation or asystole. Risk of cardiovascular death was significantly reduced 86% by psychosocial therapy, \( p = .03 \). Six of the seven cardiovascular deaths in the control group were caused by ventricular arrhythmias. The cardiovascular death in the therapy group was due to stroke. Controlling for depression, previous myocardial infarction, low ejection fraction, decreased heart rate variability, and ventricular ectopic beats had little impact on estimated treatment effect. The risk of all-cause mortality was reduced by 62% in the therapy group, \( p = .13 \). There were a total of three deaths in the therapy group and eight deaths in the control group and concluded that, psychosocial therapy significantly reduced the risk of cardiovascular death in sudden cardiac arrest survivors.

The finding of this study recommends psychosocial nursing therapy to control stress or manage stress among hospitalized MI patients. Such findings encouraged the researcher to bring out a hand book on stress management for MI patients and a stress identification and classification tool to nurses working with MI patients in the hospital setup (Appendix-VIII ) the tool may help to
identify high risk factors such as stress and lack of coping and classify stress of MI patients into mild, moderate and sever based on the score classification. Research also had given guidance on various types of psycho social intervention specifically for various levels of stress. (Appendix- VIII)

Table 4.102 exhibited the correlation existed between Coping Behaviour Scale and individual scales like Death Anxiety Scale, Family Burden Interview Schedule, Perceived Social Support Appraisal and Quality of life.

It revealed that the coping behaviour and death anxiety were negatively correlated. This implied that as the coping behaviour increased, death anxiety decreased. The correlation was significant at 99% level of confidence.

With regard to coping behaviour and family burden, coping behaviour and family burden were not correlated. Whereas coping behaviour and social support they were negatively correlated. This meant as that the coping behaviour increased social support decreased or vice versa. The correlation was seen to be highly significant at 99% level of confidence. With regard to behaviour and quality of life were positively correlated. From this it was inferred that as the coping behaviour increased, quality of life also improved or vice versa. The correlation was seen to be highly significant at 99% level of confidence.
The findings of the present study throws light on causality of MI to certain extend. Patients had increased death anxiety when they were not able to cope with the problems. It demands nursing concern to teach them effective, healthy coping mechanisms. When social support decreases, patients’ coping improves because patients become self dependent and exhibit their coping skills. Therefore the nursing goal is to assist patients to become self-reliant. Quality of life seemed to improve when patient uses more coping behaviour. This findings need to be shared with all MI patients to exercise coping skills regularly.

To find out the association between specific socio-demographic characteristics and level of stress and coping behaviour

From Table 4.103, it could be seen that there were significant association between the selected socio-demographic variables such as marital status, income per annum and educational status with the levels of stress at 95% level of confidence.

_An, Kyungeh, De Jong, Marla, Riegel, Barbara J, et.al._ (2004) carried out a cross-sectional examination of changes in anxiety early after acute myocardial infarction at 4 urban university medical centers and 2 private hospitals in the United States and 1 large university teaching hospital in Australia using cross-sectional research design on 486 patients with acute myocardial infarction. Peak anxiety occurred within the first 12 hours after
acute myocardial infarction (P < .05) and anxiety level differed among the time intervals (F [5, 474] = 4.55, P < .001). There was a main effect of gender on anxiety (F [1, 474] = 11.86, P < .001). Women reported higher anxiety than men at all time points except the time interval of 24 to 36 hours after acute myocardial infarction and concluded that Prospective, longitudinal, repeated measures research was needed to confirm the trajectory of anxiety in acute myocardial infarction patients. These study findings suggested that anxiety should be assessed and treated in the early stages of acute myocardial infarction to prevent potential complications that may be exacerbated by anxiety and to provide comfort to acute myocardial infarction patients. Nurses have vital role to play under such situation to help MI patients to manage stress. Bedside counselling and teaching effective coping strategies to MI patients would pave way to prevent recurrence of MI in long run.

From table 4.104, it could be seen that there was a significant association between the selected socio-demographic variables such as age with level of coping behaviour at 99% level of confidence and educational status with level of coping behaviour at 95% level of confidence.

From Table 4.103 and 4.104, the researcher found marital status, income, educational status and age having association with level of stress.

Both married and unmarried, low and high income group, literate and illiterate, senior citizens and young age group have stressors in their life from
different sources, at different time and with different life events. Therefore nurses could be sensitive enough to identify the source of stress from background information of the patients and help patients to understand the importance of developing control over the stressors whenever possible to prevent recurrence of MI.

*Luttik, Marie Louise, Jaarsma Tiny, VeegerNic, et.al. (2006)* carried out a study on marital status, quality of life, and clinical outcome in patients with heart failure at Groningen, The Netherlands, the main findings of the study were quality of life was primarily associated with socioeconomic status, age, and gender. Married patients had 12% less events in the 9-month follow-up period compared with patients living alone (P = not significant) and concluded that most patients with heart failure who are living alone are mostly elderly women with a low socioeconomic status, who are at risk for recurrent events and a worse quality of life.

Since only two variables showed significant association researcher planned to split the hypotheses and use multiple regression analysis to find out the association, with the assumption that chi-square test was not sensitive enough to bring out the association.
Death Anxiety and Age:

ANOVA results indicated that (F= 6.085) there was a significant difference in the death anxiety between the different age groups of myocardial infarction patients. Older age group of MI patients had lesser death anxiety than younger age group. Hence the research hypothesis $H_1$ “there will be statistically significant difference between the scores obtained by younger age group and older age group of MI patients on death anxiety scale” was retained.

Younger age group of MI patients had increased death anxiety could be due to the reason that many of their ambitions, dreams and life goals are unmet. The foreseeing of family members chains and turmoil might increase the stress in turn leading to recurrence of heart attack.

Death anxiety and family burden were found to be higher in patients with below 40 years of age. It is the active young adult age group having the role of spouse, parent, caring member and bread winner of the family. With varied roles, they are more prone for chronic stress and get into MI. At the age of 61 years and above, patients understanding about psychodynamics of human being always found better. Life experiences must have taught them, to learn the ways to maintain social support and sustain the relationship with friends and relatives and have greater social support at the time of need.
Family Burden and Age:

The ANOVA results indicated that (F=4.299) there was significant difference in the total family burden between the different age groups of myocardial infarction patients. Younger MI patients perceived higher level of family burden than Older MI patients. Hence the research hypothesis \( H_2 \) “there will be statistically significant difference between the scores obtained by younger age group and older age group of MI patients on family burden interview schedule” was retained.

Younger MI patients may have many dependent members in their family. Their MI illness must be making them to feel other members dependency as burden or load. Whereas older MI patients may be supported by many of their off-springs. The family responsibility might have been taken over by grown up children. Whereas, younger MI patients may see their children are left with no support. This might cause further stress and lead to increased chance of heart attack.

Perceived Social Support Appraisal and Age:

The data exhibit indicated that (F= 6.085) there was a significant difference in the social support between the different age groups of myocardial infarction patients. Older age group of MI patients had lesser perceived social support appraisal than younger age group. Hence the research hypothesis \( H_3 \) “there will be statistically significant difference between the scores obtained by
younger age group and older age group of MI patients on perceived social
support appraisal” was retained.

Older MI patient’s expectations for help may be high due to ageing
itself and also due to illness. But the younger age group of MI patients may feel
their social support is better due to the presence of parents, in-laws, young
spouse etc., whereas older MI patients might have lost the support from the
above sources except their children who also might have migrated to faraway
places for want of higher education, better job facilities making older MI to feel
“empty rest syndrome”. This might add to the stress and increase the chance of
cardiac mortality.

Quality of Life and Age:

While analyzing the different sub-dimensions of Quality of Life, the
results showed that there was no significant difference between the different
age groups of myocardial infarction patients with regard to Quality of Life.
Though there were differences in mean values in different age groups of
myocardial infarction patients Total Quality of Life it was not statistically
significant as the ‘F’ values were not statistically significant. Hence research
hypothesis $H_4$ “there will be statistically significant difference between the
scores obtained by younger age group and older age group of MI patients on
quality of life” was rejected.
MI illness results in pathological damage to the heart structure and its function. As a buffer mechanism many vital organs like liver, kidney and brain are affected. The absorption and excretory functions of these organs are monitored and treated with drug therapy. As adjunctive therapy many restrictions are placed on MI patients such as salt restriction, diet restriction, activity restriction and many more life style functions whether MI patient is young or old. Therefore the perception of quality of life by both the age group had not shown statistically significant difference.

Coping Behaviour and Age:

The exhibit revealed that there was no significant difference between the different age groups of myocardial infarction patients in the dimension of coping behaviour as the ‘F’ ratio (1.748) was not significant. Hence research hypothesis \( H_5 \) “there will be statistically significant difference between the scores obtained by younger age group and older age group of MI patients on coping behaviour” was rejected.

As the quality of life did not differ, similarly the coping behaviour among young and old MI patients did not differ. Having the study subjects from the same socio-cultural background, the coping behaviour used by them also did not differ among young and old MI patients.
Death Anxiety and Gender:

The total Death Anxiety of male and female myocardial infarction patients was detailed in the above table 4.106. The mean Death Anxiety value of male myocardial infarction patients was found to be $6.859 (SD= 2.720)$ whereas the mean value of the female myocardial infarction patients was $7.272 (SD= 3.051)$. It was quite evident from the information that female myocardial infarction patients score was slightly higher than the male myocardial infarction patients. The “t” value for this dimension was $-0.996$, which was found to be statistically not significant at 95 percent level of confidence. Hence the research hypothesis $H_6$ “there will be statistically significant difference between the scores obtained by male and female MI patients on death anxiety scale” was rejected.

Death anxiety was found common among male and female MI patients. ‘Death’ is a permanent departure of soul. Many MI patients commitment may be incomplete and their mental make-up may not be there to accept death. Due to MI, premature life is enforced on patients. This causes greater stress in them. This added stress may aggravate MI morbidity. Meaningful counselling, teaching, problem-solving coping by nurses would be of great help to these patients. Nurses need to plan hospice care and palliative services to them. Female patients had death anxiety slightly higher than the male patients may be due to excessive attachment that they develop towards their children and
empathising the problem of children with ‘no mother’ or with ‘step-mother’. They too need specific counselling to overcome stress due to ‘death anxiety’.

**Family Burden and Gender:**

The Table 4.106 portrayed the Family Burden of male and female myocardial infarction patients. The mean Family Burden of male myocardial infarction patients was 23.803 (SD = 10.219) whereas the mean Family Burden of female myocardial infarction patients was 19.924 (SD = 10.191). The Family Burden of the male myocardial infarction patients was more than the female myocardial infarction patients. Hence the research hypothesis $H_7$ “there will be statistically significant difference between the scores obtained by male and female MI patients on family burden interview schedule” was retained.

Male members play a dominant role in Indian families. They are the bread winner in many of the families. They make major decision in the family; they make do’s and don’ts for other members in the family. Due to MI, there is an alteration in these areas. “Power shift” occurs and male MI patients may feel that family events are not under his control and thus perceive higher level of family burden. Nurses need to extend their counselling services to family members to prevent “closing up of ranks” of MI patients to prevent accumulation of psychological and emotional turmoil in them.
Social Support Appraisal and Gender

Table 4.106 revealed the ‘Social Support Appraisal” of the male and female myocardial infarction. The mean Social Support Appraisal for male myocardial infarction patients was 41.389(SD= 4.832) where as the mean value of the female myocardial infarction patient was 45.969(6.766). The “t” value for this dimension was –5.142 showing that there existed a higher statistical difference between the male and female myocardial infarction patients in relation to social support. Thus it was concluded that the social support of female myocardial infarction patients was better than the male myocardial infarction patients. Hence the research hypothesis H₈ “there will be statistically significant difference between the scores obtained by male and female MI patients on perceived social support appraisal” was retained.

Female members are the “integrated member’s of the family taking up the vital responsibility of house-chores, child-rearing, family maintenance and 24 hours house-keeping”. Their constant contact, continuous interaction mutual give and take services among friends, relatives make them to feel that they are in comfortable position in terms of “social support” better than male MI patients even while they are diagnosed with MI. The love-bondage developed among the members of society in the pre-morbid phase helps them to get continuous social support.
Quality of Life and Gender

Table 4.10 portrayed the Quality of Life of male and female myocardial infarction patients. The mean Quality of Life of male myocardial infarction patients was 41.632(SD= 6.158) where as the mean Quality of Life of female myocardial infarction patients was 38.469(SD= 6.582). The Quality of Life of the male myocardial infarction patients was more than the female myocardial infarction patients. Hence the research hypothesis \( H_9 \) “there will be statistically significant difference between the scores obtained by male and female MI patients on quality of life” was retained.

Male members contact with outside of the family is vast and find ways to meet the ends, thus quality of life is found better to them. Whereas female MI patients remain at home most of the time with restricted activities, even keeping themselves free from house chores which is making them to feel more disabled and feel their quality of life lesser than male MI patients.

Coping Behaviour and Gender

The total Coping Behaviour of male and female myocardial infarction patients was explained in the above table. The mean Coping Behaviour value of the male myocardial infarction patients was 186.260(SD= 12.133) where as the mean value of the female myocardial infarction patients was 182.256(SD= 13.764). The Coping Behaviour score of the male myocardial infarction was found better than the female myocardial infarction patients. The “t” value for
this dimension was 2.140, showing significant probability value at 95 percent. Thus, it was concluded that there was significant difference between the Coping Behaviour of male and female myocardial infarction patients. Hence the research hypothesis \( H_{10} \) “there will be statistically significant difference between the scores obtained by male and female MI patients on coping behaviour scale” was retained.

Coping behaviour one uses is based upon the past experience of having coped with stress successfully. Since male members are incumbent of many roles with different responsibilities might have had many stressors and might have attempted to solve the problems. Those coping strategies that gave success would have been learn by them and reused again and again. Thus male MI patients coping behaviour scores were higher than the female MI patients.

**Death Anxiety and Place of Residence:**

ANOVA results indicated that (\( F = 0.968 \)) there was no significant difference between the myocardial infarction patients based on their place of residence. That was to say that the Death Anxiety experienced by urban myocardial infarction patients, rural myocardial infarction patients and semi urban myocardial infarction patients were not statistically significant. Though it was seen from the results that there was a variation with regard to mean score of myocardial infarction patients based upon their various residential places, this variation was not statistically significant as the ‘\( F \)’ ratio was not
significant. The results also showed that there was no significant difference between any two places of myocardial infarction with regard to Death Anxiety. Hence the research hypothesis $H_{11}$ “there will be statistically significant difference between the scores obtained by rural and urban MI patients on death anxiety scale” was rejected.

Death anxiety did not differ among the subjects based on their place of residence. It could be due to the reason that as long as the individuals are having common factors living in nuclear family, MI is the diagnosis, accessibility to the treatment centre, the death anxiety also could be expected common in everybody.

**Family Burden and Place of Residence:**

The ANOVA results indicated that (F=6.235) there was a significant difference in total family burden of myocardial infarction patients based on their places of residence. Total family burden perceived by all three groups namely, rural, urban and semi urban differed and the difference was found statistically significant. Through post hoc test it was found that rural & semi urban and urban and semi urban MI patients differed in the perception of family burden. The difference was found statistically significant. Through mean score it was seen that there was a significant difference between the urban and rural MI patients in the perception of family burden, urban MI patients had higher level of family burden than rural MI patients. Hence the
research hypothesis $H_{12}$ “there will be statistically significant difference between the scores obtained by rural and urban MI patients on family burden interview schedule” was retained.

Family burden was seen higher in patients living in urban area. Mechanical life, too busy work schedule, nuclear family system, both the life partners go for work, children left either in Reich or with past time servants are some of the factors make day to day management of the family activities as burden. Constant stress produced due to family burden becomes the significant cause for MI itself. Psycho-social nursing intervention to understand the need for social support, identification of resources and mobilisation of resources are necessary.

**Social Support Appraisal and Place of Residence:**

The exhibit indicated that ($F=3.296$) there was a significant difference in the appraisal of social support of myocardial infarction patients based upon their place of residence. Social support received by all three groups namely, rural, urban and semi urban differed and the difference was found statistically significant. Through mean score it was seen that there was a significant difference between the urban and rural MI patients in the appraisal of social support, rural MI patients had more social support than urban MI patients. Hence the research hypothesis $H_{13}$ “there will be statistically significant
difference between the scores obtained by rural and urban MI patients on perceived social support appraisal” was retained.

Social support appraisal was found high among rural MI patients. The rural community basically rely on agricultural means to meet their ends. Men spouse take up the physical exertion and the female spouse extend their assistance. When male or female spouse gets diagnosed with MI, the other spouse, remaining family members, neighbours, friends and relatives rush to extend needed assistance not only in agricultural field, but also in domestic chores, accompanying the MI patients to hospital etc., it is because ‘man’ is a social animal, lives in group., shares the prosperity as well as worries. It is a typical of village folk’s life style in India.

**Quality of Life and Place of Residence:**

While analyzing the different sub-dimensions of Quality of Life, the results showed that there was no significant difference between the myocardial infarction patients based on their place of residence with regard to Quality of Life. There were differences in mean values of myocardial infarction patients based on their place of residence. Urban MI patients mean score was 41.715, higher than rural MI patient mean score 39.894, indicating that quality of life of urban MI patients were higher than the rural MI patients. Total Quality of Life had not shown statistically significant difference as the ‘F’ values were not statistically significant. Hence the research hypothesis $H_{14}$ “there will be
statistically significant difference between the scores obtained by urban and rural MI patients on quality of life” was rejected.

Quality of life is a self perception. The discomfort patient experiences due to MI are common irrespective of place of living.

Coping Behaviour and Place of Residence:

The exhibit revealed that (F=7.836) there was a significant difference in the coping behaviour between the places of residence of myocardial infarction patients. Semi-urban MI patients showed higher level of coping behaviour than rural and urban MI patients. Hence the research hypothesis $H_{15}$ “there will be statistically significant difference between the scores obtained by rural and urban MI patients on coping behaviour” was retained.

Coping behaviour differed based on place of residence, semi-urban patients demonstrates higher level of coping because of two differences. One is that urban patients have easy access to treatment facility. So whenever MI related stress is there, they may reach to treatment centre rather than using wide range of coping behaviour. Second difference is that, rural MI patients have no easy access to treatment centre and therefore they use only those problem solving strategies which were successful in the past. Therefore, they too won’t show different coping behaviour. Whereas semi-urban patients neither they
have easy access nor they would have succeeded with specific strategies. Everytime they have to find ‘best’ out of scare resources.

**Effect of Coping, Quality of Life and Family burden on social support appraisal.**

Table 4.108 brought out the stepwise multiple regression results for total social support appraisal taking into consideration all cases (N=300). The selected independent variables were total coping, total quality of life and total family burden. These independent variables were correlated with social support appraisal.

Since the B coeff for total coping was negatively correlated, it was stated that as the coping increased social support decreased or vice versa. On the other hand as the total quality of life increased the social support decreased or vice versa and as the family burden increased the social support decreased or vice versa. It was agreed that as the ‘t’ value for B coeff was significant, B coeff were reliable parameter.

Therefore the multiple regression equation was

\[
\text{Social support appraisal} = 78.255 + (-0.158) \text{ total coping} + (-0.121) \text{ total quality of life} + (-0.071) \text{ total family burden}.
\]

By applying the F ratio value (23.652) for Df 3, 296, it was said that it was significant at 95 percent level of significance. So the independent variable
total coping, total quality of life and total family burden were essential in order to predict social support.

Hence the research hypothesis $H_{16}$ “there will be statistically significant correlation between perceived social support and quality of life, coping behaviour and family burden among MI patients” was retained.

When the coping behaviour of MI patients found increased, soical support become decreased. It could be due to the reason that when success in coping with the stress was present, individual feels self-reliant and confident to manage the stressors. This he/she may communicate to family members, relatives and friends that he would require no help from them and they also get convinced, therefore social support ceases.

Similarly social support found decreased once the MI patients’ quality of life improved. With the recent developments in diagnosis and treatment of MI patients, the symptoms of MI are well controlled, quickly managed and the patient express feeling of more comfort and therefore support system also gradually withdraws.

Yet another finding is that increased family burden leading to decreased social support. ‘The cost of living’ could be thought of one of the significant factor for this. As the patient reaches to the advanced stage of MI, he/she finds
difficulty to meet the expenses of family and treatment. He/she goes for taking loan/debt. These issues influence the social reputation and the MI patient looks forward for financial help from social support. Since the social support also has the economical hurdles, they don’t turn up to help MI patient and the social support comes down.

**Effect of Coping and Social support on Quality of life;**

Table 4.109 brought out the stepwise multiple regression results for total quality of life taking into consideration of all cases (N=300). The selected independent variables were total coping and total social support.

The table revealed that the total R square percentage contribution towards quality of life was 8.9 percent and R square change value for total coping is 7.3 and for total social support was 1.6. It was clearly obvious that among the two, total coping behaviour contributed the highest. Since the B coeff for total coping was positively correlated, it was stated that as total coping increased the quality of life also increased or vice versa. On the other hand as the total social support increased the total quality of life decreased. Hence the research hypothesis $H_{17}$ “there will be statistically significant correlation between quality of life and perceived social support and the coping behaviour” was retained.
An individual solves the problems, hassles and stress through various ways. When he succeeds in his attempt, he feels happy, contended and confident to lead life, thus results quality of life. Present study showed that when coping behaviour increased, quality of life also improved. It is quite justifiable.

Whereas social support decreases when quality of life improves. When MI patients feel that their quality of life is good, they tend to manage their daily affairs by themselves without any help or assistance from social support. By understanding this human dynamics, friends and relatives also do not poke their nose unnecessarily into others affairs.