CHAPTER ONE
INTRODUCTION

1) Statement of problem

Health is one of the most vital but taken-for-granted qualities of everyday life. Yet when jeopardized or diminished, an individual’s health becomes a salient and central concern (Albrecht et al., 2000:1). There is good evidence that health is a major basis of human progress and that lack of it, is one of the predisposing factors of national decay. Other things being equal, good health makes for physical efficiency, bodily comfort, and a sense of well being. It further develops energy, alertness, and keenness. The energy for creative enterprise depends upon health; the joy of existence is rooted in it; the hope and ambition that drive us to serve our families and communities have some vital relation to health, whereas illness and disease bring many evil results (Gillin, 1969: 366). As Cockerham (1989:2) rightly points out: while a person’s social class, income, and access to goods and services are highly important, the quality of one’s life, ultimately depends upon one’s level of health.* In light of the role of health in happiness, efficiency, and well-being, it seems that every social group and society strive for the betterment of health of its members.

Despite the vital role of health in social and personal life of human being, health continues to be a neglected entity. “At individual level, it cannot be said that health occupies an important place; it is usually subjugated to other needs defined as more important, such as wealth, power, prestige, knowledge, and security. Health is often taken for granted, and its value is not fully understood until it is lost. However, at the international level during the past few decades, there has been a reawakening that health is a fundamental human right and a worldwide social goal; that it is essential to the satisfaction of basic human needs
do so (Nagla, 1995: 99). Noack (1987: 13) in search for working definition of health referred to common points of different definitions of health. He points out: “Despite different cultural and institutional backgrounds as well as social and political orientations, however, they have several common elements. They show that health is a holistic concept, in accordance with the Old English hal from which it is derived, meaning whole. All, these definitions indicate that health is a complex multidimensional concept. Some common themes are: health as the absence of symptoms, illness or disability; health as a positively valued psychological experience; health as a balance or equilibrium within oneself and with the environment; health as a capacity or potential to pursue personal goals and to cope with environmental and social demands; or health as the process of goal-directed action or as the process of effective coping.

Marks and associates (2000:4) after reviewing some of the criticism on WHO’s definition of health, define health as “a state of being with physical, cultural, psychosocial, and economic and spiritual attributes, not simply the absence of illness”. Further, Noack (1987:14) with respect to system perspective concludes that within the hierarchy of a system, health can be defined as a state of dynamic balance with any other given sub-system, such as organic (biological), individual (psychological), or social group or community (sociological). Accordingly, health is viewed as a dynamic characteristic of the individual, the social group, or the socioecological system; it is clearly associated with the activities of such systems as a whole or of their component parts. Overall, it is worthwhile to note here that, what is important for a sociological as well as psychosocial study is the impact of socio-cultural and psychosocial factors on establishment, distribution, and consequences of health and illness. “Health in its fullest sense is seen as an important element and outcome of social, economic, cultural, ecological, and individual factors. It is not only a subject of concern for the medical system, but for all sections of society. In this manner health occupies a fundamental space in the life of the individual, community, and society as a whole, and must be supported by sound investments in living conditions that create, maintain, and protect health” (Erben, et al., 1992).
disease and cancer, are seen as attributable to individual behavior patterns (Macintyre, 1986: 407). The assertion that lifestyle or health-related behavior has an important link with health is largely based on the work of Belloc and Breslow (1972), who found that health habits including non-smoking, moderate or no alcohol consumption, average weight for height, regular meals, eight hours sleep, and regular physical activity greatly affected one’s health. Individuals, who followed all of these health practices, appeared to have better physical health and had a significantly longer life expectancy than those who did not (Belloc and Breslow, 1972: 409). Overall, it may be pointed out that health related lifestyles or behaviors affect the health status of individuals through direct, indirect, and interactive mechanisms. In terms of direct effects, health related behaviors may affect health by acting on biologic systems or their functioning. The indirect effects of health related behaviors affect the health status through their potential impact on the socio-economic status. For example, alcohol or sleeping problems may lead to poor job performance, which might then result in lowered socio-economic status (Mulatu and Schooler, 2002: 23).

The burden of disease attributed to health behaviors is more prominent in the developed countries. Epidemiological research suggests that all the leading causes of death in western societies are associated with behavior. It can be seen that the behaviors responsible for the majority of deaths in these countries are smoking (both active and passive), poor diet, excessive alcohol consumption, lack of exercise, stress, and driving carelessly or at speed (Marks et al., 2000: 9). However, these diseases are assuming great importance among adults in both the developed and developing countries. The prevalence of chronic diseases is showing an upward trend almost all over the world, including the developing countries, because of shifting of patterns of disease in these countries. In the developing countries, especially the middle and high social classes are exposed to chronic, non-communicable diseases attributable to health related behaviors. The proportion of chronic, non-communicable diseases in mortality and morbidity are gradually increasing in these countries, even though the proportion of infectious, communicable diseases has not decreased drastically. Therefore, it is
biological and psychological ones, have greater influence on the level of performance on health behaviors. According to McElroy et al. (1988) “health-related behaviors are determined by five categories of factors; interpersonal factors, interpersonal and primary group interactions, institutional factors, community factors, and public policy. Four of these five factors relate to the external social environment indicating the importance of social and environmental rather than individual factors (www.hc-sc.gc.ca). Overall, a healthy behavior may be shaped due to some interrelated dimensions: individuals (both biologically and psychologically), their social environment (such as family, peer, workplace, community, and society), and the interaction between individual and their social environment. Among the social factors influencing health behaviors, however, gender has emerged as a very important factor and received considerable attention over the past three decades.

1.3) Gender and health

All human societies divide their populations into two social categories, which they call ‘male’ and ‘female’. Each of these categories is based on a series of assumptions—drawn from the culture in which they occur. They relate to the different attributes, beliefs and behavioral characteristics of the individuals included within that category. Although this binary division of humanity into two genders is universal, on close examination one can see that it is a rather more complex phenomenon, with many variations reported in how male and female behavior is defined in different cultural groups. Helman (2000: 146) states that: “The gender of a particular individual can best be understood as the result of a complex combination of a number of elements. These include: i) genetic gender, based on genotype, and the combinations of the two sex chromosomes, X and Y; ii) somatic gender, based on phenotype, especially physical appearance, and the development of secondary sex characteristics (external genitalia, breasts, voice and distribution of body fat and hair); iii) psychological gender, based on the person’s own self perception and behavior; and iv) social gender, based on wider cultural categories of ‘male’ and ‘female’, which define how individuals are
behaviors. But it can be presumed that gender is one of the most important factors influencing health related behaviors in each social group as well as society. Accordingly, in the past three decades, the issue of gender differences in health and illness has gained popularity as a subject of research among social scientists. The survey of literature on gender differences on health status of different societies reveals that women suffer more from disease in their lifetime, but men die early; women live longer, yet they seem to be sicker; although men are sick less often than women, they die at younger ages. Further, in the field of health related behaviors many research studies found that in general, women are more likely than men to adopt healthier habits and perform positive health behaviors.

Overall, the main problem that this study is trying to focus on is to understand the nature of variations in health related behaviors of university students. This study has attempted a twofold comparison in health related behaviors, that is, by gender and nationality (culture) at the same time. It tries to find out how far health related behaviors of men and women university students in Mazandaran University (Iran) and Panjab University (India) differ and which factors affect these differences. Is it the psychological, social or cultural factors, or is it the combination of these factors that help to explain and predict health related behaviors of university students in the two developing countries.

2) **Review of Literature**

Review of all the studies that have investigated the relationship between health related behaviors and social-psychological factors—particularly gender—over time and place could not be attempted because the limitations of time and resources. However, a comprehensive and systematic attempt has been made to identify some significant studies that provide a glimpse of the nature and type of this relationship. These studies relate to the following aspects of health related behaviors.
at least twice a day. The correlates of brushing of teeth mentioned by these studies are level of education, socioeconomic status of the family, parent’s beliefs in importance of brushing of teeth, and a strong intention to brush teeth regularly.

With regard to dental care among university students, studies such as Dittmer et al (1993) shows that majority of the students go in for dental checkups. Komori and associates (1993) found that most of the students brushed teeth twice a day, three minutes at a time. Also, the study of Kawamura et al (2000) shows that only 2% of Finnish students put off going to the dentist until they develop toothache, as compared to 56% Japanese students. A significant number of Japanese students felt that their teeth had become worse despite daily brushing. They concluded that the self-reported oral health behaviors seemed to be very different between the two countries, reflecting different cultural and health education systems. In a cross sectional survey of health behavior among university students in Eastern and Western Europe Steptoe and Wardle (2001) found that Eastern Europeans brushed their teeth more regularly than western European, but the absolute numbers of respondents not brushing their teeth was very small (2.8% versus 1.2%). The literature on gender differences in teeth brushing indicates the healthier behavior of women students as compared to men students (Nanakorn et al., 1999; Wardle and Steptoe, 1991; Callaghan, 1995; Polychronopoulou et al, 2002; and Behbehani and Shah, 2002). Women also had more orthodontic treatment than men students (Komori et al., 1993). No other study regarding other aspects of personal hygiene, namely; bathing, changing clothes for cleanliness, and washing hands by soap could be located during the period this research was in progress.

2.1.2) Physical exercise

A large number of studies show the importance of physical exercise on the health status of individuals (Fentem et al, 1988; Allen and Quigley, 1977; Powell et al, 1987; Bouchard et al, 1994; Haskell et al, 1985; Paffenbarger et al, 1986; North et al, 1990; and Bui and Fletcher, 2000). All these studies document
differences in physical exercise indicate that physical exercise is an exception to the general prediction that men have a worse health lifestyle than women. While women students reported more positive health habits in diet, smoking, drinking, dental, and skin health than men but regular exercise was more likely practiced by men students. For example, Welsh and associates (1998) found that the men's health behaviors focused on physical activity, while women's have focused on dietary restrictions for better health. Shaw and Henderson (2000) shows that the low level of women's participation in sports and physical activity has a clear relation to societal beliefs on the gendered nature of these activities, and the constraining effect of these beliefs on women's behavior.

Some studies such as Zakarian et al. (1994); Reynolds et al. (1990); Trost et al. (1996); Sallis et al. (1988); Tappe et al. (1990); Biddle and Goudas (1996); Stucky-Ropp & DiLorenzo (1993); and Tinsley et al. (1995) show that individual factors are positively associated with physical activity among young people. For example, Zakarian and associates (1994) found that confidence in one's ability to engage in exercise and perception of benefits from engaging in physical activity or involvement in sports showed a positive association with increased physical activity among young people. Tappe and colleagues (1990) found that perception of physical or sport competence and enjoyment of physical activity were associated with physical exercise. Their study also points out the perceived benefits of physical exercise, such as excitement and having fun; learning and improving skills; staying in shape; improving appearance as associates of increased physical activity by young people. Studies on peer support for participation in physical activity show a significant association with engagement in physical exercise among young people. Significant studies in this category are; Zakarian et al. (1994); Stucky-Ropp and DiLorenzo (1993); Anderson and Wold (1992); Treiber et al. (1991); and Sallis et al. (1986). For example Treiber and his associates (1991) show that women's overall activity levels, particularly sport and leisure were positively related with peer support. Also, an intervention conducted by Foster and colleagues (1985) also demonstrates the utility of peer support in promoting exercise (Schooler, 1995: 7). Relationship between the physical
(1998); Park (2000); Aesoph (2000); Marks et al. (2000); Helman (2000); Grace (1997); and Porter (1999). The most common nutritional problems and diseases which have been mentioned by these studies are, low birth weight, protein energy malnutrition, exophthalmia, nutritional anemia, iodine deficiency disorders, endemic fluorosis, lathyrism, atherosclerotic cardiovascular diseases, diabetes, obesity, cancer, especially colonic and gastric cancers, osteoporosis, and hypertension. Marks and associates (2000) show that most importance has been given to obesity, hypertension, heart disease, and cancer. All these can be prevented by taking the right diet. Doll and Peto (1981) also show that a large proportion of cancer deaths could be attributed to dietary habits.

Large body of research studies has documented gender differences in dietary habits. Important studies in this area are; Wilson et al. (1971); Mujeeb-Ur-Rahman and Visweswara (2002); Freund et al. (1991); Ross and Bird (1994); Prohaska et al. (1985); Steptoe and Wardle (1992); Uitenbroek et al. (1996); Oygard (1997); Mennell et al. (1992); Callaghan (1995); Nanakorn et al. (1992); Monneuse et al. (1997); Douglas et al. (1997); Fennell (1997); Courtenay et al. (2002); Wardle and Steptoe (1991); Fiala and Brazdova (1996); Welsh et al. (1998); and Wardle et al. (1997). These studies show that on the whole, women have positive dietary habits than men. Women consume more fruit and vegetables; make more conscious effort to avoid fat, cholesterol, salt, red meat, and sugar. Women also consumed more milk and coffee, and showed regularity in eating breakfast. Mennell and his associates (1992) found that women consumed smaller amounts of food than men. Meat avoidance is more common among women than men. While women drink greater quantities of coffee, men drink large amounts of alcoholic beverages. These gender differences in consumption of food were widely bolstered by the accompanying beliefs, taboos, and cultural prescriptions of different societies. Morabia and Wynder (1990) found that women compared with men consumed higher amounts of fruit and vegetables and less amounts of red meat, milk, coffee, and cereals. The study done by Food Survey Research Group (2000) also shows that it was very important for women to eat a variety of foods. More women as compared to
approved orthodoxy of the day, than those lower down the social scale. Wardle et al. (1997) found significant univariate associations between healthy dietary habits and gender, weight, dieting status, dietary health beliefs, nutrition knowledge, and health locus of control. In multivariate analyses, only gender, dieting status, and dietary health beliefs were significant predictors of healthy dietary habits. Also smoking and drinking (Altekruse et al., 1995), saliency of health and health norms (Ozasa et al., 1995), and personality type (Kikuchi et al, 1999), were found to be associated with dietary habits.

2.1.4) Preventive medical checkups

The review of literature on preventive medical checkups shows the existence of following studies. These are: Faulkner and Schauffler (1997); Friedman et al (1994); Culica et al., (2002); Hopkins et al. (1975); Saver and Peterfreund (1993); and Preisser et al. (1998). These studies show the importance of age with medical checkup use (Faulkner and Schauffler, 1997; Culica et al., 2002; Preisser et al., 1998; and Saver and Peterfreund, 1993). They also show gender differences in preventive medical checkups, indicting men are less likely to be seen for periodic health examination, particularly if they are poor (Culica et al., 2002; Faulkner and Schauffler, 1997; Friedman et al., 1994; Saver and Peterfreund, 1993). Health insurance coverage was also found to be associated with access to medical checkups (Culica et al. 2002; Faulkner and Schauffler, 1997; Hopkins et al., 1975; Saver and Peterfreund, 1993). Health risk factors such as smoking, drinking, and sedentary lifestyle were also associated with routine checkups (Faulkner and Schauffler, 1997; Preisser et al., 1998, Culica et al., 2002; and Faulkner and Schauffler, 1997). Culica et al (2002) show that an increased likelihood of recent checkups was associated with married people, highest household income, and fair and poor health status. Ross and Wu (1995) show that the well educated are more likely to get preventive medical care, annual physical exams, immunizations, and screening.

Some studies highlight the gap between men and women smokers in developed countries and developing countries. These studies show that the gap is very narrow in some developed countries. For example, The World Bank (2000a) study shows marginal differences in the smoking habits of men and women in some developed countries such as USA, UK, and Ireland; while in the developing countries such as Pakistan, Sri Lanka, Nepal, and Myanmar it is quite wide.

Research also shows the failure of medical and clinical efforts in containing smoking behavior. Thus, it appears that causes of smoking behavior are essentially non-medical factors. Research has shown that tobacco use or non-use results from a complex mix of factors ranging from overt beliefs related to tobacco use to those that appear to have little to do with tobacco use. Petraitis and his colleagues (1995) suggest three distinct types of influence on tobacco use, namely social, cultural, and personal. Social influences include the characteristics, beliefs, attitudes, and behaviors of the persons who make the more intimate support system of adolescents, such as family and friends. Cultural influences include the practices and norms of the broader social environment of adolescents, such as the community, neighbourhood, and school. Personal influences include individual biological characteristics, personality traits, affective states, and behavioral skills (Department of Health and Human Services, 2001: 453).

The most important factors influencing the inclination to smoking were the smoking behavior of friends and family members. The role of parental and peer smoking habit in the initiation to and continuation of smoking has been
2.1.6) Alcohol Consumption

Too much drinking is associated with a wide range of health hazards for the drinker and for the people he or she is associated with. The disadvantages and hazards of alcohol consumption, especially heavy drinking are supported by numerous studies. The significant ones are; Porter et al (1999); Aesoph (2000); American Institute of Preventive Medicine (1999); Sarafino (1998); Marks et al (2000); Park (2000); Pratt (1982); and Forrest et al. (1991). For example, a research done by American Institute of Preventive Medicine (1999) found significant association between alcohol drinking and liver disease particularly liver cirrhosis and cancer; cardiovascular diseases, especially hypertension; different types of cancers such as esophageal, stomach, brain, mouth, larynx, liver and bladder; and malnutrition.

However, almost all literature on gender differences in alcohol consumption indicates that men more likely than women consume alcoholic beverages. Most important studies in this area are by Uitenbroek et al. (1996); Steptoe and Wardle (1992); Mechanic and Cleary (1980); Cahalan (1976); Callaghan (1995); Patrick et al. (1997); Wardle and Steptoe (1991); Fennell (1997); Douglas et al. (1997); Courtenay et al. (2002); Svenson et al. (1994); Nystrom et al (1993); Engs et al. (1991); Mendoza et al. (1998); Fords and Goode (1994); and Digrande et al. (2000). These studies indicate that men are prone to consume alcohol more frequently and in larger quantities than women. Dean (1989) in her study on "self-care components of lifestyles" found that 44.0% women as against 20.0% men were non-drinkers. She also found that the consumption of the number of alcoholic drinks by men was far more than women. Another study by Patrick and his associates (1997) shows that, men more likely than women students consumed alcohol on a regular basis. Stevenson and colleagues (1994) reported that women students generally had healthier attitudes toward alcohol consumption. Spigner and associates (1993) found that women more likely than men perceived greater risk from the use of alcohol. De Lint (1976) shows that there seems to be little doubt that the magnitude of alcoholism is largely
how peer and parental attitudes about alcohol are important in the formation of attitudes of students on the consumption of alcohol. Pietila and associates (1995) also show that the most common explanation that young people have for drinking is that they want to meet with their peer’s approval and gain independence.

Some research studies mention several factors as correlates of alcohol consumption. These are: Digrande et al. (2000); Jones et al. (1992); Del Rio et al. (1989); Holcomb (1986); De Lint (1976); Goetz (1994); Pietila et al. (1995); and Steptoe and Wardle (1992). Important factors mentioned in these studies are: inclination to drink before age of seventeen, marijuana and cigarette use; living in residence hall or independently and far away from family; having positive attitude towards alcohol consumption; having higher level of education for women; accessibility of alcohol; stress inducing events; living in urban areas; being in older ages; and belonging to higher social classes.

2.2) Cross-National Studies

Large numbers of research studies on health related behaviors have been conducted in western societies. Most of these were conducted among certain groups and countries only. The proportion of cross-national studies, even among the western societies is very small. However, some cross national comparisons were carried out in relation to health risk factors such as the Monica project on cardiovascular risk factors by WHO (1988), survey of smoking by Pierce (1989), and personal hygiene by Bergler (1989). A WHO cross-national survey on health behavior in school children is one of the few cross-national studies on some health related behaviors like smoking, eating habits, physical exercise, use of alcohol, oral hygiene and sleeping habits in 11-15 year old children (Wardle and Steptoe, 1991; 925). The ‘European health and behavioral survey’ using a standardized protocol suitable for translation and administration in different countries of Europe, has been trying to eliminate obstacles in the way of cross-national studies. Some parts of the results of these studies have been published by Wardle & Steptoe (1991); Steptoe and Wardle (1992); Wardle et al (1997); Steptoe & Wardle (2001); and Steptoe et al. (2002). In their study on young
Stahl et al. (2001) conducted another study within European countries on the importance of the social environment for a physically active lifestyle. It studied 3342 adults, 18 years and above from six European countries. The study found that 70.0% of the males and 68.0% of females were physically active. The proportions of active and inactive adults varied largely by countries. The extent of variation was from 88% active in Finland to 37.4% in Spain. The strongest predictor of being physically active in this study was social environment. Those who perceived low social support from their personal environment (i.e. family, friends, school, and workplace) were more than twice as likely to be sedentary compared to those who reported high social support from their personal environment. It also found that specific knowledge of the programmes and actions of physical activity and sport was also a strong predictor of being active.

In another cross-national study on smoking behaviors of students, Torabi and associates (2002) compared tobacco use knowledge, attitude, and practice among college students in China and USA. A total of 2131 students were surveyed. The study found that compared with Chinese college students, American students scored higher on knowledge but lower on the attitudinal scale. American respondents also were more likely to smoke cigarettes and use other tobacco products. Chinese students, on the other hand, had a higher frequency of starting smoking at an early age of 13 years or younger and were less likely to have had a fatigue effort to quit it.

Uitenbroek and associates (1996) carried out a comparative study on four health related behaviors in three European cities; Varna in Bulgaria, and Glasgow and Edinburgh in Scotland. They found large differences in health behaviors with regard to smoking, exercise, and diet regulation. The respondents in Varna were found to be least healthy and the respondents in Edinburgh showed the most healthy behavior. In case of alcohol use an opposite relationship was found. The study showed that females generally have more healthy behavior than males; however, this pattern was not consistent for all health behaviors. Zimmer and associates (2000) carried out another cross-national study for examination of
Other significant studies are; Ghadirian (1992), Ghadirian (1987b), Cook-Mozaffari et al. (1979); and Hormozdiari et al. (1975). All these studies have identified smoking, alcohol, and dietary habits as important risk factors for esophageal cancer. Similar studies have been done in relation to coronary heart disease, hypertension, and stroke.

Studies on smoking behavior are most common. These studies report an overall low prevalence of smoking in their samples. These studies have been conducted by Ahmadi et al. (2001a); Ahmadi et al. (2001b); Aghai and Spencer (1982); Mosalla (1990); Hussein-Khani (1990); and Farmanbar (1994). Higher prevalence of smoking among men has been reported by Ahmadi et al. (2001a); Ahmadi et al. (2001b), Hussein-Khani (1990); Mosalla (1990). The most important among these studies is by Ahmadi and associates (2001a). This study shows that a higher proportion of the men as compared to women were current smokers. It further shows that the mean age at which the respondents started smoking cigarettes was 21.3 years. The most common reasons for current cigarette smoking were: the need to avoid withdrawal symptoms, the release of tension, and for pleasurable purposes. Reasons for the onset of cigarette smoking were modeling, release of tension, and pleasurable purposes. Similarly, Ahmadi et al (2001b), conducted a study on cigarette smoking among Iranian medical students, resident physicians, and attending physician. Their study shows that 16.8% of males and 0.7% of females were smokers. The mean number of cigarettes smoked per day was 6.3 and the mean age of starting cigarette smoking was 19.7 years. Another important study in this area has been conducted by Government of Iran (Ministry of Health) in 1991. It shows that the overall prevalence of smoking in Iran in 1990 was 20.0%. This study also shows a much higher incidence of smoking among men (27.2%) as against women (3.4%). It further indicates that Iranian men and women in the age group 15-24 years were the least frequent smokers as compared to the later age groups. The study found that 11.7% men as compared to 0.7% women reported smoking more than 20 cigarettes per day. The study concludes that smoking in Iran like other developing countries is men-oriented behavior. According to the WHO
university students in Tehran found that 42.7% men as compared to 26.6% women students were very active. In another study, Zaghari Tafreshi (1993) in her study on adolescent girls in Tehran found that overall they had good behavior in terms of physical exercise, and there was an association between self-esteem and engagement in physical exercise.

In relation to dietary habits, Mosalla (1990) found that 59.3% students were good in terms of dietary habits (48.0% men versus 70.6% women students). Hussein-Khani (1990) also found that 8.7% students never add salt to their meals. The study also shows that 56% students preferred to consume red meat, and 82.7% reported eating snack between meals.

2.4) Studies on health related behaviors in India

Large number of studies on health-related behaviors has been conducted in India, but most of those studies identify risk factors involved in some chronic diseases, particularly heart disease, hypertension, oral cancer; as well as some infectious diseases such as malaria, and tuberculosis. For example, smoking has been identified as an important risk factor for hypertension by Malhotra et al. (1999); and Khokhar and Mehra (2001); heart disease by Singh et al. (1996); Sahay & Sahay (2002); Gupta et al. (2002); Gupta (2000); Reddy (1999); Singh et al. (1998); Gupta et al. (1994); and Ahlawat et al. (2002); and Cancer by Balaram et al. (2002); and Nayar et al. (2000). Alcohol consumption also was found to be an important risk factor for hypertension by Hazarika et al. (2002); and Malhotra et al. (1999); heart disease by Singh et al. (1996); and Gupta (2000); and cancer by Balaram et al. (2002); and Nayar et al. (2000). Further, dietary habits like salt and fat intake, or low level of consumption of vegetables and fruit have been studied as risk factors for hypertension by Hazarika et al. (2002); Singh et al. (1997); Beegom & Singh (1997); and Mir et al. (1986); and for heart disease by Singh, et al. (1996); Sahay & Sahay (2002); Gupta et al. (2002); Gupta (2000); Reddy (1999); Singh et al (1999), Gupta et al (1994); Ahlawat et al. (2002); and Vaz & Bharathi (2000). Physical inactivity as a risk factor for hypertension and heart disease has been studied by Malhotra et al.
study on perception and attitude towards smoking among doctors in Chandigarh. Subjects of study were 218 doctors from PGI. Around 31.6% of all the respondents were current smokers whereas 23.3% had stopped smoking (ex-smoker). All but one of the smokers were men who smoked cigarettes. Spirit of experimentation and peer influence were important initiating factors whereas the habit had continued mainly to concentrate on work/study. Doctors were uniformly aware of the detrimental effects of smoking. They found that counseling patients about hazards of smoking was practiced significantly less by smoking doctors and surgeons. A study on global status of tobacco use by WHO (1997), states that, 6.1% of world total unmanufactured tobacco and 1.5% of manufactured cigarettes in 1992 were consumed in India. The report shows that only about 20% of the total tobacco (by weight) consumed in India is in the form of cigarettes; bidis (account for 40% of tobacco consumption), chewing tobacco, pan masala, snuff, hookah, hookli, chutta, dhumi are other types of tobacco use in India. In 1990-92, annual average of tobacco use per adult (+15 years) was 1370 (150 cigarettes and 1220 bidis). Further, it is estimated that 65% of all men use some form of tobacco (about 35% smoking, 22% smokeless, and 8% both), while prevalence of bidi and cigarette smoking among women is about 3%.

In relation to alcohol consumption, some research studies such as; Gupta et al. (1995); Mohan et al. (1984); Varma and Dang (1980); Singh and Singh (1979); and Khan and Unnitham (1979) show that alcohol consumption by men is higher than women. However, the pattern is different. Majority of the drinkers (65.3% of men as compared to 93.6% women) were taking alcohol at their homes. Similarly, these studies show that the proportion of drinkers in urban areas is higher than in rural areas. Varma and Dang (1980) in their study on non-medical drug use between students and non-students in the age range 10-24 years found that the use of alcohol was greater in males, older age groups, those with lower educational levels, and those from urban areas. They further showed that among non-students the use of intoxicants was practically limited to tobacco, alcohol, and cannabis, and their use was more regular and the age of its onset was lower. Overall, apart from gender and urbanity, some other factors were associated with
Medical Sciences, Hyderabad. They reported significant gender differences in the quantities of many food items consumed and the nutrition intake by the Muslims and Hindus. The results revealed that with lower level of education and per capita income, the intake of cereals and millets and meat foods were higher in the Muslims than in the Hindus. With higher levels of education and per capita income, there was hardly any difference in the intake of cereals and millets between the Hindus and Muslims. The intake of meat foods was higher in Muslims than the Hindus irrespective of the levels of education and per capita income. Further, the milk and milk products, and fats and edible oils were higher in the dietary patterns of Hindus than in the Muslims. This was found to be true in all the income groups and educational levels. Nutrient adequacy was better in the Hindus than in the Muslims. They concluded that family size, per capita income, and literacy levels had a significant effect on dietary patterns and nutrient adequacy among the two communities. In another study by Abrol and Khanna (2002) aiming to examine the effect of smoking on dietary intake, they found that 76% non-smokers as compared to 40.0% smokers were non-vegetarian. Smoking had negative effect on nutritional status of an individual. They reported that smokers consume less salads, fruits, and green leafy vegetables than non-smokers. Kumari and Singh (2002) carried out a study on food consumption patterns of scheduled castes in Bihar. They found that the malnutrition problem among scheduled castes was very complex. Majority of them do not get enough amount of iron. Dietary habits of scheduled castes were quite conservative. The intake of food and nutrients was comparatively lower than the recommended dietary intake for Indians (RDA). The reason attributed was their poor socio-economic status. The intake of most of the foods and nutrients was comparatively lower for females than for males. Simmons and Williams (1997) in their study on dietary practices among Europeans and different south Asian groups in UK reported that Europeans ate less fruit but more vegetables. Muslims were least likely to be vegetarians. Most south Asians ate Indian sweets and western snacks. Singh (1984) in his study on milk consumption in Chandigarh reported that the average monthly total, as well as per capita
been carried out in the western countries, more particularly the European
countries. The psychosocial studies on health related behaviors in Iran and India
are very few. Majority of the studies (particularly in Iran) have been conducted by
medical scientists to explain health related risk factors involved in chronic and
infectious diseases. There is, thus, an acute shortage of studies on the role of
psychosocial and cultural factors on health related behaviors. A few studies that
were conducted on Iranian and Indian college/university students, concentrated
on drug and substance use. Most of these studies look into the smoking and
alcohol consumption behavior of the college going students. All other aspects of
health related behaviors such as physical exercise; dental care, dietary habits,
and medical checkups have been ignored by the studies altogether. Again, there
was no comparative study on health related behaviors of university students in
Iran and India.

In light of the above-mentioned deficiencies, the present study seeks to analyse
gender differences in health related behaviors of university students in Iran and
India. This study attempts a psychosocial and cultural explanation of health
related behaviors. The study is supposedly comparative as it is inclusive of
students of different nationalities and cultural groups. The present study most
probably represents a pioneering step in this direction.

3) Theoretical Framework

The study of gender differences in health/illness has been approached from
a number of perspectives. In general, these perspectives can be broadly put into
two, namely: Biomedical and Socio-medical. According to the Biomedical
perspective it is hypothesized that observed gender differences in health are the
product of biologically based inherited risks (Kandrack, 1991: 579). In the
biomedical model state of health is a biological fact (immutable, real,
independent) and ill health is caused by biological calamities. Signs and
symptoms identify the causes of disease, and the process of diagnosis,
establishing deviation from medically established normality and medical
Sociologists define socialization as the way in which people learn the skills and attitudes relevant to their social roles (Smelser, 1991: 54). Socialization is the complex learning process through which individuals develop selfhood and acquire the knowledge, skills, and motivation required for participation in social life. This process provides a link between the individual and society. The relationship between the individual and society has been looked at from two major points of view. For the individual, interaction with others is the means by which human potentialities are actualized. Similarly, effectiveness of socialization is essential for the society as it is for the individual. Untrained members disturb the social order (Mackie, 1990: 61). It can be said that socialization, briefly, is that process by which children are transformed into social beings who have taken on particular norms and values, and know what kinds of behaviors are expected of them (Stanley and Wise, 2002: 273).

In socialization theory, some social groups or organizations such as family, peer groups, school, and mass media are considered as agents of socialization, though the influence of family and peer on the behavior of individuals, are seen as more important than significant others (such as workmates, teachers, or movie stars). Family socialization forms the basis of many of our health beliefs and behaviors. Because of the complex nature of the roles in family life, a number of theorists have called for an examination of the contextual and situational aspects of health behaviors in families (Alonzo, 1979; Graham, 1985). Parents’ food choice may be influenced by children’s health needs and eating habits, such as vegetarianism. In addition, many parents attempt to provide a healthy role model. This may lead to health enhancing behavioral change by parents, but more often than not leads to furtive behavior to avoid children observing smoking and poor dietary habits. Maintenance of health damaging behavior may also result from the pressure of parenthood, particularly where material circumstances are poor and resources are low. Even family related life events may contribute more positively to lifestyle change (Penny et al., 1994: 113-4). Overall, the family system plays a major role in children’s learning of health related behaviors. Children, who observe for example, the dietary,
punishment they receive from different kinds of play and through observation and modeling, especially of their same-sex parent (Martin, 2000: 446). Furthermore, social learning theory is based on self-efficacy paradigm. According to this paradigm, behavior change and maintenance are functions of (1) expectations about the outcomes of engaging in a behavior and (2) expectations about one's ability to engage in the behavior (www.ed.gov/pubs). The social learning theory proposes that a child learns appropriate sex-type behavior through rewards, punishments, and initiation of adult models. Accordingly, sex-type behavior is learned in the same way as other behaviors. A child learns to conform to parental and cultural expectations. This point of view is widely held in sociology, anthropology, and psychology (Walum, 1977: 37). Social learning theory, which has been most substantially articulated by Bandura (1977, 1986), emphasizes the notion that behaviors are gradually acquired and shaped as a response to the positive and negative consequences of those behaviors. Parents, teachers, peers, siblings and significant others (such as pop stars and sport heroes) provide the reinforcing or negative feedback necessary for shaping and maintaining behavior. These individuals also serve as role models, providing examples of appropriate and inappropriate behaviors, and their consequences can be seen when the adolescent matures. These rewards and punishments then become internalised (Penny et al, 1994: 58). In summary, social learning theorists argue that gender role behaviors, are learned by reinforcement (rewards and punishments) and observational learning. Children are rewarded or punished by their parents and society for exhibition behaviors appropriate to their gender role. As a result, gender-appropriate behaviors take on greater value for the child and are exhibited with greater frequency. Similarly, individuals learn by watching the behavior of those around them (Models), especially if the models are reinforced for their behavior and to the same sex children (Eccles, 2000: 455). Social learning theory places more emphasis on environmental influences. Accordingly, health promotion or risk behaviors are socially learned and purposeful behavior, results from interplay of social –environmental and personal perceptions and influences.
thereby under one’s personal control. In contrast, external locus of control refers to the perception of positive/negative events as being unrelated to one’s own behavior in certain situations and thereby beyond personal control (www.workhealth.org). Theoretical basis of locus of control relies on individual differences between how people perceive events as a result of their own behavior or endurance characteristics (internal), or as being controlled by some other variables like chance, luck, fate, or authority (external).

In the area of health/illness, health locus of control is the degree to which individuals believe that their health is controlled by internal or external factors. Likewise, health locus of control is “a concept that refers to an individual’s views regarding the relative control he/she has over his/her health condition (Pacther et al, 2000:716). Externals refer to the belief that one’s health condition is under the control of powerful others, or is determined by fate, luck, or chance, but internals refer to the belief that one’s health condition is directly the result of one’s behavior. Rotter found strong support for the hypothesis that internal locus of control individuals are likely to: a) be more aware of environmental factors that influence future behavior, b) take steps to improve environmental conditions, c) place greater value on skill or achievement reinforcement, and d) be resistive to conformity and other subtle attempts to influence their behavior. External locus of control conversely is associated with Rotter’s concept of learned helplessness and derived from a low expectation of reward/control over reward (www.members.tripod.com). Similarly, some studies investigate the role of locus of control to a variety of health-related behaviors, including health-facilitating behaviors (for example, physical activity, and exercise) and health-damaging behaviors (for example, overweight, smoking). “The literature concerning research on the relationship between locus of control and health-facilitating behaviors as a whole points toward internal locus of control as a mediating factor of actions taken to prevent health problems. Likewise, research on health-damaging behavior has also shown that internal individuals are often better off than externals (www.workhealth.org). Internals are prone to obtain proper nutrition, exercise, rest, stress reduction, and to adopt prevention/enhancement

42
roles that males and females occupy, because roles are seen to encourage or
discourage particular behaviors. In the area of health and illness, social role
theory attempts to understand how the multifaceted nature of men and women’s
lifestyle affects their health and well being (Pavalko and Woodbury, 2000).
According to Nathanson (1975): women report more illness than men because it
is culturally more acceptable from them to be ill; and the sick role is relatively
compatible with women’s other role responsibilities, and incompatible with those
of men, and also women’s assigned social roles are more stressful than those of
men; consequently women experience more illness. Gove (1984) develops the
‘fixed role’ hypothesis and its relationship to men’s health. According to this idea
the roles of men tend to be more structured or fixed than the roles of women. It is
argued that highly structured or fixed roles tend to be causally related to good
mental health and low rates of morbidity. Marcus and Siegel (1982) have
developed the ‘role compatibility’ hypothesis, which is based on the premise that
traditional female roles are more compatible with the sick role than traditional
male roles. Differences in early socialization might inhibit illness and sick-role
behavior among men, and conversely facilitate such behavior among women.

Gender differences in health behaviors can be attributed to gender role
socialization, gendered expectations and obligations that determine appropriate
or misappropriate behaviors for men and women, and influence health status of
individuals. A common explanation of the decline in sex differences in smoking in
western societies focuses on the consequences of gender equality. Narrowing
sex differences in smoking in times of increasing gender equality and
strengthening values of female independence, leads to the inference that the
new found freedom and higher status of women have prompted the undesirable
behavior of smoking (Pampel, 2001: 388). Similarly, Jung (2001: 236) in
explaining gender differences in alcohol use focuses on gender role.
Psychosocial explanations for drinking among women emphasize sex role as a
set of learned beliefs and attitudes about the roles for men and women in a
culture. The traditional sex role theory centered on health and home, might
create frustration and depression, leading some women who felt restrained by it
(2001: 134) also points out that socio-economic status determines and shapes individual’s exposure to and experience of virtually all known psychosocial, and many biomedical risk factors for health. Thus socio-economic positions are originally fundamental causes that shape exposure to and experience of most diseases and risk factors for health, even as these diseases and risk factors change over time.

Overall, several social, psychological, and biological mechanisms have been hypothesized to underlie the socio-economic status–health relationship. One set of hypotheses centers on the ways that socio-economic status may influence health status through its effect on shaping the individual’s day-to-day lifestyle and health-affecting behaviors. Among these potentially socio-economic status–related health-affecting lifestyle behaviors are patterns of diet, sleep, exercise, smoking, drinking, and drug use. Health-related behaviors and health status may affect one another through direct, indirect, and, interactive mechanism. Another pathway through which socio-economic status and health are hypothesized to influence each other is by way of socio-economic status differences in exposure to psychological stress and distress. Another obvious way is through differences in occupational conditions: the job demands and conditions of workers in different positions in the occupational hierarchy may differentially affect their health (Mulatu and Schooler, 2002: 23).

The above analysis of theoretical perspectives shows the prevalence of mainly three broad approaches. These are socialization, social role theory, and socio-economic status approach. The present study, proposes to test the efficacy of all these approaches in explaining gender related differences in health behaviors of students in Iran and India.

4) Objectives of the study

The main objective of this study is to describe and explain gender differences in health-related behaviors of university students in Mazandaran University in Iran and Panjab University in India, with special emphasis on
magnitude of these descriptive and explanatory variables for men and women, and for students of Mazandaran University and Panjab University?

5) Are there any significant gender differences in terms of preventive health behaviors of students in anticipation of illness and protection of health? And what are the main factors that can be associated with these differences?

5) **Hypotheses of the study**

With respect to main objectives of the study, some major hypotheses of the present study are:

1) That women and men students are different in terms of awareness of risk factors involved in illness (health knowledge), and these differences can also be observed at the national/university levels.

2) That women and men students differ from each other in their beliefs on important of health maintenance behaviors (health beliefs), and these differences are also manifest at the national levels.

3) That women and men students show different habits in terms of observance of health related behaviors, and these differences are also exist at the national levels.

4) That men and women students choose different types of preventive health behaviors in anticipation of illness at the national/university levels.

6) **Significance of the study**

The significance and importance of the present study is multifold. **One**: as stated above, research studies highlight the importance of gender in influencing health related behaviors of individuals. Gender is perhaps the single characteristic, which most fundamentally determines perceptions, behavior, and position in most societies. No other characteristic of individuals has been subjected to the same degree of cultural and social learning. Therefore, it may be
expressions, which are produced by the group in their effort to cope with the demands and contradictions of social structures and the significant amounts of mortality and morbidity experienced by people of different age and genders, particularly in youth and adolescence, and how these could be prevented. Therefore, this study, which relates to the health-related behaviors of university students and tries to focus on and explain gender as well as cultural differences in Iran and India, has much significance for the understanding and promotion of positive health related behaviors.