As is clear from the title of the work the purpose of this study is to see whether Type A Behaviour a significant contributor to hypertension and coronary heart disease is a myth or a reality in Indian perspective in the context of Sagar region of Bundelkhand.

Before starting any research work, it is necessary to have a clear notion of the concepts and terms used in the study. The main concepts referred in the present work are (i) Type A personality (ii) coronary heart disease (iii) High Blood pressure. It will be in the fitness of things to define and describe these concepts in brief.

PERSONALITY:

Human personality is pervasive and encompass so many dimensions. Allport (1932) poineer researcher in the field of personality puts it is as greatest puzzle in his own personality. Every human being is unique in nature because of the uniqueness of his behaviour and also because of the fact that he uniquely adjust to environment. This unique whole of human nature is called personality.

Allport (1924) after a wide review of literature defined 'personality as the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments with his environment.' The same idea was again expressed later by Allport (1937) in his definition as the individual’s
characteristic reactions to the social stimuli and the quality of his adaptation to the social features of his environment. Murphy (1947) also propagated the same idea when he said that personality is moulded by social order. In a more elaborate statement Cameron (1947) proposed that personality is a dynamic organization interlocking behaviour systems that each of a possesses, as he grows from a biological Newman to a biosocial man in the socio cultural context.

Trait based personality definitions have found much favour among personality psychologists because it provides a good basis for a systematic study. Allport defined trait as a generalized and focalized neuropsychic system peculiar to that individual with the capacity to render many stimuli functionally equivalent and to initiate and guide constant from of adaptation and expressive behaviour.

A classic definition of personality is proposed by Gardon Allport (1961), one of the pioneers of personality psychology as "Personality is the dynamic organization within the individual of those psychophysical system that determine his or her characteristic behaviour and thought." This definition has been explained by Martin (1995):

Dynamic organization: Integration and organizational processes as essential components of the normal personality
Psychophysical: Personality as both mental and physical (it is very hard to think clearly without a brain).

Systems: the complex interrelations of our emotional, cognitive, and spiritual characteristics. Allport notes "each individual carries with him his past relations to the world his emotional dispositions, and his own expectancies for the future".

Determine: all of the previously mentioned systems exerting a directive influence on all manifestations of personality. As Allport succinctly puts it: "Personality is something and does something"

Characteristics: Our distinctive actions, thoughts, and feelings.

Behaviour and thought: blanket terms to cover anything a person does. This includes our feelings, hopes, aspirations, wants and personal meaning of life.

This definition has been widely been accepted by psychologist as well as other social scientists. However another definition proposed by Martin Jain Mac (1995) Highlights the significance of personality development and growth over the life span as "personality is the developing system of those distinctive emotional, cognitive and spiritual attributes that manifest themselves in the individuals characteristic behaviour at any point of the life course."

In general personality is a participant in a life time succession of activities from the beginning of life till end. It is a product of
activities which includes social, physical and mental aspects and is a natural consequence of everyday situations encountered by the person.

**SHAPING OF PERSONALITY:**

Most of the studies of personality have shown that a particular kind of personality is shaped by interplay of genetic and environmental factors. The investigator’s have emphasized biopsychosocial aspect and have classified personality determinants in (a) biological (b) psychological and (c) social factors. Biological factors include physical traits, intelligence temperament, physique, health and disabilities etc. psychological factors are also directly related to the development of personality. The controversy of nature and nurture ratio in the development of the psychological aspects of personality is a result of the importance attached to the biological and social factors. Much depends upon the individual’s exposure to his context. The social environment always demands action on the part of organism. It is a common assertion among psychologist that personality is shaped and process of socialization plays a vital role. The socialization/ takes place in a social environment and the process begins right from birth and progresses as we grow and learn to adaptive skill. However, it should not always be taken as for granted that the entire personality is shaped in the early years life as the Freudian believe. This may be true
with regard to psychopathic and abnormalities but the physical and social factors constantly go on molding the personality characteristics of the individual. For instance, the disability and distress of chronic illness experiences, to a great extent, affects the shaping of his personality dispositions. It is said in this context that the personality dispositions undergo some changes during one’s life time according to his physical and social conditions. As Murphy, Murphy Newcomb (1937) put it in most respects, personality is not a stable entity capable of being pinned to a table and analysed ………………… it interacts constantly with situations in such a way as to make it difficult to talk about personality trait as inherent ……………… We never deal with an organism but with an organism in an environment. Personality in other words is an interplay with other persons and situation, an interplay depending always upon concrete processes both within and without. Lapiere and Erans coorth (1949) also observe that personality does grow experience by experience, bit by bit, even as it is revealed situation by situation and piece by piece. This clearly shows that personality is not only the bye product of biochemical aspects but equally of social and environmental aspects.

Type A behaviour pattern (TABP) as a personality variable has long been examined as a contributor to coronary heart disease. Type A personality or behaviour pattern is a construct developed by twin
Cardiologists Friedman and Rosenman (1958) is well linked to coronary heart disease. But the toxic elements with type A, mostly remains elusive.

The type A behaviour pattern (TABP) is a syndrome or style of living, characterized by over competitiveness, restlessness, aggressiveness, haste, impatience, and search of excellence cardiac reactivity, explosive speech style, tensions of facial muscles and feelings of being under the pressure of time and under the challenge of responsibility, always trying to achieve many targets at the same time.

This pattern is characteristic reaction of chronically predisposed person situation that challenges him or her. On the other hand this pattern is neither a stressor situation. nor a distressed response. Rather it is a style of overt behaviour with which some people respond to life situations, pleasant or unpleasant in a challenging way and in a win/loose perspective.

Individuals who posses the above characteristics are called Type A's whereas those who do not, are called type B's, in actuality type A is defined as a continuum ranging from extreme A to extreme B responses. A full description of the type A side of the continuum has been developed, whereas the only available description of Type B is the relative absense of type A. It seems obvious, however that Type of B is not merely the absence of a certain style of interacting
with life's challenges and dilemmas, as probably represents a distinctively different set of coping responses. Such a view is consistent with the responses of type A's and B's to uncontrollable stressful events (Glass 1977). While A's are struggling to maintain control over their environment, B's are not simply struggling less, they appear to be coping in a different manner.

Type A's exert greater than type B's to master events where they sense of losing environmental control. In contrast to B's type A's work hard to succeed, suppress subjective states (like fatique) that might interfere with task performance, exhibit rapid pacing of their activities, show little tolerance for even otherwise important competing activities and express hostility after being harassed in their efforts at task completion Type-A behaviour might thus be conceptualized as a characteristic style of responding to environmental stressor's that threaten the individuals sense of control. Type A's always engage in a struggle for control. Whereas Type B's are relatively free of such concerns and hence, free of characteristic pattern A traits (Glass 1977).

**Element of Type A behaviour Pattern:**

Anxiety and stress have long been regarded as impacting health and both of these constructs have been studied by personality psychologist. However, the study of personality and health emerged as a contemporary field of study with the discovery
of the Type A behaviour pattern (TABP). In 1892 Sir William Osler described the typical coronary patient as neither delicate nor neurotic but robust, keen, ambitious and vigorous in mind and body. Also of interest was the observation of cardiologist that the fabric on the front edge of the seats of the chairs in their waiting rooms tended to wear our quickly, suggesting that their patients were agitated and high strung. In 1974, Friedman and Rosenman, the great dico formally introduced a description of a common pattern of stable behaviour observed in coronary patients that they labeled Type A behaviour pattern. The publication of their work has generated a tremendous amount of research linking personality and health.

**Development of TABP**

Friedman and Rosenman (1974) depicted TABP as an action-emotion complex that is observable in any person who is aggressively involved in a chronic, incessant struggle to achieve more and more in less and less time and if required to do so, against the opposing efforts of other things or persons. The Type B behaviour pattern refer to the absence of Type A behaviours. This is an individual differences approach to the impact of stress which recognizes that not every life event, stressful or not has the same impact on everyone under all circumstances (Matthews an Glass, 1981).
A variety of behaviour are often said to characterize Type A individuals (Glass 1977). Thus Type A subjects tend to

- Perceive time passing rather rapidly.
- Show a deteriorating performance on task that require delayed responding.
- Work near maximum capacity even when there is not a time deadline.
- Arrive earlier for appointments.
- Become aggressive and hostile when frustrated.
- Report less fatigue and fewer physical symptoms.
- Become motivated by intense desires to master their physical and social environment and to maintain control.

Wright (1988) has proposed a somewhat different view of TABP in coronary patients.

He asserts that the basic ingredients of TABP include.

A sense of time urgency – not over large amounts of time but over seconds (e.g. changing lanes to save a few car lengths).

- A chronic activation level – being keyed up most of the everyday.
- A multi phasic quality – the tendency to be engaged in multiple tasks that need to be done at the same time.

There is also some disagreement over the status of TABP as a personality variable. For some, it is description of a set of overt
behaviours that are found in coronary patients whereas for others it is a dispositional personality trait with causal implications for heart disease (Rodin and Salovey, 1989). Another issue is whether the type A-B distinction is a typology rather than a dimensional concept (strube 1989).

Type 'A' or Coronary prone personality as conceptualized by Meyer Friedman and Rosenman (1974) represents the beginning of the current resurgence of Personality and health research. Type 'A' behaviour pattern include a cluster of personality traits and behaviour. Type A persons are highly competitive, hostile, impatient and frequently act aggressively towards other persons and having explosive speech style. People who do not have these extreme traits are called Type B. Type A persons experience more daily stress than Type B. This is an individual difference approach to the impact of stress which recognizes that not every life event, stressful or not, has the same impact on every one under all circumstances. Type 'A' pattern has been described as an action emotion complex and a style of response to environmental challenge and demands.

Subsequently Glass (1977) conception of Type A include: Type A persons tend to Perceive time pressing and urgency rather rapidly. Exhibit deteriorating performance on tasks that require delayed responding. Arrive earlier for appointment and its at the edge of the chair. Become aggressive and hostile when frustrated. Have high
motivation to exert control over physical and social environment. Work for maximum capacity even when there is not a time dead line.

**Wright (1988) has projected a slightly different picture of TABP in CHD:**

A sense of time urgency - not over large amount of time, but over seconds, changing lane to save a few car lengths. A chronic activation level-being keyed up most of the time every day. A multi phasic quality the tendency to be engaged in multiple tasks that need to be done at the same time.

**Costa and Mc Crae (1992) Portray, currently, two components of Type A - (a) angry hostility:** Characterized as frequent and intense experience of anger frustration and rage and (b) Antagonistic hostility marked by cynicism rudness, condescension, and direct expression of anger have been found as most valid predictor of CHD.

**TABP and CHD :** According to Wiebe and Smith (1997), after two decades of generally supportive data, a panel of experts convened by AHA (American heart association), Conclude that type A pattern was a robust coronary risk factor (study conducted in 1981). Several researchers (e.g. case et al. 1985, Ragland and Brand 1988) due to failure in replication have raised doubt on this conclusion. A recent meta analysis of the available prospective studies by Mathew (1998) and Miller et. al. (1991) indicated that in previously healthy
population the TABP is associated with increased risk of initial premature development of CHD.

It is clear from the researches that Type 'A' Behaviour pattern, particularly antagonistic hostility lead to CHD and hypertension.

Thus hostility complex pronounced in distrust and contempt for other people, along with frequent expression of such feeling, has been a serious concern for health Psychologist as a risk factor leading to CHD.

Personality factors which moderate TABP and CHD relationship and lesser the chances of CHD, enhance good health include as conscientiousness (Costa and McCrae 1992), Hardiness Kobasa (1979), Optimism (Scheier and Carver 1985) etc.

Conscientiousness (as indicated by competence, being ethical, self discipline, the tendency to think carefully before acting etc.) measured by NEOPI is related to good health.

**Hardiness:**

The trait of hardiness consists of the three interrelated tendencies of control, challenge and commitment that serve to help us cope with stressful events (Kobasa, 1979). Control is our general expectation that our outcomes are predictable and controllable by our own efforts. Challenge refers to the belief that changes are a normal part of living and thus challenge us to effectively employ our
abilities. Commitment is the belief that our activities are meaningful and important rather than meaningless and trivial. In theory, the greater our sense of control, challenge and commitment, the greater we exhibit the trait of hardiness in meeting life's changes, which are then experienced as less stressful.

Consistent with this approach, executives of a large company who were high in hardiness were observed to have fewer serious illnesses than those who were low in hardiness (Kobasa, Maddi & Kahn, 1982). This result suggests, of course that the trait of hardiness functions as a health buffer for stressful events.

**Optimism:**

Optimism, as described by Michael Scheier and Charles Carver as a stable, generalized disposition to anticipate positive outcomes in all areas of life. As part of their control theory approach to how we regulate our own behaviour and feelings these authors propose that an optimistic personality and disposition enables people to better cope with adverse events. Optimists are more likely to cope actively with the situation. Pessimists, in contrast, are more likely to adopt passive or fatalistic attitudes.

The trait of optimism is measured by an eight-item Life Orientation Test (LOT). Optimists, as defined by high scores on this brief test, report fewer occurrences of physical illness and are more likely to use problem-focused coping strategies (Scheier and Carver,
An optimistic personality disposition has been found to help women cope with the stress of discovering they have breast cancer (Carver et al., 1993).

A perusal of the above cited researchers portray that the relation between Type A behaviour pattern and CHD is mixed and inconclusive. Toxic factor within Type A: antagonistic hostility, as measured by NEO Five point inventory (Costa and McGrac 1992) in significantly related to the development of CHD. Findings on this line are based on a few researchers in western setting. Similarly factors like optimism and Hardiness which contribute to good health and lesser the risk of CHD are also not well researchers. These inconsistencies and inconclusive findings, lead me to take the present research work particularly in Indian perspective.

Based on the researches discussed above the purpose of the research work are of as follows:

**Components of TABP, Crucial for the development of CHD:**

Recently a specific component of TABP - anger and hostility has come to prominence as closely related to CHD. 3 elements contribute to this component: having cynical thoughts, feeling anger and behaving antagonistically towards others. (Barefoot 1992).
CONTROL :

The other most important component of TABP is control. Type A persons have an impelling need for control. Their active dynamic style even makes them look as if they are in control of situation, whether or not they are (Strube et. al. (1986). Most of their type "A" behaviour seem to be a desparate attempt to the control that they continually afraid of slipping away from them.

It is almost as if they have a set to control every thing followed by an inevitable 'frustration - hostility reaction' when events in their lives elude their grandoise plan of control (Phares and Chaplin 1997). They constantly feel challenged, experiencing a great deal of stress as a result. (Brunson and Mathews (1981)). As these personality factors have clear link with CHD it would be worthwhile to have a bird eye view of this disease conceptually.

Coronary Heart Disease:

Coronary heart disease is the most dreaded disease of the present era and is supposed to be one of the worst killers of man. Not only is its incidence rising but more and more people of much younger age are being involved. Within a decade or so the number of deaths from heart disease has shown a dramatic rise from 6% to 10%. It has become No. 1 killers like tuberculosis, pneumonia, cholera etc. Despite significant improvement in facilities for diagnosis and treatment in the country, hospitals are not being able
to keep pace with rapid increase in the cases of heart attack. (Bernard 1986, Chingappa 1986, Gupta 1987).

Coronary heart disease occurs due to a blockage or narrowing of the coronary arteries which supply blood to the heart muscles. Heart is a muscular pump designed to ensure the circulation of blood throughout the body. The heart itself has two types of coronary arteries – left and right. The coronary vessels supply oxygen to the myocardium depending upon its demand. When the coronary arteries are blocked or narrowed the myocardium receiver insufficient supply of blood and oxygen. The main symptoms includes severe pain in the chest palpitation feeling of constriction, breathlessness, sweating etc. with or without exertion.

Coronary heart disease is of two form (a) Anginapectoris and (b) Myocardial infarction. Angina pectoris is caused by shortage of oxygen in a part of myocardium due to narrowing of coronary vessels and arteriosclerosis. The symptoms are heavy and painful feeling in chest increased heart rate after physical or psychological strain. In myocardial infarction there occurs a cell necrosis in the myocardium which may arise due to (a) blockage of coronary artery resulting from clot formation (b) long lasting increased oxygen demand due to excessive heart work causing swelling. Palpitation hypotension etc. The damage in Angina pectoris is reversible while that in myocardial infarction is irreversible.
A lot of work has been done to investigate into the aetiology of CHD and number of factors have been identified as increasing risk of CHD such as aging, sex, high cholesterol level in blood, heavy cigarette smoking, family history obesity and physical inactivity (Glass et al 1980) it is now universally believed that the disease has a multifactorial actiology i.e no single cause can be held responsible for its occurrence. Epstein (1967) and Gallium (1984) have shown strong correlation between CHD and various factors like hypertension, smoking hypoglycemia, obesity, physical inactivity, Serum cholesterol level, mental stress, personality traits and genetic disposition various researchers like Jekins (1976) Alfredson and Theorell (1983) Marmot (1983) orth Gamar (1983) have investigated the role of psychological and socioeconomic factors such as anxiety neuroticism life events and change, job satisfaction and dissatisfaction, emotional loss and deprivation family conflict and life crisis, ethnic background and social status etc on the basis of all these studies it can be said that certain factors do put an individual at high risk of CHD.

Many psychologists have recognized or type of personality and behaviour pattern (TABP) which they believe is associated with high risk of coronary heart disease. It is a sort of an overt behavior syndrome or a style of living. Characterized by extreme competitiveness, striving for achievements aggressiveness, haste,
impatience, tension and a feeling of being under pressure all the time and under a challenge of responsibility. This is called a type 'A' personality. The extreme type 'A' person has a chronic involvement in almost a never ending struggle to attain his goal against all odds. This is a sign of aggressiveness in his personality.

He is overconscientious and tries to excel in his task and vocation. Rosenman (1978) asserted that the most critical aspects of type A behaviour are excess of aggressiveness, hurry and competitiveness.

Frustration and depression due to dissatisfaction from a job and from other life situations has also been found to be a major factor in the causation of CHD (K.Jenkins, 1971, Wolf 1968, Green et al 1972, Theorell and Rahe 1972). Anger and hostility were also found related to CHD. Dimond (1980) demonstrated that hostility and anger and anger had a great role to play in the aetiology of coronary heart disease. Van Doornar (1984) showed a relationship between psychological variables and serum cholesterol level in blood which in turn is in many cases responsible for coronary heart disease.

**Stroke**

Atherosclerosis and arteriosclerosis can also affect the arteries that serve the head and neck thereby restricting the blood supply to the brain. Plaques may become detached from the artery wall or one
of the blood clots that tend to form on plaques may detach and flow through the circulatory system. Any obstruction in the arteries of the brain will restrict or completely stop the flow of blood to the area of the brain served by that portion of the system. A piece of material too small obstruct an arteriole might completely block a capillary. Oxygen deprivation causes the death of brain tissue within 3 to 5 minutes. This damage to the brain resulting from lack of oxygen is called stroke, the third most frequent cause of death in the United States. But strokes have other causes as well for example, a bubble or air (air embolism) or infection that impedes blood flow in the brain may also result in a stroke. In addition, the weakening of artery walls associated with arteriosclerosis may lead to an aneurysm, a sac formed by the ballooning of a weakened artery wall. Aneurysms may burst, causing a hemorrhagic stroke or death.

A stroke damages neurons in the brain, and these neurons have no capacity to replace themselves. Therefore, death of any neuron results in the permanent loss of its function. The brain, however, contains billions of neurons. Rarely do people suffer from strokes that kill all neurons controlling a particular function. More commonly, some of the neurons devoted to a particular function are lost, impairing brain function. Even though no neurons are replaced, the remaining healthy neural tissue compensates to some extent. For example, one specific area of the brain controls speech
production. If this area is completely damaged by a stroke, the victim can no longer speak (but can still comprehend speech). A stroke that damages some of the neurons in this area results in partial loss of fluency and some difficulty in speaking. The extent of the loss is related to the amount of damage to the area more extensive damage results in greater impairment. This same principle applies to other types of disabilities caused by stroke. Damage may be so extensive or in such a critical area as to bring about immediate death; or damage may be so slight as to go unnoticed.

Degenerative disease of the cardiovascular system, such as atherosclerosis, are not the only cause of stroke. Blood clots can form around internal wounds in the process of healing and break away to float through the circulatory system. However, the most common cause of stroke is atherosclerosis. Blood clots can form around atheromatous plaques, and a plaque itself may detach from the artery wall, forming a floating hazard in the cardiovascular system that may result in a debilitating or deadly stroke.

**Blood Pressure**

When the heart pumps blood, the force must be substantial to power circulation for an entire cycle through the body and back to the heart. In a healthy cardiovascular system, the pressure in the arteries is not a problem because arteries are quite elastic. In a cardiovascular system diseased by atherosclerosis and
arteriosclerosis, however, the pressure of the blood in the arteries can produce serious consequences. The narrowing of the arteries that occurs in arteriosclerosis and the loss of elasticity that characterizes arteriosclerosis both tend to raise blood pressure and make the cardiovascular system less capable of adapting to the demands of heavy exercise and stress.

Blood pressure measurements are usually expressed by two numbers. The first number represents systolic pressure, the pressure generated by the heart's contraction. The second number represents diastolic pressure, or the pressure achieved between contractions, reflecting the elasticity of the vessel walls. Both numbers are measured by determining how high in millimeters (mm) a column of mercury (Hg) can be raised in a glass column.

Elevations of blood pressure can occur through several mechanisms. Some elevations in blood pressure are normal and even adaptive. Activation of the sympathetic nervous system, for example, increases heart rate and also causes constriction of the blood vessels, both of which raise blood pressure. The parasympathetic division blocks sympathetic action and returns blood pressure to its baseline rate, so sympathetic activation should not result in permanent increases in blood pressure. Other elevations in blood pressure, however, are neither normal nor adaptive; they are symptoms of cardiovascular disorder.
Millions of people in the United States have hypertension - that is, abnormally high blood pressure. This "silent" illness is the single best predictor of both heart attack and stroke, but it can also cause eye damage and kidney failure. Hypertension is of two types - primary or essential hypertension and secondary hypertension. Essential hypertension, which accounts for 90% of the hypertension in the United States (Williams and Knight, 1994), refers to elevations of blood pressure that have no identified cause. It is positively related to such factors as age, African American ancestry, weight, sodium intake, tobacco use, and lack of exercise. Secondary hypertension is much less common than essential hypertension and stems from other diseases such as arteriosclerosis, kidney disorders, and some disorders of the endocrine system.

Hypertension tends to progress from elevated systolic blood pressure coupled with normal or slightly elevated diastolic pressure to elevations of both systolic and diastolic blood pressure. Although systolic and diastolic hypertension may occur separately people-especially older people - with hypertension typically experience elevations of both. Systolic pressure that exceeds 200 mm Hg presents a danger of rupture in the arterial walls (McClintic, 1978). A rupture of the aorta is usually fatal; a rupture of a cerebral artery results in a stroke that may be fatal. Diastolic hypertension tends to result in vascular damage that may injure organs served by the
affected vessels, most commonly the kidneys, liver, pancreas, brain and retina.

Because the underlying cause of essential hypertension is unknown, no treatment exists that will remedy its basic cause. Treatment tends to be oriented toward drugs or changes in behaviour or lifestyle that can lower blood pressure. Because part of the treatment of hypertension involves behaviours changes, health psychologists have a role to play in encouraging in such behaviors as controlling weight, maintaining a regular exercise program, and restricting sodium intake.

**High Blood Pressure or Hypertension**: Hypertension is the single most important risk factor in cardiovascular disease, yet millions of people with high blood pressure are not aware of their vulnerability. Unlike most disorders, hypertension produces no overt symptoms, and dangerously elevated blood pressure levels commonly occur with no signals or symptoms. Most people believe that if their blood pressure were high they would be aware of the elevation (Meyer, Leventhal, & Gutman, 1985). Unfortunately, hypertension ordinarily has no discernible symptoms. At 15, Jason does not monitor his blood pressure, and he takes a rather fatalistic attitude about developing hypertension.

Although the Framingham Heart Study was not the first to suggest that people with high blood pressure have more
cardiovascular problems than those with normal blood pressure, it provided solid evidence of the importance of hypertension. The Framingham study (Dawber, 1980) divided blood pressure into three categories: normotensive (normal blood pressure), borderline, and hypertensive. Regardless of people’s age or gender, their risk of cardiovascular disease increased with increases in blood pressure, clearly indicating that high blood pressure is a risk factor. Since that time, many other studies (e.g., Fried et al., 1998; Reed, Maclean, & Hayash, 1987) have confirmed the dose-response association between blood pressure and rate of cardiovascular disease.

If hypertension is a risk factor for heart disease and stroke, then factors related to hypertension should also relate to cardiovascular disease. One such factor is obesity, which the Framingham study found to be the best predictor of hypertension (Dawber, 1980). Although obesity itself does not always result in cardiovascular disease, one study (Manson et al., 1995) founded that very heavy middle age women had a fourfold risk. In summary, hypertension and factors related to hypertension are risks for CVD.