Adolescence is a period of exploration, experimentation and formation, but young people often lack knowledge, experience and maturity to avoid the grave risks that confront them. In both developed and developing countries, adolescents can face overwhelming problems. Like substance abuse and violence, which makes them more vulnerable to life-threatening diseases.

Alcohol and Tobacco use are serious health problems for adolescents. Swayed by images of adult smokers and drinking models or through advertising, young people perceive smoking and drinking to be sophisticated or fun. One third to one half of young people who experiment with cigarettes and alcohol become regular smokers and alcoholics.

Smoking and drinking are accepted as reasons for mortality and morbidity world over. This behaviour is initiated during adolescence. According to Verkooijen et al. (2007), adolescence is a sensitive period with respect to substance use. Engaging in smoking, alcohol, and other drug use is initiated dramatically during this phase of life. Although taking on increased risks is a normal phenomenon during growing up and becoming an adult, it also makes young people vulnerable to serious health problems. Acute health problems may result from substance-induced accidents, violence, unsafe sex, or unwanted pregnancies. In the long term, the adoption of unhealthy lifestyle patterns leads to the development of chronic and widespread diseases. Therefore, both current health of young people and future health of adults could be improved by modulating the factors that determine substance use in adolescence. Within the field of health psychology, numerous attempts have been made to reveal young people’s social and cognitive motives to engage in substance use. The focus of the present study was, therefore, to explore the impact of protective and risk factors in smoking and drinking among adolescents.
A. CONCEPTUAL FRAMEWORK

HEALTH HABITS

Health is one of the most vital, but taken for granted aspects of everyday life. When jeopardized or diminished, it becomes of salient and central concern. Health and illness are universal elements of human life (Marks et al., 2000). Generally Health Habits include proper eating and exercise patterns and avoidance of use of alcohol, smoking and drugs.

Health

The word health comes from an Anglo-Saxon term meaning 'wholeness'. The same root-word gives us the words 'whole' and 'holy'. It is interesting that the religious idea of being spiritually holy has a similar origin as the medical notion of being physically healthy. Before the development of Western medicine, the role of physical healing was often closely connected with that of spiritual healing, and religious people were involved in the care of the sick. Even today spiritual health is still associated with physical well being in many parts of the world (Benyard, 2001).

Now-a-days, the adolescent years have been recognized as crucial for the later emotional and physical development of the individual. This has been evidenced in many reviews of the studies carried out on this age group (Heaven, 1996). However, it is recently only that research attention, in both the medical and social sciences, has begun to focus exclusively on adolescent health.

According to Heaven (1996) adolescence is a time during which the future young person is striving to achieve a personal identity. As such, it is a time during which the adolescent will experiment with different behaviours. Some have viewed the adolescent years as a time of 'storm and stress' and of alienation. Others see it simply as a period of risk. Risky behaviours are in fact those of which outcome remains unclear. Such behaviours may have either harmful or non-injurious effects. Drug usage is a health risk behaviour.
Epidemiological studies of the major causes of adult mortality (e.g., coronary heart disease, cancer, pulmonary disease, and stroke) have revealed that many of the predominant risk factors for these diseases are behavioural. Smoking, alcohol use, dietary habits, and sedentary lifestyle in particular, are the key risk factors. Smoking and alcohol use have both been documented to begin and escalate in adolescence (Chassin et al., 1996). Dietary and exercise habits often originate in childhood, but are established more permanently during adolescence (Cohen et al., 1990).

GENERALISED SELF-EFFICACY

Bandura (1977a), introduced the concept of self efficacy. The expectancy of being able to cope with successive high risk situations as they develop is closely associated with the idea of self efficacy. Expectancy has two components: (1) cognitive (informational) component, which is associated with what a person "knows" or expects to happen as a result of performing significant behaviors and (2) motivational (incentive) component, which is related to the interest "reinforcement values" of the specific outcomes or effects. The feelings of confidence to cope effectively with high risk situations is enhancing the perception of self efficacy.

Self-efficacy is defined as the 'belief in one's capabilities to organize and execute the course (s) of action required to produce given attainments (Bandura, 1977 a). It has been related to both general and diabetes-specific health behaviors (Schwarzer, 1992). The belief that one can succeed at something that one wants to do is known as self efficacy (Bandura, 1977b). One decides whether or not to carry out a healthy behavior by deciding whether it will achieve the desired effect and then whether one is capable of doing it or not.

RELIGIOSITY AND SPIRITUALITY

In the present materialistic world, interest in religion and spirituality has dramatically increased both within culture, in general, and in psychology in
The emergence of Positive Psychology movement has fuelled attention on the question, to what extent religious and spiritual beliefs are related to behaviours in the absence of mental health problems. Probing has also been done in the way spirituality is related to positive emotional and psychological states (Joseph et al., 2006).

For many years, religiosity or religiousness has been considered as a construct that includes both internal and external aspects of religious thought and behaviour (Allport, 1950). Recently, the concept of "spirituality" has taken precedence in reference to internal struggles in the search for its meaning. Religiosity or religiousness is a comprehensive sociological term used to refer to the numerous aspects of religious activities, dedication, and belief (Wikipedia, 2005). There are several recent theoretical and empirical studies emphasizing the different experiences and outcomes associated with diverse types of religiosity. Foremost among them is the intrinsic versus extrinsic religious orientation (Wulff, 1997). Numerous studies have explored the different components of human religiosity (Hill and Hood, 1999). Cornwall et al. (1986) identified six dimensions of religiosity based on the understanding that there are at least three components to religious behaviour: knowing (cognition), feeling (affect), and doing (behaviour). For each of these components of religiosity, two cross classifications have resulted in six dimensions:

- **Cognition**
  - Traditional orthodoxy
  - Particularistic orthodoxy
- **Affect**
  - Spiritual
  - Church commitment
- **Behaviour**
  - Religious behaviour
  - Religious participation
Spirituality, as typically defined, encompasses a search for meaning, for unity, for connectedness, for transcendence and for the highest of human potential (Pargament, 1997). It refers to belief in a power apart from one's own existence and implies a connection with a universal force transcending everyday sense-bound reality. It is also viewed as the search for purpose and meaning within which ideas of transcendence and immanence form an integral part (King et al., 2003).

Many researchers have concluded that both spirituality and religion are multifaceted and are related to each other, and can be defined in a multitude of ways (McFadden, 1996).

Accordingly the consensus document from the National Institute for Healthcare Research affirms spirituality as "the feelings, thoughts, experiences, and behaviours that arise from a search for the sacred" (Hill and Hood, 1999). They have defined religion as (a) the feelings, thoughts, experiences, and behaviours that arise from a search for the sacred and/or (b) a search or quest for a non-sacred goal (such as identity, belongingness, meaning, health, or wellness) in a context that has [as] its primary goal the facilitation of (a), and (c) the means and methods (e.g., rituals or prescribed behaviours) of the search that receive validation and support from within an identifiable group of people.

In the Webster's Dictionary (1988) the word "spiritual" has been described as a synonym for "ecclesiastical" or "religious". According to Pargament (1997) religion is "the search for significance in ways related to the sacred" and spirituality is "the search for the sacred". Therefore, spirituality and religiousness represent both broad constructs, with spirituality acting as the "heart and soul of religion". Thus, religion and spirituality are not necessarily interchangeable terms but are related to each other.

The phenomenological definitions of spirituality approach it not as a process, but as an end product (Elkins et al., 1988). The motivational trait
perspective that "conceptualizes spirituality as a quality that organized within the body itself and that propels the organism" (Piedmont and Leach, 2002).

In the present study, Religious Commitment and Spiritual Well Being (viz., Religious Well Being and Existential Well Being) with respect to problems of adolescents were studied.

**Spiritual Well Being**

There is a strong support among theorists who contend that a spiritual approach to life fosters well being (Tlooczynski et al., 1997). Spirituality has recently been considered by the World Health Organization as an important aspect of health, in addition to physical, psychological, and social health (Yogesh et al., 2004). Among a number of studies regarding spirituality, mental illness, and trauma, Tsuang et al. (2002) found that existential, but not religious well-being are correlated positively with a variety of personality variables, including stress reactivity, and negatively with alcohol abuse and personality disorders.

Attempting to define Spiritual Well-Being, the National Interfaith Coalition on Aging (1975) proposed that Spiritual Well-Being is the affirmation of life in a relationship with God, self, community and environment that nurtures and celebrates wholeness. Spiritual Well-Being involves a religious and a social-psychological components. It is probably because such terms as "spiritual" and "well-being" appear to have subjective meanings.

Moberg (1971) has conceptualized spiritual well-being as two-faceted, with both vertical and horizontal components. The vertical dimension refers to our sense of well-being in relation to God (Paloutzian and Ellison, 1982), i.e., Religious Well Being. The horizontal dimension, Existential Well Being refers to a sense of life purpose and satisfaction, i.e., with no reference to anything specifically religious. To have a sense of existential well-being is "to know what to do and why, who (we) are, and where (we) belong" (Blaikie and Kelsen, 1979)
in relation to ultimate concerns. Both dimensions involve transcendence, or a stepping back from and moving beyond what it is. As human beings function like integrated systems, one would expect that the two dimensions, while partially distinctive, would also affect each other, and that there would be some statistical overlap (Paloutzian and Ellison, 1982).

Spiritual well-being seems a continuous variable, rather than dichotomous. It is not a matter of whether or not we have it, but a question of how much and in what manner we may enhance the degree of Spiritual well-being that we have. Perceiving Spiritual well-being as a continuous variable has enabled researchers to consider spirituality as having positive effect on different dimension of health.

**PARENTAL BONDING**

The concept of a ‘bond’ between a parent and a child accepted. Theoretically, it might be stated that parent-child bonds could be broadly influenced by characteristics of individual differences in attachment behaviour, characteristics of the parent or care taking system (psychological and cultural influences) and by characteristics of the reciprocal dynamic and evolving relationship between the child and the parent (Parker et al., 1979).

Studies have suggested that the parental contribution to bonding may be influenced by two principal source variables; the **first being as “care”** dimension and the second as “**psychological control over the child**” or “overprotection” dimension (Parker et al., 1979). Care has been associated with affection, emotional warmth, empathy and closeness, whereas overprotection has been associated with control, intrusion, excessive contact, infantilization and prevention of independent behaviour (Levy, 1970, Parker et al., 1979).

**STRESS**

The term “Stress” means many things to many people. According to Heaven (1996), our understanding of the nature of stress has undergone
considerable changes over many years. Selye (1956), defined stress as “the non-specific response of the body to any demand”. Lazarus and Folkman (1984), stated that psychological stress is “a particular relationship between the person and the environment that is appraised by the former as taxing or exceeding his or her resources and them endangering their well-being”.

Stressors are circumstances that represent a threat, obstacles, loss or scarcity of resources (Lazarus and Folkman, 1984). A stressor is “an environmental stimulus that affects an organism in physically or psychologically injurious ways, usually producing anxiety, tension, and physiological alterations”.

Types of Stressors
There are two types of stressors:
(a) stressful life events and
(b) chronic stressors: daily hassles and uplifts

(a) Stressful Life Events
According to Encyclopedia of Stress (2000), “a life event stress is a comprehensive list of external events and situations (stressors) that are hypothesized to place demands that tend to exceed the capacity of the average person to adapt. The difficulty in adaptation leads to physical and psychological changes or dysfunctions creating risk for psychological disorder or physical disease”.

(b) Chronic Stressors: Daily Hassles and Uplifts
Hassles are irritants - things that annoy or bother us, they can make one upset or angry whereas uplifts are events that make one feel good, joyful, glad or satisfied (Kanner et al., 1981). Some hassles and uplifts occur on a fairly regular basis and others are relatively rare. Some have only a slight effect whereas others have strong one. Minor events or daily hassles and uplifts are stressors which a
person experiences in the process of his everyday life situations (Hahn, 1999). They are different from major life events and tend to have different negative behavioural outcomes. Daily hassles were defined as the 'irritating, frustrating and distressing demands that to some degree characterize everyday transactions with the environment (Kanner et al., 1981). Daily hassles are chronic irritants. Hassles are the minor negative events, while uplifts are minor positive events (Stone et al., 1987). Hassles and Uplifts are related to the health of an individual.

Chronic stressors are aspects of the environment that are demanding on an ongoing and relatively unchanging basis (Eckenrode, 1984). These may be relatively high-intensity ones, such as fear of losing one’s job, or they may be low-intensity stressors, such as constant minor disagreements with co-workers. The dimension that distinguishes chronic stressors from other types of stressors is the frequency with which they occur. **Chronic stressors are of specific type with a high frequency of occurrence.**

**Stress Symptoms**

When faced with a stressful situation, there are some internal and surface reactions that occur which may be seen as the symptoms of stress.

Heilbrun and Pepe (1985), opined that checklist of stress symptoms is a response -defined measure of stress in distress or stressful conditions. Coping styles vary from problem focussed to emotional ones and different coping styles are used by different individuals to manage stress. Mohan et al. (1998, 2000) have also reported the same observation.

**COPING**

Coping is “a continuous cognitive and behavioural process of overcoming stress and stressful consequences of external forces” (Mohan, 2003). The term coping is viewed as a stabilizing factor that may help individuals maintain
psychological adaptation during stressful periods (Folkman and Lazarus, 1985; Billings and Moos, 1984). It is necessary for individuals for physical and psychological well-being to reduce or eliminate the negative effects of stress. It is possible for an individual to either avoid the stressful situations or learn to cope with them.

A given situation is appraised as stressful only when one lacks the resources to deal with it. These resources decide one's potential in dealing with stress and the consequences of stress. Whereas effective coping helps to maintain equilibrium, ineffective coping leads to maladjustment or disease. Hence the ways one employs for coping have a significant role to play in combating stress (Lazarus and Folkman, 1984).

Ways of Coping

Different definitions of the concept of coping responses by researchers have lead to different classification systems (Compas et al., 1995), but most research has focussed on the positive and negative effects of different coping responses on behavioural and social dysfunctions (Folkman et al., 1986).

Problem-focussed and emotion-focussed coping  – Not only do situations vary in several important ways, but also the coping responses that the situations elicit from people. Lazarus and Folkman (1984) have distinguished two broad classes of coping reactions.

a) Problem-focussed coping  – A response that is aimed at doing something to alter the source of the stress – removing, defusing, or avoiding the threatening event or altering its impact on the person.

b) Emotion-focussed coping  – Any response aimed at reducing or managing the negative feelings that arise in response to the threat or loss.
Avoidant Coping

Studies that have examined these coping reactions separately have found that not all of these responses are effective in diminishing negative feelings. In fact, there are evidences that some kind of coping responses actually make things worse. Some of these responses that seem to have this adverse effect have been termed as avoidance coping. Such reactions include wishful thinking, escapist fantasy, denial, turning to alcohol, and overeating. Another response that seems to intensify distress is self blame. The idea that some kind of coping reactions are dysfunctional rather than helpful is very important (Kazdin, 2000).

DEPRESSION

Depression has been one of the most intensely studied mental disorders. It is a widespread disorder, and depressive symptoms are common across a broad range of psychological problems (Kazdin, 2000).

Beck et al. (1979) observed that depressed individuals share common cognitive features, i.e., a negative view of the self in relation to the world, and in relation to the future. A model based on three factors viz., affective, motivational and cognitive has been given by Beck et al. (1979). Among the three approaches for depression, viz., psychoanalytic, interpersonal and cognitive one, the last was proposed by Beck in 1967 while studying the etiology of depression. He argued that all individuals possess cognitive structures called schemas that guide the ways information is attended to and interpreted. Such schemas are determined from childhood by our interactions with the external world. For example, a child who is constantly criticized may begin to believe that he/she is worthless. They might then begin to interpret every failure experience as further evidence of their worthlessness. If this negative processing of information is not changed, it will become an enduring part of their cognitive organization, that is, a schema. When this schema is activated (e.g., by a poor grade in a test or any other failure experience), will predispose them to depressive feelings (e.g., I am no good). As a
result of this faulty information processing, depressed persons demonstrate a
cognitive triad of negative thoughts about themselves, the world and the future
(Friedman, 1998).

AGGRESSION/HOSTILITY

According to Encyclopedia of Psychology (2000), Human aggression is
behaviour performed by one person (the aggressor) with the intent of harming another (the victim) who is believed by the aggressor to be motivated to avoid that harm. “Harm” includes direct physical (e.g., a punch to the jaw), direct psychological (e.g., verbal insults), and indirect (e.g., destroying the victim’s property) harms.

Affective Versus Instrumental: Affective aggression has the primary motive of harming the target, and is thought to be based on anger. It is sometimes labelled hostile, impulsive, or reactive aggression, though these labels often carry additional meaning. When aggression is merely a tool to achieve another goal of aggression, it is labelled as instrumental aggression.

Proactive versus Reactive: Proactive aggression occurs in the absence of provocation. It is usually instrumental. Reactive aggression is a response to a prior provocation. There is an asymmetrical relation between proactive and reactive aggression. Children who are high on proactive aggression usually are high on reactive aggression as well, but many children who are high on reactive aggression engage in little proactive aggression.

Hostility

Hostility in general refers to the state of exhibition of aggression or violence which differs from aggression itself. The term hostile is generally used to characterize the attitudinal background of the behaviour, whereas the term aggressive usually refers to the act of moving against another person.
According to Buss (1961), hostility can be defined as an implicit verbal response involving negative feelings and negative evaluation of people and events.

**Aggression**

Aggressive behaviour means inflation of organism. The perpetrator must believe that the behaviour will harm the target and the target is motivated to avoid the same. Several dimensions of aggression have been identified, *viz.*, Physical, Verbal Anger and Hostility as per Buss Perry Questionnaire.

Physical aggression is an intent to or actual inflicting of physical harm. Verbal aggression is verbal threat or abuse with an intention to hurt. Both are forms of instrumental aggression in which the primary goal is not just to harm the victim, but to access other involved resources. Anger is the affective aggression considered as impulsive, thoughtless, unplanned motive to harm the target occurring in reaction to some perceived provocation.

Hostile aggression is the cognitive component of aggression, a covert form of aggression, where prime objective is to inflict some kind of harm on the victim.

**SENSATION SEEKING**

Sensation Seeking is a psychological construct based on the theory of optimum level of arousal which postulates that every individual has a preferred level of stimulation required for reaching states of arousal that maximize affective, cognitive and motor functioning. It has been defined as “the need for varied, novel and complex sensations and experiences and, the willingness to take physical and social risks for the sake of such experiences” (Zuckerman, 1979). High sensation seeking has been linked to substance abuse (Mattoo *et al.*, 2001).

Zuckerman (1979, 1988) defined sensation seeking as the tendency to seek relatively, novel and stimulating sensation and experiences. He defined sensation seeking as "the need for varied, novel, complex sensations and experiences and the willingness to take physical and social risks for the sake of such experiences". He
has further stated that high sensation seekers have greater need for stimulation than low sensation seekers in order to achieve their respective optimal levels of arousal. As such, there are definite differential behavioural correlates of high and low sensation seekers in daily life.

Sensation seeking is measured in terms of the following four dimensions:

(i) **Thrill and adventure seeking (TAS)**: It consists of items expressing desire to engage in sports or activities involving some physical danger or risk taking (such as mountain climbing, parachute jumping, speeding in car).

(ii) **Experience seeking (ES)**: It contains items describing the desire to seek new experiences through the mind and senses by living in a nonconforming life style with unconventional friends, music art (arousal of the mind and senses through a non-conforming life style).

(iii) **Boredom susceptibility (BS)**: It indicates an aversion for repetitive experience of any kind, routine work, or even dull or predictable people. It indicates a restless reaction when things are unchanging.

(iv) **Disinhibition (DIS)**: It has been named for the items describing the needs to disinhibit behaviour in the social sphere by drinking, partying and seeking variety in sexual partners. It measures the desire to seek social stimulation in uninhibited, social activities and is a type of sensation seeking related to non-conformity, impulsivity and rebelling against behavioural norms.

Sensation seeking form V (Zuckerman, 1979) has been used in the present investigation measuring all these four sub factors thereby yielding a total sensation seeking score, obtained by summing the scores on all the subscales.
B. RELATED STUDIES

SPIRITUALITY, RELIGIOSITY AND DRUG ABUSE AMONG ADOLESCENTS

It has been theorized that religiosity (measured as religious commitment or religious service attendance) may positively affect health by

(a) encouraging positive health behaviours and discouraging the negative ones;

(b) facilitating social support, and

(c) giving individuals a sense of coherence or meaning in their life (George et al., 2000).

Parental religiosity and spirituality could affect adolescent well-being directly, via providing them with resources that meet their spiritual, emotional, and physical needs, by suggesting that they engage in behaviours which are more or less adaptive, by providing instrumental and emotional support and by helping adolescents to interpret events from a spiritual or religious viewpoint. Indirectly, parental religiosity and spirituality could affect adolescent well-being directly, via

(a) modelling positive behaviours leading to spiritual, emotional, and physical well-being and abstaining from those that compromise good health, e.g., smoking and drinking,

(b) creating a home environment that promotes communication, is cohesion, is low in conflict, and deals forthrightly with issue issues from a religious perspective, and

(c) having inputs into the adolescent’s peer group in much the same way the religious community of which adolescents are a part may affect their well being:

(i) by sanctioning behaviours that are health-promoting and discouraging or prohibiting those that compromise well being, like smoking and drinking
(ii) by providing a paradigm to interpret events that occur on the individual, family, or community level and

(iii) by providing essential of religion ‘to do’ and ‘not to do’ for a peer community of adolescents (George et al., 2000; Shahab et al., 2007).

Adolescents’ own behavioural choices may emanate from their religious and spiritual commitments. They may find their religious and spiritual commitments a source of support and comfort, particularly if they have peers within the religious community to which they belong. In making sense of the confusion of adolescence, religious and spiritual commitments may give youth a paradigm from which to ascribe meaning (Pargament, 1997).

Religious youth are found more likely to behave in ways that enhanced their health, such as getting proper nutrition, exercise and rest (Wallace and Forman, 1998). Importantly, these patterns persisted after controlling for demographic factors. An inverse relationship between adolescent spirituality and substance use was found by other authors (Holder et al., 2000; Miller et al., 2005).

The researchers have established that Spiritual Well Being inhibited alcohol and nicotine and other drug use (Wills et al., 2003; Cook, 2004; Galen and Rogers, 2004; Dinn, 2005). Both Religious Well Being and Existential Well Being were inversely related to substance abuse.

A study by Nollen et al. (2005) examined the relationship between religiosity, social support, and gender on smoking cessation among a sample of 498 urban African American smokers using the nicotine patch. Smoking status and social support were assessed at baseline, week four, and month six, while religiosity was assessed only at baseline. Logistic regression analysis indicated that neither baseline religiosity, social support, nor the interaction between baseline social support and gender predicted quitting at month six. However, a significant positive association was found between females' social support and
quitting. Additionally, a significant positive association was found between males' social support and quitting. The findings highlight the importance of social support during an active quitting attempt.

Relationship between aspects of spiritual well-being, alcohol use and related social cognitions in college women was explored by VonDras et al. (2007). Results suggested religious and existential well-being to be inversely associated with indices of alcohol use and the likelihood of attending a social event where alcohol was served. Further, religious well-being was found to be negatively associated with beliefs concerning the social effects of alcohol, while existential well-being was observed to be a significant predictor of a composite set of attributions related to alcohol prevention. Importantly, these data suggested religious and existential aspects of spiritual well-being as moderators of behaviour as well as casual attributions and beliefs that represented a cognitive mechanism of alcohol prevention in college women.

SELF-EFFICACY AND DRUG ABUSE AMONG ADOLESCENTS

Self-efficacy refers to confidence in one’s ability to do what is required to produce the desired outcome. Fontaine and Cheskin (1997) reported that self-efficacy judgments predict outcomes in a variety of addictive behaviours such as smoking and drinking problems. Similar results were found by Feldman et al. (1999) in their study.

According to Bandura (1997), more positive self-efficacy beliefs are hypothesized to lead to efficacy-confidence in one’s ability to execute the performances requiring greater effort and persistence in the face of obstacles, which in turn leads to a higher probability of successful behaviour change. Self-efficacy has been widely studied in smoking and drinking cessation, with positive results. High overall confidence in one’s own self was found to be associated with success in quitting smoking (Gulliver et al., 1995). This relationship that smokers with higher efficacy ratings were less likely to relapse was also confirmed by
Gwaltney et al. (2002). This implied that self-efficacy plays an important role in substance abuse.

Bandura et al. (1997) examined how adolescents’ attitudes and social skills affect current substance use and intentions to use substances in the future. They administered an anonymous questionnaire to 2646 seventh graders in their classrooms. This questionnaire was developed to measure the frequency of tobacco, alcohol, and other substance use, anticipated use, positive attitudes toward drug use, self-efficacy to say “no,” decision-making skills, advertising-viewing skills, anxiety-reducing skills, communication skills, drug-resistance skills, perception of peer substance use, and weapon-carrying behaviour. Ethnicity classified respondents as “white” or “students of color” and family structure indicated one vs. two-parent families. Data were analyzed with Spearman’s r, analysis of variance, and multiple linear regression. A multiple linear regression model demonstrated that self-efficacy to say “no; positive attitudes toward drug use; perception of peer substance use; male gender; weapon-carrying; and fighting accounted for 51% of the variation in the current use of drugs. Anticipated substance use during the subsequent year was significantly associated with current substance use, positive attitudes toward drug use, self-efficacy to say “no”, drug-resistance skills, weapon-carrying, and fighting behaviour.

According to Piko (2001), a number of factors emerged as being associated with adolescent smoking. While theoretical evidence suggested that attitude could be an important factor influencing smoking, empirical findings were somewhat contradictory. The main goal of Piko (2001), was to identify the characteristics/dimensions of attitudes towards smoking in adolescence. Data were collected among primary (Grades 7–8), and secondary (Grades 9–12) school students using randomly selected classes in Hungary (n=261). The self-administered questionnaire consisted of questions on sociodemographics, smoking behaviour, beliefs, and attitudes related to smoking (items adapted from The
Students' Health and Lifestyle Study developed by the research team of The University of Western Ontario, Canada. Factor analysis of the statements concerning smoking gave five factors: antismoking attitude, liking attitude, worrying attitude, disliking attitude, and unrealistic attitude. Antismoking attitude proved to be the most important influencing factor of tobacco use, which was greatly independent from the number of smoking friends in boys and older adolescents. Findings supported the idea that antismoking interventions can be adapted to the target groups as programs may have different impact on boys and girls and on different age groups.

PARENTAL BONDING AND DRUG ABUSE AMONG ADOLESCENTS

The period of adolescence is not only marked by physical and intellectual developments, but these developments are also accompanied by significant changes in social relationships, which in turn substantially influence particularly those behaviours that are largely socially defined e.g., sexual behaviour, smoking and drinking.

Parents obviously shape the physical and social environment in which young people live. They often define in explicit terms the level of tolerance and social acceptability of a range of behaviours. Family functioning, parental family management techniques and parental behaviour have all been associated with adolescents' health, particularly with 'anti-social' behaviours including smoking, alcohol misuse, and the use of illicit drugs (Baumrind, 1987).

Although the family and peers are the primary social influence on health related behaviour, they are by no means the only significant social factors. Important secondary social influences on behaviour include both the school and the mass media. There is clear evidence of a relationship between school experience and social behaviours. It appears that the more positive the family experience, the more positive is the health behaviours shown by the adolescents. The reverse is also true in that dislike for a school, and/or under achievements are
closely associated with health compromising behaviours including substance misuse and unsafe sex (Jessor and Jessor, 1977).

Authoritative parenting has been found to be an optimal parenting style associated with well-adjusted children and adolescents. Baumrind (1987), in her study found that success in shielding children from dysfunctional, risk taking behaviours (like drug use) appeared to be a result of strong mutual attachments that persist through adolescence, and consistent parental practices of supervision and discipline. Other researchers also found that drug users have less satisfactory relationships with their parents than nonusers, that they are less likely to report closeness to their parents, and that parents of these children are less likely to set rules and standards for their children (Kandel and Davies, 1996). Although the role of parental monitoring has been shown to be an important predictor of drug use in adolescence, the role of affective relationship between the parent and the adolescent is also important (Division et al., 2004; Wu et al., 2004).

Several studies of parent adolescent relationships have supported the hypotheses that predominantly negative emotions in the parent-child relationship are associated with poor adolescent outcomes. It was observed that parents who were more hostile (rejecting) than warm were more likely to have children at risk for developing elevated depressive symptoms or conduct problems than parents who were less rejecting (Ge et al., 1996).

Family environment is an important factor in substance abuse. Low family cohesion, poor familial functioning and family disunion were found by Fletcher et al. (2004) to be related to increased rates of adolescent substance use.

Parents and the family context play important role in youth smoking and drinking. According to Costa et al. (2005) adolescents themselves acknowledge the important role that parents play in providing drinking and smoking related messages.
A study by Carson et al. (1999) examined the relationship among a host of family characteristics and indicators of adolescent competence in a sample (n=107) of 8th-9th grade students in one school located in Berhampur city in Orissa state, India. Social competence and antisocial behaviour were assessed by teachers, and adolescents evaluated various areas of their own competence on a perceived competence scale. Final examination grades were also obtained as a general measure of cognitive competence. The results indicated that families of more socially competent participants tended to be verbally and emotionally expressive; democratic with regard to discipline and decision making; close but not enmeshed; higher in parent-adolescent communication and lower in external locus of control. Consequently, families of more antisocial adolescents had more conflict and enmeshment and were more external-locus-of-control oriented and either permissive or authoritarian.

Parental connectedness (i.e., feelings of warmth, love, and caring from parents) and perceived parental expectations for school completion were significant predictors of multiple risk behaviours (viz., alcohol, tobacco, and marijuana use and early sexual activity (Resnick et al., 1997; Russ et al., 2003). Parental support appeared to influence health risk behaviour through a variety of pathways, including adaptive coping, academic competence, and fewer deviant peer affiliations (Drapela et al., 2006).

Levels of perceived parental support, control and participation with self-esteem were correlated in a study by Croteau (2005). The results showed self-perception of adolescents to be strongly and positively correlated to positive perception of parents. An important role was played by self-esteem of adolescents for not indulging in substance abuse.

Taylor et al. (2004) examined how saturation of an adolescent’s environment with models of cigarette smoking (e.g., parents, siblings, friends) affects the probability of tobacco and alcohol use among junior high and high
school students. The Health and Smoking Questionnaire was administered to 806 adolescents (182 smokers and 624 non-smokers; 57.2% female) average age was 15.1 years. Risk for smoking or using alcohol increased dramatically as the number of models who smoke increased in an adolescent’s environment. For instance, adolescents with one significant other who smoked were nearly four times more likely to smoke than someone with no significant others who smoked. However, if an adolescent had four significant others who smoked, they were over 160 times more likely to smoke. Similar results were found for alcohol use; adolescents who had one significant other who smoked, were more than 2.5 times more likely to drink than those without smoking models. Adolescents who had four significant other smoking models were 13 times more likely to drink. As the number of cigarette smokers in an adolescent’s environment increased, risk of tobacco and alcohol use substantially increased (Kodl and MerMelstein, 2005).

A study by Pires and Jenkins (2007) purported that parental rejection and warmth were critical to the development of adolescent drug use, and investigated a model that also considered children’s vulnerability to be positively related to drug use, whereas parental warmth was negatively associated. Deviant peer affiliations were positively associated with drug use.

A study by Novak et al. (2007) showed that unpopularity in school increased the risk of smoking. However, Alexander et al. (2001) suggested that the risk of smoking could be high among both popular and unpopular students depending on the smoking prevalence in a school. Popular students with high smoking prevalence and unpopular student in school with low smoking prevalence are equally at risk of smoking. They suggested that high smoking prevalence may reflect a social norm and to be popular, students may adopt the norm of the larger group. Unpopular students, on the other hand, may feel stressed in school and smoking may be used as a measure of stress relief.
According to Voisine et al. (2008) the prevention literature has been given little attention to show parental influences and its affect on substance use among Mexican origin adolescents, despite being the largest ethnic minority group in the United States. This study explored the effects of three types of parental influences, viz., parental monitoring of the child’s whereabouts, degree of parental permissiveness, and the strength of parental injunctive norms discouraging substance use - on alcohol, cigarette, and marijuana use and anti-drug norms. Results showed that parental permissiveness and parental injunctive norms, particularly anti-drug injunctive norms, had the strongest effects on the substance use outcomes, but parental monitoring generally was not a significant predictor.

STRESS, COPING AND DRUG ABUSE AMONG ADOLESCENTS

Throughout history, alcohol and other drugs have been used to provide relief in times of stress and frustration. This association between disruptive life change events and substance abuse has been confirmed through various studies. Stewart (2000), hypothesized that two psychological constructs facilitate and mediate relationship between stress and substance abuse. Uncontrollable stress (negative life change events) was assumed to create a sense of loss of control, which in turn engendered a decreased level of meaning in life. This meaninglessness in life experienced as stressful and uncontrollable, is then treated or medicated with various drugs.

Unhealthy adaptation to stress can take many forms, such as school maladjustment. Stressors at home and school may lead to reduced attention span and diminish motivation to succeed academically (Pryor-Brown and Cowen, 1989). Some students develop socially maladaptive coping patterns, including verbal and physical aggression toward others, defiance of authority, acting out, and juvenile delinquency (Compas et al., 1989). Anxiety depression and suicidal ideation and substance abuse are other reactions to stress (Swearingen and Cohen, 1985).
According to William and Clark (1998), alcohol expectancies (i.e., preconceived beliefs about the effects of alcohol can play an important role in moderating the relationship between stress and alcohol use. The expectancy of tension reduction by alcohol can predict problem drinking in students (Brown et al., 1996), whereas moderate and heavy drinkers can hold greater expectancies of tension reduction from alcohol than do light drinkers.

Smoking uptake by adolescents is best studied by following a cohort of children as they proceed through adolescence (Koval and Pederson, 1999). In the analysis of the first stage of such a study, several hypotheses about psychosocial factors that may modify the initiation of smoking in adolescents of 11 and 12 years age groups were examined (n=1,552) in a school system in Canada. Investigation of the stress-coping hypothesis and other possible effect modifiers as they relate to ever-smoking revealed that stress (measured by number of life events) was important for both males and females. However, the mechanisms underlying smoking appear to be different for males and females, even at the young age. In models adjusting for several factors simultaneously, rebelliousness was found to be the most important factor followed by attitudes toward the effect of second-hand smoke for males, whereas for females, mother smoking was the most important factor followed by rebelliousness.

The stress-coping model of addictive process suggested that substance use represents one of many cognitive and behavioural coping strategies adolescents may employ to manage life stresses (Wagner et al., 1999).

According to Webb (1999), while adult models of stress and coping processes have been postulated, there is a paucity of models for adolescents. Shermis and Coleman (1990), offered a cognitive-behavioural model of adolescent stress and coping having five major components: environmental stressors, environmental moderators, personal factors, stress outcomes, and behavioural outcomes.
Environmental stressors included daily hassles (like, getting involved in an argument, experiencing bad weather, having plans change unexpectedly) and major life events (like, parental divorce, death of a friend or relative, serious illness or injury), with differential effect (Compas, 1987). Environmental moderators include support from family members, peers, and school personnel. These individuals may offer advice, teach skills, provide material aid, help the adolescent overcome emotional distress, and share responsibilities (Compas, 1987). Shermis and Coleman (1990), suggested that it is the adolescent’s perception of support that actually determines the extent to which the effect of stress are moderated.

Personal factors like cognition are prominent and may also impact affective and behavioural outcomes. Shermis and Coleman (1990), identified self-talk as one form of cognitive coping. An earlier conceptualization (Chandler, 1985), included age, cognitive appraisal (e.g., perceptions of threat or loss, perceptions of control), self-esteem, and problem solving skills as personal moderating factors. Stress outcomes may include physical and psychological symptoms (Chandler, 1985). Shermis and Coleman (1990), listed drug abuse, delinquency, pregnancy and dropping out of school as maladaptive behavioural outcomes to stress.

Webb (1999) conducted a study to uncover the factors that buffer the impact of stressful experiences on adolescent adjustment. A theoretical model of adolescent stress and coping, with social support and social problem solving proposed as moderators, was investigated using path analysis. The effects of stressful events on adjustment were mediated by coping resources, which included a combination of problem solving abilities and social support. A positive correlation between stress and smoking was found (Webb, 1999).

Comeau et al. (2001), stated that the use of alcohol, cigarettes, and marijuana to be highly prevalent among adolescents. They reported that in addition to its prevalence, substance use carried significant risk of adverse
consequences such as injuries, motor vehicle accidents and assaults. They further reported that a substantial number of young people who were smoking cigarettes would die prematurely from a preventable, smoking-related disease.

A study by King et al. (2003), compared relationships between stressful events, affective disturbance, and personality characteristics in males and females at various levels of alcohol drinking patterns. Although participants were excluded from the study if they had been diagnosed with comorbid psychopathology, there were consistent sub threshold increases in female alcoholics' mood disturbance, neurotic personality, and heightened stressful events compared to their male counterparts. Moreover, women at the intermediate level of drinking (i.e., problem drinkers), also reported heightened mood disturbance and health-related stressful events relative to male problem drinkers. Among lifetime light social drinkers, no gender differences were apparent on any of these dimensions. These results suggested that in females, crossing a lower threshold of chronic, heavy alcohol intake is associated with more mood symptomatology, impact of stressful events, and neurotic personality style than in males at the same level of drinking. According to King et al. (2003) the variance in men's drinking may be better accounted for by factors such as adaptive coping, expectancies, and genetic vulnerability. In terms of the latter, adoption and twin studies have generally indicated stronger genetic links to alcohol dependence in males as compared to females. Moreover, factors such as “distress” (i.e., an affective response) and adaptive coping, may moderate the impact of stress on drinking behaviour differently in men as compared to women. For example, one study showed that male alcoholics had less negative association of stressful events in childhood than females. Another study indicated that avoidant coping style and positive alcohol expectancies, along with stressful events, related significantly to men's heavy drinking levels. It may be speculated that the lower neuroticism in male alcoholics may represent a premorbid personality trait or an exacerbation of avoidant coping
tendencies, which then may perpetuate the cycle of hazardous drinking in men. Results of the study by King et al. (2003) indicate the female alcoholics to be having significantly greater depression, anxiety, and neuroticism as compared to their male counterparts (and all other drinking groups). Female problem drinkers reported significantly greater depressive symptoms and health-related stressful events compared to male problem drinkers and the light drinkers. In contrast, male problem drinkers did not show elevations on these dimensions and more closely resembled light drinkers, amongst whom no gender differences were found. The findings supported theories suggesting a “telescoping” of complications, health-related stress, and mood dysfunction in women at a lower threshold level of alcohol consumption as compared to their male counterparts.

A positive association between avoidance coping and alcohol use was reported by Cooper et al. (1995).

Geisner et al. (2004) evaluated the prevalence of general symptoms of psychological distress, the degree to which these symptoms were related to drinking and smoking, negative consequences related to substance use and gender specific relationships. The sample survey included 1705 students drawn from a random sample of three West Coast universities. Results revealed higher levels of consumption and more negative drinking and smoking consequences for men, more psychological distress symptoms reported for women. The association between psychological distress and negative abuse consequences was stronger among men than women.

Wills et al. (2002) reported that studies on several types of populations established the stress to be linked with cigarette smoking. Measures of negative affect and negative life events were linked to maintenance and relapse for smoking among adults. A linkage between stress and alcohol and opiate uses was found.
It has been opined that positive affect helps to ward off ill consequences of stress (Khosla, 2006). Positive affect promotes coping responses which leads subjects to find meaning even in stressful experiences and avoid substance abuse.

Rafnsson et al. (2006) reported that major stressful life events predicted higher levels of alcohol problems and depressed affect for adolescents.

Rich and Huebner (2006) investigated the characteristics of adolescents who reported high levels of life satisfaction. Youth in the high life satisfaction group exhibited significantly higher adaptive coping than those in the low satisfaction group and reported less drug abuse.

The relations between negative affect, stress, and smoking among college students, while controlling for alcohol and marijuana use were investigated by Magid et al. (2009). The study was comprehensive as it examined objective and subjective indices of stress, and two dimensions of negative affect (general distress and sadness), and included a large sample that was assessed multiple times during the academic year. Consistent with previous research, measures of depression, general emotional distress, general perceived stress, and subjective stress ratings were positively related to weekly cigarette use, with the strongest association between depression and smoking. Interestingly, objective stressful events (both social and academic) were negatively related to cigarette use. The latter finding may appear counterintuitive at first, but it was important to note that prior research suggested that smoking to be primarily a social activity in college. Perhaps students withdraw when experiencing social (e.g., fight with a friend) or academic stress (e.g., poor grade on a test), thus limiting exposure to contexts where substance use normally occurs in college, such as parties. Similar results were confirmed by Myers et al. (2009).

**DEPRESSION, AGGRESSION/HOSTILITY, ANGER AND DRUG ABUSE AMONG ADOLESCENTS**

Depression and alcohol use have been found to exist concurrently in adolescents. Torikka et al. (2001) observed that 23.6% of depressed females
consumed alcohol once a week or more as compared to 7.1% of them who were not depressed. Early symptoms of depression were linked to later problem drinking even when accounting for demographic factors.

Smoking was seen to be a risk factor for both concurrent and future depressed mood of depressive disorder, even after controlling for other substance use behaviours and risk factors (Fergusson et al., 2003; Galambos et al., 2004). Conversely, depressive symptoms and depressive disorder were shown to predict smoking uptake in adolescence and adulthood. Retrospective studies indicated that early onset of smoking posed a greater risk for depression and more severe depressive symptoms than did later onset smoking. There might be complex interactions between the level of depressive symptoms and the stage of smoking (Goodman and Capitman, 2000). Finally smoking and depression among youth might be connected through shared risk or protective factors such as demographic, social psychological characteristics (Fergusson et al., 2003). Alcohol use, particularly heavy use was linked with depression among adolescents (Rey et al., 2002; Degenhardt et al., 2003).

A positive correlation between trait anxiety levels and coping cigarette smoking motives was found by Comeau et al. (2001).

Lucenko et al. (2003), identified adolescents with greater negative affect viz., anger, aggression, anxiety report heavier substance abuse.

Alcohol use was also reported by subjects indulging in cigarette smoking and other risky behaviours (Camenga et al., 2006). They found current adolescent smokers to be even more likely to engage in risky sexual behaviours, violent acts, risky alcohol-related behaviour, and no use of seat belt or bicycle helmet than the adolescents in the early nineteens.

Eftekhari et al. (2004), examined anger expression and avoidance coping and their relationship to substance use and related consequences in a sample of
270 adolescents. Outwardly expressed anger was significantly associated with both alcohol and marijuana use as the related consequences. Avoidant coping was also significantly associated with all outcome variables. Collectively, results suggested that expression of anger and avoidant coping were independent risk factors for a substance use in adolescents.

**SENSATION SEEKING AND DRUG ABUSE AMONG ADOLESCENTS**

Temperament is a key variable in the etiology of substance use. According to Mattoo et al. (2001), the search of the addictive personality is impelled by its important implications for the understanding of development and management of substance abuse. This search led to study of personality variables like alienation, sensation seeking and dimensions of Minnesota Multiphasic Personality Inventory (MMPI) in substance abuse.

**Sensation Seeking**

According to Bardo et al. (2007), Sensation Seeking (SS) is a personality trait defined by a need to seek novel sensations and experiences, accompanied by a willingness to take risks for the sake of such experiences. This study reported that among different populations, Sensation Seeking is associated with expression of various health-related risk behaviours, most notably substance use and abuse. Evidence from basic research with laboratory animals and from human clinical studies indicated that high sensation seekers may have an overactive mesocorticolimbic dopamine system relative to low sensation seekers. While the precise molecular mechanisms underlying SS remain to be elucidated, evidence suggested that low levels of monoamine oxidase activity, as well as altered dopamine receptor and dopamine transporter expression and function might be plying a role. Sensation seeking was reported to be a reliable predictor of vulnerability to substance use disorders.
Sensation Seeking as a Risk Factor for Behavioural Problems

Although broad personality factors are sometimes used to characterize risk for negative health outcomes in humans, Zuckerman (1988) argued that narrowly-defined traits such as Sensation Seeking may be more useful in predicting specific outcome behaviours. Consistent with this, Sensation Seeking was shown to be associated with aggressive, sex-for-money and criminal behaviours (Arnett, 1996; Donohew et al., 2000). In a study conducted among high school students living in Midwestern U.S. cities, Donohew et al. (2000) found high sensation seekers to be more prone to engage in sexual risk-taking, including having multiple sex partners, causing or becoming pregnant, and having unwanted sex while drunk. Among males, Sensation Seeking is a risk factor for sexual risk-taking, with the Disinhibition scale being associated most closely with the number of partners within the past year (Bancroft et al., 2003). Further, high sensation seekers were found leaning to gamble, drive fast and suffer from physical injuries. In a survey of 279 college students, compared to low sensation seekers, high sensation seekers were found not to wear seatbelts, beat other drivers and get away, weave through traffic and enjoy passing other vehicles, and driving at high speeds as well.

Among the various potential negative health outcomes, the association between Sensation Seeking and drug use was most thoroughly characterized. Numerous studies indicated that Sensation Seeking is a reliable predictor of drug use and abuse (Desrichard and Denarie, 2005). Franques et al. (2003) reported that subjects with high sensation seeking scores were at increased risk for drug use. Similarly, as measured by the Cloninger scale, novelty seeking was robustly associated with drug use and abuse. In a meta-analysis involving 61 empirical studies, Hittner and Swickert (2006), found a small to moderate effect size between Sensation Seeking and alcohol use; however, analysis of the four Sensation Seeking subscales revealed Disinhibition to be most strongly correlated with alcohol use.
Another meta-analysis involving 82 studies investigating a restricted age group (10-15 year old subjects) revealed that Sensation Seeking and extroversion scores to be correlated most strongly with coping motives which supported alcohol use (Kuntsche et al., 2004). In an Australian study of 2,700 10th and 11th grade students, Heavy Episodic Drinking (HED) was significantly associated with Sensation Seeking (in self-report surveys). In combination with high Heavy Episodic Drinking scores, the analysis of high Sensation Seeking scores showed a correlation between potentially risky and harmful driving behaviours, such as driving under the influence, nonuse of seatbelts, and being a passenger of a driver under the influence of alcohol (van Beurden et al., 2005). In fact, Cheong and Nagoshi (1999), had found that high sensation seekers exhibit more aggression when tested under the influence of alcohol than when sober.

Bardo et al. (2007) reported that although a relationship between sensation seeking and drug abuse has been observed across various pharmacological classes, some evidence suggested that the choice of substance might be correlating with subscales of the Zuckerman scale. For example, in a study of Sensation Seeking and drug use in 1027 Norwegian male and female high school students aged 16-19 years, Pedersen et al. (1991) found high correlation of Disinhibition with alcohol, while Thrill and Adventure Seeking predicted tobacco use. In contrast, high scores on Experience Seeking predicted use of cannabis and tranquilizers. According to Bardo et al. (2007), the heritability of sensation seeking (SS) represents a biologically-based trait, and one would expect to observe a genetic influence on its expression. To assess this, Fulker et al. (1980) administered the Zuckerman scale to over 400 monozygotic and dizygotic adult twins. Using a complex biometric-genetic statistical approach to identify specific sources of variation, Sensation Seeking was seen to be primarily a function of genetic and within-family environmental factors. Genetic factors alone accounted for 58% of
the variance in Sensation Seeking scores. Some evidence indicating the degree of inheritance to be greater in males than in females was obtained.

Stoel et al. (2006) administered the SS scale Form IV to Dutch monozygotic and dizygotic twins, as well as to non-twin siblings. Monozygotic twin correlations across the four Sensation Seeking subscales were approximately twice the dizygotic twin and sibling correlations, indicating that a relatively large portion of Sensation Seeking is attributable to additive genetic factors. Heritability estimates were highest for males on the Experience Seeking and Disinhibition subscales (~60%) and lowest for females on the Boredom Susceptibility subscale (~30%). However, evidence for common environmental influences were also noted for males on the TAS subscale (~20%) and for females on the Experience Seeking and Boredom Susceptibility subscales (~15%). Thus, taken together, these behavioural genetic analyses support the view that Sensation Seeking has a heritable biological basis.

In India, Mattoo et al. (2001) and Malhotra (2006) found Sensation Seeking and drug use to be positively related. Sensation seeking other personality factors like extroversion or high sociability (Peterson et al., 2005), or impulsivity (Zuckerman and Kuhlman, 2000), emotional stability (Peterson et al., 2005), aggression-hostility (Zuckerman and Kuhlman, 2000), and disinhibition (Gerra et al., 2005; Elkins et al., 2006), were demonstrated to be predictors of alcohol consumption. Additionally, personality factors such as neuroticism, extraversion, conscientiousness and impulsivity were found to predict different motives, both internal (coping and enhancement) and external (conformity and social), for drinking, as well as desire to drink in different stressful, convivial, or boring situations (Cooper et al., 2000). Furthermore, personality factors, such as sensitivity to rewards and as well as to punishment, were found to interact with different motives for drinking, such as coping and social reasons, to determine different drinking patterns found in college students (O'Connor and Colder, 2005).
With increasing evidence that personality factors play a large role in the prediction of drug use, a focus had been on the development of personality theories that explain substance use. A major theory developed by Cloninger (1987a, 1987b) proposed alcohol abuse to be related to three dimensions of personality: Novelty Seeking (NS), Harm Avoidance (HA), and Reward Dependence (RD). These personality dimensions were proposed to reflect underlying brain systems that interacted to influence an individual's ability to adapt to novel, appetitive, and aversive stimuli. NS was defined as a tendency to respond strongly to novelty and cues for rewards that lead to frequent exploration in pursuit of rewards and avoidance of punishment. HA was defined as a tendency to respond strongly to aversive stimuli that leads to learned inhibition of behavior in order to avoid punishment and novelty. RD is a tendency to maintain behaviors previously associated with reward or relief of punishment and was proposed to be related to the brain systems involved in behavioral maintenance.

Sher et al. (2000) found that personality traits related to disinhibition or behavioral under control were the most consistent predictors of substance abuse disorders. Similar views were expressed by Skeel et al. (2008). They found novelty seeking and harm avoidance to be positively related with drug use.

According to Munafo and Black (2007), previous cross-sectional studies had shown personality differences between smokers, ex-smokers, and nonsmokers. The relation between smoking and adult personality was prospectively studied. In these prospective studies, smoking initiation was predicted by personality factors including high neuroticism, extraversion, sensation seeking, and hostility and low social responsibility, conscientiousness, agreeableness, and self-control. Some of these studies addressed the issues of change in smoking behavior and/or personality traits. High extraversion was associated with stopping smoking in young adulthood as well as starting smoking.
when younger. Early hostility was the main predictor of continued smoking in late adulthood.

The relationship between personality traits and smoking in early adulthood in a general population birth cohort, and assessed personality traits prediction of future smoking independently of current smoking behaviour was investigated by Welch and Poulton (2009). They also investigated the association between change in personality traits and change (or continuity) in smoking. It was observed that higher aggression and alienation predicted late age smoking. This study measured smoking dependence during the 12 months prior to interview at ages 26 and 32, and observed that those with higher scores in negative emotionality (and all of its subscales) were more likely to be dependent at age 32 even after controlling for dependence at age 26; so their findings were consistent with the theory that negative affect is associated with a greater tendency to relapse into dependency. They also showed a reduction in odds of future smoking dependence associated with higher levels of constraint (traditionalism and self-control) and positive emotionality (well-being and social closeness).

GENDER AND DRUG ABUSE AMONG ADOLESCENTS

As regards gender differences in depression and substance use, females were consistently found to be at greater risk of depressive symptoms, internalizing problems and depressive disorders than the males (Kuehner, 2003). Males were at greater risk of substance use disorders than the females (Rohde et al., 2001). Substance abusers boys scored higher on avoidant and emotion focussed coping (Sobti, 2010).

A study by Poulin et al. (2004) explored gender differences in the association between substance use and elevated depressive symptoms in the general adolescent population. The association between depression risk and age, alcohol use, cigarette smoking and use of cannabis in the general adolescent population was not straightforward and differed according to gender.
Finnish adolescents 14-16 years of age were surveyed Torikka et al. (2001). All analysis were stratified on gender. The risk of depression was associated with frequent alcohol use and substance use for both males and females in this sample. Brook et al. (1998) followed 975 New York children prospectively into adulthood. Despite stratifying on gender, their analyses revealed no significant differences in the risk of depressive disorder among females and males in terms of alcohol, cigarette and cannabis use.

According to Corcoran and Corcoran (2001), females are thought to use alcohol as an escapist coping strategy more than the males do. In contrast, for males, substance use may be viewed as an externalizing behaviour as it is more closely linked to attention deficit/hyperactivity disorder, conduct disorder and acting out behaviours (Pelkonen et al., 2003). Some evidence suggested the adult males are more likely to experience the onset of depression after substance use, accordingly depression may be a consequence of the biological and social effects of heavy drinking (Kessler et al., 1997).

A study to better understand the motivation for adolescent smoking and drinking and to identify the underlying risk and protective factors associated with these behaviours among adolescents was conducted by Simantov et al. (2000). A school-based survey of students in grades 5 through 12 was carried out. A nationally representative sample of 2574 boys and 2939 girls in grades 7 through 12 from 297 public, private, and parochial schools across the United States participated in the study. Adolescent boys and girls were equally likely to be regular smokers (11.2%). The prevalence rate of regular drinking was only slightly higher for boys (22.4%) than for girls (19.3%). Gender differences also emerged in motivation for engaging in these behaviours. Exposure to childhood abuse and stressful life events was strongly associated with an increased risk for boys’ regular smoking. Similar associations were found for regular drinking. For girls, a history of abuse, violence within the family, and depressive symptoms...
were significantly associated with an increased risk for regular smoking. Similar associations were also found for regular drinking. Parental support was protective against health-risk behaviours for both the sexes. Participation in extracurricular activities was associated with lower risk for regular smoking for boys and girls, however, there was no significant association between drinking behaviour and participation in activities. The increased risk for regular smoking and regular drinking among adolescents with a history of abuse, family violence, depressive symptoms, and stressful life events implied that routine screening for abuse, violence, and other family experiences should be done. Effective prevention programs to reduce smoking and drinking among adolescents might be recognizing health-risk behaviours to be associated with other negative life experiences and that the strength of these associations differed by gender.

Kaplan et al. (2003) reported that males were more likely to report a higher frequency of experimentation with smoking and drinking than females. They reported that boys, reporting an average grade of B or better had a decreased risk of engaging in health compromising behaviours; whereas for girls grades were not a significant risk factor. They further found that lack of participation in extracurricular activities among girls was related to health compromising behaviours. On the other hand, for boys, neither extracurricular activities nor acculturation were related to health compromising behaviours.

The results of study by Sieberer et al. (2006) in general supported the results obtained in earlier international literature of adolescents' health risk behaviours. Patterns of smoking and drinking varied across countries. In the Western and Northern European Countries, females are more likely or as likely as males to smoke regularly, whereas males are more likely to have higher rates of regular alcohol consumption or binge drinking (Schmid and Nic Gabhainn, 2004; Kuntsche et al., 2010). Their results confirmed the relevance of difference in cultural backgrounds for health risk behaviours. The study also showed regular
alcohol and tobacco use to be associated with mental health problems and lower QOL in almost all dimensions.

Engels and Knibbe (2000) opined that alcohol use and cigarette smoking in particular to be common during adolescence and that there might be fulfilling some positive functions, such as making it easier to approach peers and the opposite sex. Silvia et al. (2006) investigated the longitudinal relationships among changes in substance use, risk and protective factors as they are defined in the problem behaviour theory. They reported that if vulnerability of adolescents is reduced by promoting protective factors viz., school success, moral and religious activities, healthy parental modeling and family support and reducing negative affects, then universal strategies in drug abuse prevention can be framed.

**DISCELLANEOUS FACTORS CONTRIBUTING TO DRUG ABUSE**

Brook et al. (2003) examined a model of smoking behaviour derived from family interactional theory, wherein the roles of various psychosocial risk factors found to predict adolescent smoking behaviour in the United States were examined among adolescents in South Africa. The key domains of risk factors included ethnic factors; the individual’s sense of well-being; peer, sibling, and significant other smoking; personality, attitudes, and behaviours. The proposed model posited that two domains of constructs (a) personality, attitudes, and behaviours and (b) peer, sibling, and significant other smoking are each direct predictors of smoking behaviour, as well as being mediators of less immediate predictors of smoking behaviours, namely, the individual’s sense of well-being and ethnic factors. Subsequently these authors Brook et al. (2005) hypothesized that a second domain, the individual’s sense of well-being, also has an indirect association with adolescent smoking behaviour. Adolescents who do not have a strong sense of well-being are likely to experience stress. Self-perceived quality of life, defined broadly as an amalgam of both internal (e.g., self-esteem) and external (e.g., neighborhood influences), factors have also been found to be
associated with adolescent health risk behaviour. Those adolescents who feel that their lives have lesser value (relative to societal expectations) are more willing to take risks with their health. The domain of the individual’s sense of well-being is expected to have indirect effects on smoking behaviour, mediated through the domains of adolescent personality, attitudes, and behaviours and peer, sibling, and significant other smoking. Adolescents who are dissatisfied with themselves and their environment are likely to show discontent and dissatisfaction with their siblings, potentially leading them towards increased smoking behaviour. In addition, adolescents who lack a sense of well-being are more likely to select peers and significant others who are also disgruntled and thus are more likely to be smokers (potentially mediated by their own personality traits). Conversely, they hypothesized that a strong sense of well-being is associated with choosing more conventional and positive peers and significant others who will likely refrain from smoking. Thus, the individual’s sense of well-being is expected to be inversely related to deviance-prone personality, attitudes, and behaviours (such as rebelliousness) and positively associated with conventional attributes (such as being accepting of conventional roles).

Brook et al. (2005) also hypothesized that the domain of tobacco-prone personality, attitudes, and behaviours are directly associated with smoking and these behaviours also serve to mediate the relation between the domains of ethnic factors; the individual’s sense of well-being; peer, sibling, and significant other smoking; and adolescent smoking behaviour. Adolescents who are unconventional (rebellious, tolerant of deviant behaviour, or who engage in deviant behaviour) are more likely to smoke, as are those who have difficulty controlling their impulses and those who experience symptoms of depression. Although tobacco-prone personality, attitudes, and behaviours are expected to have a direct association with smoking behaviour, they are also expected to have indirect effects through the peer, sibling, and significant other smoking domains. In fact Rose et al. (1999)
had already demonstrated that adolescents with tobacco-prone personality attributes were more likely to select peers who smoke, which is in turn related to the adolescents’ own smoking behaviour.

The relationship between individuals, sense of well being, personality attitudes and behaviours with adolescent smoking behaviour was assessed by Brook et al. (2005). Results revealed that as hypothesized, the domain of personality, attitudes, and behaviours had a direct effect on adolescent smoking, as well as being mediated by the domain of smoking behaviour by siblings and peers. A reciprocal relation between the domain of personality, attitudes, and behaviours and the domain of smoking behaviour by siblings and peers was seen. There was a reciprocal relation between adolescent tobacco-prone personality traits and tobacco use by peers. Adolescents with tobacco-prone personality traits were more likely to associate with tobacco-using and deviant peers. Having friends who smoke was then linked with the adolescent having tobacco-prone personality traits. Consistent with findings reported in the United States, five personality dimensions appeared to be of importance in this regard: difficulty in self-regulation (impulsivity), intrapersonal distress, rebelliousness, delinquent behaviour, and tolerance of delinquent behaviour. Another significant pathway was from the individual’s having a sense of well-being to adolescent smoking behaviour. Not maintaining a sense of well-being that encompasses satisfaction with the self and aspects of the environment (i.e., social support, the school environment, material possessions) was seen to be associated with tobacco-prone personality, attitudes, and behaviours and with peer, sibling, and significant other smoking behaviour, which, in turn, were both related to adolescent smoking behaviour.

Predictors of smoking intentions among current adolescent nonsmokers and smokers as well as risk factors associated with smoking status were examined (Tyc et al., 2004). Adolescents (n=237), aged 12 through 18 years, were asked to
complete a questionnaire that assessed smoking behaviour and variables thought to be related to smoking. Cognitive-motivational variables including perceived vulnerability and optimism, not previously examined in adolescent smoking studies, were also included. Parental smoking, higher perceived instrumental value, higher risk taking/rebelliousness, higher perceived vulnerability, and older age increased the odds of an adolescent being a smoker. Greater intentions to smoke among non-smokers were best predicted by peer influences, less knowledge, and higher perceived instrumental value. Smokers with lower intentions to quit, perceived greater instrumental value of smoking. There are important distinctions between the factors that prompt intentions to smoke and to quit smoking.

The extent to which youthful alcohol consumption and the initiation of tobacco, betel nut, and other illegal drugs may differ by their first drinking context in Taiwanese society with social norms that are more tolerant of underage drinking was examined by Chen et al. (2008). In 2004, in a nationally representative sample of 11,943 school-attending youth in the age range of 15-18 years, information pertaining to sociodemographic characteristics, problem behaviours, lifetime experiences of alcohol, tobacco, betel nut, and illegal drugs, as well as psychoactive, drug-specific age of initiation, context at first use, average frequency, and recency of use, was assessed by anonymous questionnaires. Youth who had their first alcoholic beverage in entertainment settings or at friends' houses were more likely to become frequent drinkers. After adjustment for socioeconomic background and problem behaviours, having had the first drink in entertainment settings was associated with a faster progression into the initiation of illegal drug abuse.

A study by Bricker et al. (2009) longitudinally investigated psychological and social risk factors consistent with the Theory of Triadic Influence (TTI) as predictors of adolescent smoking transitions. Among 4218 adolescents, five
psychological risk factors (i.e., parent-noncompliance, friend-compliance, rebelliousness, low achievement motivation, and thrill seeking) were assessed in 9th grade (age 14). Two social influence risk factors (i.e., parents' and close friends' smoking) were assessed in Grades 3 (age 8) and 9 (age 14), respectively. The probabilities contributed by each of the five psychological risk factors to the overall probability of making a specific smoking transition were: 22 to 27% for the transition from never to trying smoking, 10 to 13% for the transition from trying to monthly smoking, and, for three of the five risk factors, 11 to 16% for the transition from monthly to daily smoking. Parent-compliance had a higher contribution to the probability of trying smoking when an adolescent's parent smoked (p < .05), whereas friend-compliance had a higher contribution to the probability of trying smoking when an adolescent's friend smoked (p < .001). These psychological and social factors have an important influence on adolescent smoking transitions.

The smoking practices and intention among Chinese college students was studied by Mao et al. (2009). They also explored the association between cigarette smoking and individual and psychosocial factors. Crosssectional data were collected from 1874 students from 19 college campuses in Jiangsu province, China. Both bivariate and multivariate analyses were performed to assess the associations of smoking practice and smoking intention with various individual and psychosocial factors. There was a significant gender difference in both smoking practice and smoking intention. Overall, 53% of the participants (70% male and 31% female) reported ever having smoked in their lifetime and 29% of the sample (49% male and 5% female) reported having smoked in the past 30 days. About one-fourth of the sample (44% male and 6% female) thought they were likely to smoke in the next 6 months. Male gender, low family socioeconomic status, perception of more peer smoking, more perceived benefits of smoking, higher level of pro-smoking attitude, higher level of perceived cost of
non-smoking and more involvement in other health risk were positively associated with being a past or current smoker. Likewise, male gender, older age, more friends smoking, greater perceived benefits of smoking, higher pro-smoking attitudes and more health risk involvement were associated with the likelihood to smoke in the next 6 months. The data suggested a substantial smoking experimentation among college students in China, which presented both a challenge and an opportunity to prevent a large proportion of experimenters from progressing to regular smokers.

Findings by Jamieson et al. (2010), compared problem gamblers (n=138) who were presented for treatment for their gambling to two other groups: alcohol and/or drug addiction groups. It was found that those who have gambling problems also exhibited alcohol and drug addiction.

It appears from the foregoing details that many attempts have been made to understand the problem of adolescents particularly with regards to succumbing to smoking, alcohol and drug use. There is a need to deeply look into the problem to have healthy youth for the healthy country and hence the present study was undertaken.