

Psychosocial Stress Among Women Suffering From CHD & Its Complications (A Comparative Study In Rural And Urban Residents Of The Sindh)

KHALIDA SOOMRO*

Psychosocial factors are believed to increase the risk of coronary heart disease in women, and prevalence of CAD due to psychosocial stress reflects the degree of economic development cultural diffusion and standard of education.

Objective

This study was set up to evaluate psychosocial risk factors in women suffering from CHD, with particular attention to the urban and rural residents of Sindh, and to examine their relationship to societal trends of the area.

Method

This study is population based case study of women hospitalized for acute myocardial infarction or severe angina pectoris. 140 urban residents were compared with the same number of age matched rural residents. All women were <65 years. Patients were interviewed about previous life events, sleep disturbances, psychosocial symptoms, type A behaviour, work strains and overall satisfaction at the time of inclusion.

Result

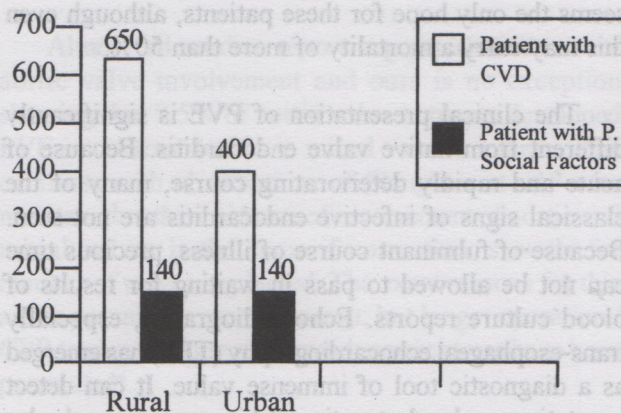
Financial problems appeared to be important risk factor for CHD (90% Vs 50%) in urban females. At least as important however was perceived stress from spouse (20% Vs 25%), separation (5% Vs 1%), dissatisfaction with amount and quality of leisure time (15% Vs 5%) in urban than rural women. Sleeping problems (18% Vs 5%), concomitant disease (10% Vs 2%), lack of social support (40% Vs 14%) and stress from work domain (1.5% Vs 0%), making vital decisions (3% Vs 0%), were more common in urban females. Assault in family (5% Vs 0.5%) strain from problems of children (40% Vs 30%) were more common in rural females who suffered from cardiovascular events.

Conclusion

In the comparison of different sources of stress and strain for the relative risk of CHD, financial problems were significant risk factor in urban and rural population both but strain from family domain such as spouse, separation, smaller opportunities for leisure and recreation, lack of social support, sleeping problems were common in the urban population, where as assault problems of large number of children were related with incidence of CHD in rural females. So

TABLE 1

Total patient analyzed 1050



All women were <60+5 year in both groups.

counselling with patients to avoid stress full setting when possible from psychosocial factors and to encourage control will prevent risk of CAD.

It is now well established that chronic psychosocial stress contributes to the development of cardiovascular dysfunction by sustained activation of autonomic nervous system. Numerous studies have been conducted over the past two decades to assess the impact of social and psychological stress in the incidence of CHD^{7,8}, especially in Framingham study a number of psychosocial factors have been found to

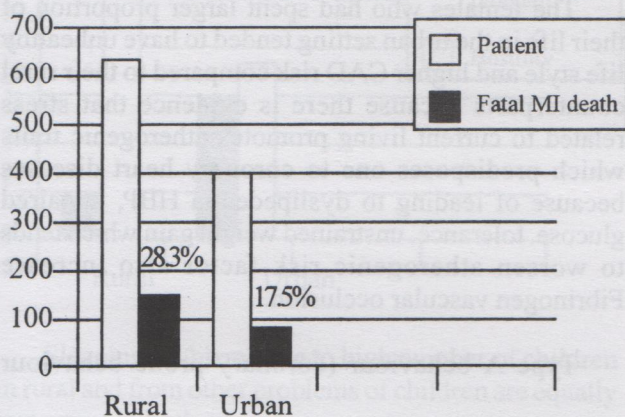
* L.M.C. Hyderabad.

contribute to the CHD incidence, i.e. these include type A behaviour, work overload, personnel and aging worries, job changes, marital disagreements, trouble falling sleep⁷.

It has been suggested that psychosocial stress influence may be responsible for many of the unexplained difference in CHD incidence in population reflecting the degree of economic development, cultural diffusion experienced and educational level of the area. As the previous studies were conducted in developed countries whose life style in women is

TABLE 2

Incidence Fatal MI Death



Total female patient with CHD analyzed 1050

different from our country and as well as there is gross difference of living in rural and urban population of residents of the Sindh so we carried out study with a view to have an idea of impact of psychosocial stress on the risk of coronary artery disease and to examine their relationship to societal trends of the area in female patients belonging to urban and rural area hospitalized for acute myocardial infarction or severe angina pectoris in Dewan Mushtaq coronary care unit Hyderabad during August 1994 to August 1998.

Method

140 urban female residents were compared with the same number of age matched rural residents (table-1). All women were 65 or younger. To be able to find out all the sources of psychosocial stress we used a semiconstructed interview designed to cover all possible sources of stress and strain from life domain. These sources of stress included work strain and job changes, financial situation, leisure time and

opportunities for recreation, spouse and cohabitant relationships, divorce, personnel and aging worries, previous life events, psychosomatic symptoms, type A behaviour trouble falling asleep (after screening them with history, physical exam and blood chemistry, e.g. lipid profile from Hospital laboratory).

Result

Results were maintained when controlling for additional factors, e.g. age, educational level, menopause status, HBP, BMI, smoking, diabetes, lipid profile and self-rated general status found in rural then urban residents.

Higher level of lipid profile (28.3 Vs 15.3), BP (30% Vs 25%) and obesity (20% Vs 15%) were observed among in rural than urban residents (table-2).

Smoking was also more prevalent in rural population (20% Vs 15%) (table-2). The incidence of death or fatal cardiovascular events of MI or deterioration of angina was higher in rural than urban population. (table-3).

In comparison of different sources of stress and strain for the relative risk of CHD financial problems appeared to be important risk factor 90% Vs 50% in urban than rural female, strain from the family domains such as spouse, separation, strain from problems of growing children were equally important or even more important in urban females (40% Vs 30%).

Most pronounced difference were smaller opportunities for leisure, recreation in and dissatisfaction in the urban females (5% Vs 15%) sleeping problems (18% Vs 5%), concomitant disease 10% Vs 2%). Lacks of social support (40% Vs 14%) and stress from job (table-4) (1.5% Vs 0%) making vital decision were more common in urban females. Domestic violence and Assaults were more prevalent in rural females (5% Vs 0.5%) having CHD.

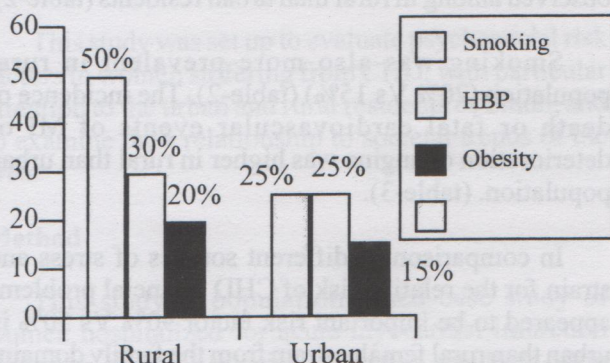
Discussion

Certainly not all the stress is bad and infect sometimes those events that are perceived as new interesting and challenging, for example are often beneficial. At the other end of the spectrum is deleterious stress associated with fear uncertainty and doubt, that may lead to loss of control over situation and its outcome, lost control or lack of it can lead to a period of perceived struggle or emotional arousal which will increase neuro haemeral activity (cortical catecholamines

angiotension, so called hot reactor response to those situation), when situation becomes chronic psychosocial stress or accumulation of small stresses from long standing conflicts augment the development of cardiovascular disease especially by HBP, coronary atherosclerosis, with the help of theoretical models recent socioepidemiological reasons has identified distinct profiles of psychosocial factor which evoke and increase autonomic activation, one such profile is characterized by domestic violence on female in this part of the world, especially in Sindh and other parts of the Pakistan and this abuse comprises not only

TABLE 3

Other Risk Factor



physical violence but also the mental and environmental abuse of women. Here the control, emotional and mental torture and the ever blooming chronic threat of abuse persistently trap women in the cycle of violence "As some says it is for to be hunted then to be killed" thus there are several deliberative consequences of chronic psychosocial stress which impair women's mental and physical health. Especially contributes to the development of cardiovascular dysfunction by sustained activation of autonomic system appears to influence on risk factors like sex, age, race, cigarette smoking, cholesterol, and blood pressure or directly associated with coronary heart disease incidence. Although the higher levels of BP, total cholesterol triglycerides and body mass index smoking is more common in rural women especially the use of berries containing tar. So the incidence of the CAD in form of the MI, deteriorating Angina and their fatal outcome is more prevalent (20% Vs 17%) due to lack of knowledge financial situation and less importance for medical care of females in rural areas.

In Framingham study a higher incidence of coronary heart diseases was noted among women

having high job demands but poor supervision⁷. Although ratio of working women here is very small (1.5% Vs 0%) but due to a negative pay off in social exchange at work site, especially an imbalance between high extrinsic (demands) or intrinsic, e.g. (critical coping) effort spent and low rewards (money, self esteem, status control) obtained may be related to CHD.

Life changes in urban females when they have disturbed relationship especially loss of loved ones, divorce, strain from spouse, lack of social support increases the risk of CHD as females have more intimate ties with males and have more AWARENESS in urban areas. Possible role of social support in the etiology of CAD is less well documented.

The females who had spent larger proportion of their life in the urban setting tended to have unhealthy life style and higher CAD risk compared to their rural counterparts because there is evidence that stress related to current living promotes atherogenic traits which predisposes one to coronary heart diseases because of leading to dyslipidemia HBP, impaired glucose tolerance, unstrained weight gain which tends to worsen atherogenic risk factor also increase Fibrinogen vascular occlusion.

Type A behaviour (coronary prone behaviour

TABLE 4

Results

	Urban	Rural
Financial status	90%	50%
Sleeping disturbances	18%	5%
Separation	1%	5%
Dissatisfaction	5%	15%
Social Support	40%	14%
Assault	0.5%	5%

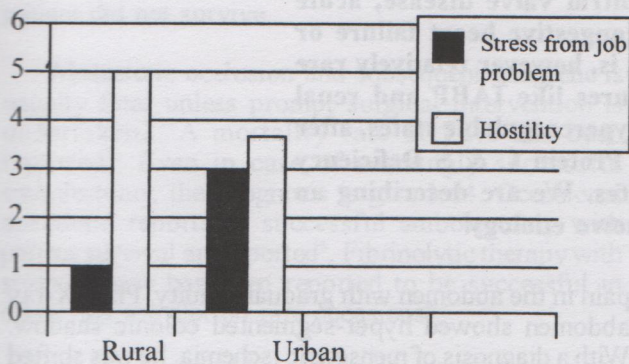
pattern), personnel and aging worries, trouble falling sleep are common in urban females both in house wives and women working outside the house. Type A behaviour is characterized by chronic time urgency, aggressiveness, hard driving, competitiveness especially when females are in white collar occupation

has the same strength of CAD prevalence as to the other standard risk factors incidence of CHD manifested in angina and MI with two fold excess risk.

In male dominating society like ours decision making and work load is again source of strain in urban female the most important difference is of smaller opportunities for leisure and recreation in urban females due to over busy schedule of their spouse and other family members.

TABLE 5

Result



Sleeping problems due to high number of children in rural and from other problems of children are equally important in both groups.

Hostility and Assault and domestic violence (verbal, physical and sexual especially from spouse) are more common in rural females than urban population.

Overall impact of stress on the occurrence of CAD may vary by personality type, coping assets and the type of elicited physiologic response in women.

So awareness of patients environment and cultural background, socio economic conditions, work status, family situation can provide insight for effective counselling intervention and prevention by identifying detrimental factors in environment. The cardiologist can help the patient to find areas where change is possible or to cope with unchangeable aspects, this might prevent continuing stress and adverse health effect on cardiovascular function.

Conclusion

The psychosocial risk profile between two

communities demonstrated several unexplained differences in CHD incidence not accounted for major risk factors between the urban and rural female population. Assault hostility and stress from large number of children, were the important risk profile for CAD in rural females. Strong inverse association between socio economic predictors of CAD progression was observed in rural population. Whereas strain from jobs, work hours, time of leisure and sex. Marital disagreements, social class, sleeping problems were related to high risk score in the urban areas due to more awareness.

This study suggests that CHD history is related to some psychosocial stress pattern. Understanding of cultural background, socio economic condition, work status, family situation can provide the insight for effective counselling intervention and prevention of CAD.

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