



Psychological Factors associated with substance abuse in youth

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Abstract: In the fast changing scenario of the world, youths, university students are considered to be the future assets of the family and the nation at large. These youngsters can contribute a lot for the welfare and the advancement of the family or nation in a truly global sense only if their energies and potentialities are channelized in the most appropriate and desired manner on the contrary, if they indulge in undesirable activities like drug abuse which is become the most prevalent social evil in the present times they can never utilize their potential and energies for self-growth, family welfare as well as for the welfare and development of the nation. Who has suggested that drinking, smoking and abuse of other drugs may suicide, since they involve such as risk to health. To curb this menace among youth, psychologist must come forward to ascertain the psychological factor which tends to increase this so these factor may be removed from the society and the nation. Which is the ultimate aim of this research. For this purpose, a sample of 300 student 100 habituated, 100 occasional and 100 non users was chosen from Magadh University Bodhgaya. For this categorizing Drug abuse schedule was use. Sinha (1968) Anxiety scale Hindi version of Taylor's manifests anxiety scale was used for assessment of anxiety level of students. Thakur and Thakur (2000) Hindi version of EPQ was used for assessment of psychoticism, extraversion, neuroticism and lie score. A significant association existed between psychological factor and Drug abuse behavior in youth. The present study has both theoretical and practical applications. Keeping this in view the present work was undertaken.

Key Word : Drug Abuser, DAS, Sinha (1968) Anxiety Scale, Thakur & Thakur (2000) personality questionnaire.

Drug abuse is defined as taking a drug for reasons other than medical in an amount, strength, Frequency or manner that damages the physical or mental functioning. The term itself conveys the notion of social disapproval and use of drug usually is self-administration (Jaffe, 1991). Psychological & social cultural factors play an important role in determining drug use. Such as adverse experiences during childhood, mentally illness, discord, violence, stressful family life, peer pressure and psychological complications (Crjeervalds, Byrvany & opjordsoen, 2000; Khan & Salman 2003; Kirkcarldya, Siefenb, surall & Birsh off, 2004; Labouvie & Mc Gee, 1986). For some drug use begins as a means to deal with trauma, anxiety,

anger depression, boredom etc. (Frederick, Resinek and wittline (1973), and some engage in drug use as a social behaviors or to fit in with a group, rather than as a way of managing negative emotions. Feeling of helplessness, lack of social support & lack of direction with in one's life can all contribute to a person's susceptibility for drug use. Glossop (1976) reported considerable deficiencies in self-esteem among drug abusers have personality characteristics like social non-confirmation, low self-esteem, depressive feelings, sensation seeking and external locus of control. The relationship of personality characteristics to different forms of substance abuse has drawn widespread attention (Labouni & Mc Gee 1986; Cox 1985; 1987; Tarter, 1988; Ahuja; 1978; Laskowitz 1961; Hoffman, 1964; Zimmering et.al 1952; Schiff, 1959 Felix, 1944; Wilker and Rasor, 1967; Gerard & Kornetsky, 1955; Earlywine, 1995; O connar, Berry, Morrison & Brown 1995).

Many researchers have stated that a high proportion of institutionalized drug users have personality problems. Research result is in fact, somewhat contradictory and inconsistent. However the result of the different studies in a general sense could be explained in terms of Eysenckian concept of introversion Extroversion, Neuroticism, psychoticism and criminal propensity. According to Eysenck's theory of personality it may be urged that drug abusers will be more extraverted as they have a kind of stimulus hunger and relatively less conditionality to social values and authority due to the high inhibitory tendencies of the brain cells in their cortex. Thus with Eysenckian theory, it is possible to predict that extraverts will be predisposed towards stimulant drugs and the introverts towards depressant drugs.

Spotts and Shontz, on the basis of Eysenck's theorization used extraversion scale of the EPI. They found statistically significant difference among carefully matched series of heavy chronic users of cocaine, amphetamines, opiates, barbiturates, sedative hypnotics and a comfortable series of non-users. Cocaine users and opiates user were found to be more introverted; where are amphetamines users, barbiturate users and non-user more extraverted. In respect to the



Indian drug scene, the linkage between extraversion and drug use is how even, Far from being settled. Tripathi (1978); Chatterjee and other (1979) supported stimulus hunger theory. In contrast, Singh and Chopra (1979) reported extraversion as one of the prominent personality traits of drug users. This was also the case with shanmugan (1979) who found drug users markedly more extraverted than non-users. he further stated that drug abusers were markedly more neurotic, psychotic and crime prone.

According to American Psychiatric Association, drug addiction is usually symptomatic of a personality disorder. It is symptomatic of organic brain disorder, psychotic disorder. Marcovitz and Myers (1944) reported that marijuana users have psychopathic personalities characterized by hostility, authority problems and impulsivity. Lewis and Osberg (1958) Summarizes, their assessment of institutionalized addicts by categorizing them as character disordered, who were "passive, aggressive or narcissistic, utilizing manipulation of others, corruption of other, provoking others to disagree among themselves and to overt anger a troublesome group to take care of. Hill et. al (1960) reported that the adolescents and all adult group exhibited deviant personality characteristics which were associated with psychopathology or which were predominantly psychopathic in nature. Many drug addicts are more like the socio-phatic personality type, i. e. lying cheating, aggression and sexual deviation.

A major psychological trait reported is that of anxiety and depression. Anxiety produces strong intense reactions within the body and mind. Anxiety responses are not always recognizable and may go untreated. Anxiety will manifest in two ways, physical and psychological symptoms from drugs and alcohol. An addict will automatically look for substances to calm an anxious state. The avoidance of uncomfortable physical agitation and painful emotions are some of the components that maintain addiction and anxiety. Both anxiety and addiction will become stronger the more the addict continues using drugs and alcohol. Anxiety problem and different type of personality disorder may increase the likelihood of using substances (Armstrong & costello, 2002; Hoffman & Cerbone, 2002; Jane - Llopis & Matytsina, 2006, Kirkcaldy et. al 2004. Rao & Chen. 2008). Mecandles (1970) explained that drug abuse may be defense against serious depression which is often accompanied by feeling of alienation. Khanzian and Khantzian (1984) suggested that depression and self-destructive motives appear in drug users due to constant criticism for parents.

Some more different type of personality traits have been regarded as contributing factor for

drug abuse self actualization, self conception visual disturbances, feeling of attention and field dependence etc. (English and Tori 1973; Manganiello, 1978; Cryns, 1974; Craig, Skolinick and Zuckerman, 1979; Cryns, 1974; Korin 1974; Arnonetal, 1974).

The drug users are normally characterized an anxious neurotic, psychotic, extrovert, tensive, frustrated, assertive, insecurity etc. All of these however, cannot be simultaneously subjected to scientific and systematic investigation. The present study was confined itself to the investigation of the psychological (personality) characteristics as found in the drug users and the non-users. Further to determine the extent to which these variable are able to differentiate the users (Occasional and habitual). From a matched group of non-users. The basic assumption is that if the experimental (users) and the control (non-users) groups differ to a significant extent on any trait on a group of traits, measurement of such psychological traits would be relevant to the prediction and control of the drug abuse.

Purpose:

1. To examine the level of anxiety among drug users and non-users.
2. To assess the level of extraversion neuroticism, psychoticism and lie of drug users and nonusers.

Hypothesis:

1. It was hypothesized that habitual and occasional drug user would some significantly higher as compared to non-users on anxiety.
2. It was hypothesized that occasional, habitual and non-uses, group of students would differ on extroversion. It was further expected that habitual drug users would be more extraverted than other two groups.
3. It was hypothesized that habitual drug users would score more on neuroticism than their counterparts.
4. It was hypothesized that habitual drug users would score more on psychoticism than their counterparts.
5. It was hypothesized that habitual drug user would score more on lie personality traits than their counter parts.

Method:

1. **Sample:** In present research the sample consisted of the three hundred (300) male postgraduate students of Magadh University, Bodh



Gaya. The sample was selected from incidental cum purposive sampling technique. The sample was drawn equally from three groups, namely, occasional drug user (N=100), habitual drug users (100) and non users (N=100). Attempt was also made to match the three groups of respondents in terms of their age (20-25 years) and socio-economic status.

2. Tools

- i) Drug Abuse schedule (DAS) : To find out the drug users a "Drug Abuse schedule" was used.
- ii) Taylor's Manifest Anxiety scale (TMAS) : Hindi version by Sinha (1968) of this scale was used to measure the anxiety level of student. The test retest reliability, after a gap of two weeks was found to be .98 (df = 48) and the internal consistency reliability to be .90 (df=68) Both the values were sufficiently high]
- iii) Eysenck Personality Questionnaire (EPQ) : For measuring personality dimensions

(extraversion, psychoticism) neuroticism and lie) Hindi version of this test by Thakur and Thakur (2000) was used. This inventory consists of 107 items. Test retest and internal consistency reliabilities for extraversion, neuroticism, psychoticism and lie scale ranging from .91 to .98.

3. **Procedure of Data collection** : For collecting the Data, the above mentioned tools in printed forms were distributed among small groups consisted of 10 to 15 students from a class in a separate room. It was extended over a period of two sessions. Efforts were made to establish a workable rapport with the students in order to ensure their co-operation.

Result and Discussion:

In quest of obtaining the result, of the present study the data were analyzed by descriptive as well as by inferential statistics. The means, SD and t-test of the variables among the group of occasional user, habitual and non-users are shown in tables.

Table - 1

Significance of difference among habitual, occasional and non-users in respect to their anxiety scores.

Sl. No.	Groups	N	Mean	SD	t-between	t-ratio	p-value
a)	Habitual	100	28.30	13.32	a & b	1.24	NS
b)	Occasional	100	25.85	14.50	a & c	3.92	<.01
c)	Non-users	100	21.13	12.60	b & c	2.46	<.05

Ns= Not significant

It is evident from above table that the habitual drug users have scored high on anxiety (mean=28.30) than non-users (mean=21.13). The obtained t value is 3.92 which is significant on <.01 level of confidence. Similarly the difference between occasional drug users (mean=25.85) and non-drug users group with respect to their anxiety scores have been found to be statistically significant (t=2.46, <.05). Although habitual drug users have scored more on anxiety (mean=28.30) than occasional drug users (mean=28.85) but the difference between the two mean is not significant beyond chance (t=1.24 NS). The finding of the present study lends support to the hypothesis formulated in the present content.

The trend of data also indicates that the college youths involving in drug abuse manifest more anxiety syndromes than those youths who never use drugs (non-drug user group). Lather & Singh (1993) reported that drug abusers show higher anxiety than non-abusers. Lewis and Peterson (1974) reported that the addicts maintain high level of anxiety. A number of researchers have accepted drugs as a means of reducing anxiety (McConnell 1977; Nichols, 1983; Wilner and Kassebaum, 1965)

Extraversion refers to the sociable, Risk taking, active, impulsive, irresponsible, dominant, lack of reflection, sensation seeking, Expressive (Eysenck's model of personality, 1975 ; Corta & McCrae, 1992).

Table - 2

Significance of difference among habitual, occasional and non- users in respect to their extraversion scores.

Sl. No.	Groups	N	Mean	SD	t-between	t-ratio	p-value
a)	Habitual	100	11.60	3.36	a & b	2.03	<.05
b)	Occasional	100	10.45	3.72	a & c	2.27	<.05
c)	Non-users	100	10.60	2.87	b & c	0.33	NS

NS – Not significant



This dimension of personality has been widely used in context of social problems. It is clear from table – 2 that habitual drug users group have scored significantly higher (mean=11.60) than those with occasional (mean=10.45) and non-users (mean = 10.60). Although students with occasional drug users have scored slightly less on extraversion than those with non-users, the mean difference has been found to be statistically insignificant (t.33; NS). Subjects with habitual drug users have been found to be more extraverted (mean=11.60) than those with occasional and non- users. Thus the

hypothesis formulated in this respect has been proved. This result is supported by many earlier findings (Shanmugam 1979, Chopra, 1979, Jackson & Matthews, 1988, Gossop and KristJanson 1977 Dubey et. al 2010). However number of researcher have found contradict result (Ebile&Pela, 1981; Rankin et al, 1982; Porrata& Rosa, 2000; Sher et.al, 2000; Halstead and Neal, 1999).

Neuroticism refers to the Anxious, Depressive, Guilt-feeling, low self-esteem, tense, moody, Hypochondriac, lack of autonomy is obsessive (Eysenck's model of personality, 1975)

Table – 3

Significance of difference among habitual, occasional and non-users in respect to their neuroticism scores.

Sl. No.	Groups	N	Mean	SD	t-between	t-ratio	p-value
a)	Habitual	100	12.28	4.42	a & b	2.05	<.05
b)	Occasional	100	11.05	4.10	a & c	4.68	<.01
c)	Non-users	100	09.1	3.68	b & c	2.62	<.01

It is clear from table – 3 that present hypothesis gains support from the finding. In the light of above finding, it may be inferred that student having neurotic tendency use more drugs and violate rules and regulations framed by society. The present finding also corroborate to a large number of studies (Skinner & Allen, 1982; Butler& Montgomery, 2004; Hoffman & Cerbone, 2002; Ruiz, Pincus& Dickinson, 2003; Quiz etal 2003;

Vollrath&Torgersen 2002; Walton & Roberts, 2004; Dorus, Senay 1980; Sher., Bartholow& wood, 2000; Dubey etal 2010).

Psychoticism refer to the Aggressive, assertive, egocentric, Unsympathetic, Manipulative, achievement oriented, dogmatic, masculine, tough minds (Eysenck's model of personality, 1975).

Table – 4

Significance of difference among habitual occasional and non-users in respect to their psychoticism scores.

Sl. No.	Groups	N	Mean	SD	t-between	t-ratio	p-value
a)	Habitual	100	7.25	2.57	a & b	1.68	NS
b)	Occasional	100	6.51	3.52	a & c	2.73	<.01
c)	Non-users	100	6.21	2.79	b & c	0.67	NS

NS= Not significant.

The findings as displayed in table-4 show that the youths of habitual drug users group have scored significantly higher (mean=7.25) than the youths of non-users group (mean=6.2) on psychoticism dimension of personality. The obtained difference is also significant statistically (t=2.73, <.01) although youths of occasional drug users and non-users are almost similar on psychoticism scores. The differences between two means are insignificant. Thus on the basis of finding of drug abuse with respect to psychoticism dimension of personality have been partially supported. Sher,

Bartholow& Wood (2000) found drug abuses appear to score high on measures of psychoticism.

Whether drug abuse among youths is linked with lie tendency? To examine this, it was hypothesized that habitual drug users would score more on lie personality trait than their counterparts. In order to test this hypothesis also youths of habitual drug users, occasional drug users and non-users have compared on lie scores obtained results are presented in Table – 5

Table – 5

Significance of difference among habitual, occasional and non-users in respect to their lie scores.

Sl. No.	Groups	N	Mean	SD	t-between	t-ratio	p-value
a)	Habitual	100	17.59	3.90	a & b	5	<.01
b)	Occasional	100	14.61	3.70	a & c	4.06	<.01
c)	Non-users	100	15.64	2.86	b & c	2.19	<.05

It looks from the table – 5.5 that the youths of habitual drug users have scored significantly higher on lie scores (mean = 17.59) than occasional drug

users (mean = 14.61) and non-users (mean = 15.64). However the occasional drug users group has scored significantly less on the lie scale than



the non-users group. But it is clear that all three groups of drug users statistically differ with each other ($t = 5.52; 4.06$ and 2.19 respectively).

Conclusion

It is concluded that these psychological factors play an important role in drug abuse. A person who is anxious, psychoticism, neuroticism tendency, there is a chance to take a drug more than other. Extroverted person have a tendency to take a risk. Sometime these tendency mold in wrong directions and they take drug in a fun but after some time they are addicted to these drugs.

References:

- Ahuja, R. (1978 & 1982). *Sociology of Youth Sub-culture*. Jaipur : Rawat Publications.
- Armstrong, T. D., & Costello, E. J. (2002). Community studies on adolescents substance use, abuse, or dependence and psychiatric comorbidity. *Journal of Consulting and Clinical Psychology*, 70, 1224-1239.
- Butler, G. K. L., & Montgomery, A. M. J. (2004). Impulsivity, risk taking and recreational 'ecstasy' (MDMA) use. *Drug and Alcohol Dependence*, 76, 55-62.
- Chatterjee, R.G., Chattopadhyaya, P.K., Bhattacharya, A.K., & Roy, A.R. (1979). Role of Neuroticism, Extraversion, Test Anxiety and Adjustment, In cigarette smokers. *Indian Psychological Abstracts*, 17(1), 64.
- Chopra, G.S. (1979). Man and Marijuana. *The International Journal of Addictions*, 4, 215-247.
- Costa, P.T., Jr. Mc Crae, R.R (1992). NEO PI-R Professional manual. Odessa FL : Psychological Assessment Resources, Inc.
- Cox, W.M. (1985). Personality correlates of substance abuse. In M. Galizio and S.A. Maisto (Eds.), *Determinants of Substance Abuse : Biological, Psychological and Environmental Factors*. New York: Plenum Press, pp.209-246.
- Cox, W.M. (1987), Personality theory and research. In H.T. Blane and K.E. Leonard (Eds.), *Psychological Theories of Drinking and Alcoholism*. New York: Guilford Press, pp.55-84.
- Craig, R. (1979) . Personality characteristics of heroin addicts : A review of the empirical literature with critique : Part II, *Int. Jl. Of Addict*, 14, 607-625.
- Crjervldsen, S., Myrvang, B., & Opjordsmoen, S. (2003). Risk factors for drug addiction and its outcomes: A follow up study over 25 years. *Nordic Journal of Psychiatry*, 57, 373-376.
- Dorus, W., & Senay, E.C. 1980). Depression, demographic dimensions and drug abuse. *American Journal of Psychiatry*, 137, 699-704.
- Dubey, C., Arora, M., Gupta S., & Kumar, B. (2010). Five Factor Correlates : A comparison of substance Abusers and Non-substance Abusers . *Jl. Of Indian Academy of Applied psychology*. 36(1), 107-114.
- Ebile, J.C., & Pela, D.A. (1981). Some aspects of drug use among students in Benin City, Nigeria. *Drug & Alcohol Dependence*, 8, 265-275.
- English, G.E., & Tori, C.A. (1973). Psychological characteristics of alcoholic clients seen in a community mental health centre. *Jl. Of Community Psy.*, 1, 403-407.
- Eysenck, H.J., & Eysenck, S.B.G. (1975). *Manual of the Eysenck Personality Questionnaire*. San Diego, CA: Educational and Industrial Testing Service.
- Felix, R.H. (1944) . An appraisal of the personality types of addict. *American Journal of Psychiatry*, 100, 462-467.
- Frederick, C. J., Resinek, H., & Wittlin, B. J. (1973). Self destructive aspects of hard-core Addiction. *Archives of General Psychiatry*, 28, 579-585.

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- Gerard, D.L., & Kornetsky, C. (1955). Adolescent opiate addiction: A study of control and addict subjects. *Psychiatric Quarterly*, 10, 457-486.
- Glossop, M. (1976). Drug dependence and self esteem. *International journal of addiction*, 11, 741-753.
- Halstead, H., & Neal, C. (1999). Intelligence and Personality in drug addicts : A pilot study. *Br. Jl.Of Addict.*63, 237-240.
- Hill, Haertzen, & Glazer, R. (1960). Personality characteristics of narcotic addicts as indicated by the MMPI. *Jl.Of General Psychology*, 62, 127-139.
- Hoffman, J., & Cerbone, F. (2002). Parental substance use disorder and the riskadolescent drug abuse: An event history analysis. *Drug and AlcoholDependence*, 66, 255-264.
- Jackson,C.P., & Matthews, G. (1988). Theprediction of habitual alcohol use from alcohol related expectancies and personality. *Alcoholand Alcoholism*,23, 58-63.
- Jane-Llopis, E., & Matytsina, I. (2006). Mental health and alcohol, drugs andtobacco: a review of the comorbidity between mental disorders and the useof alcohol, tobacco and illicit drugs. *Drug and Alcohol Review*, 25, 515-536.
- Joffe, J. H. (1991). Drug addiction and Drug abuse. In Gilman. A. G.; Roll, T. W. &Nies, A.S. (ed) & In Pharmacological Basis of Therapeutics, Pergamon press 8th edition, 522-573. Child Psychiatry Quarterly.
- Khan, W. & Salman (2003).Personality profile ofdrug addicts and normal.*Journal of Personality and Clinical Studies*,19, 23-24.
- Khantizian, E.J., Khanitizian, N.J. (1984). Cocaine addiction : Is there a psychological is position. *Psychiatric annals*,14,753-759.
- Kirkcaldy, B. D., Siefen, G., Surall, D., & Bischoff, R. J. (2004). Predictors ofdrug and alcohol abuse among children and adolescents. *Personality and Individual Differences*, 36, 247-265.
- Kirkcaldya, B.D., Siefenb, G., Surallb, D., &Bischoff, R.J. (2004).Predictors of drug and alcoholabuseamong children's andadolescents. *Personality and Individual differences*, 36, 247-265.
- Labouviee, E.W., & McGee, C.R.(1986). Relationof personality to alcohol and drug use inadolescence. *Journal of Consulting andClinical Psychology*, 54, 289-293.
- Laskowitz, D. (1961) . The adolescent drug addicts : An Adlerian view. *Jl. Of Individual Psychology*, 17, 68-79.
- Lather, & Singh, A. (1993). Drug abuse among students, Chandigarh : Arun Publishing House.
- Lewis, & Osberg (1958). Observation on Institutional treatment of character disorders. *American Journal of Orthopsychiatry*, 28, 730-744.
- Lewis, R.T., & Peterson, H.N. (1974). Human behavior – An introduction to psychology, New York :*The Ronald Press Company*.
- Korin, H. (1974). Comparison of Psychometric measures in Psychiatric patients using heroin and others drugs. *Jl. Aborm. Psychol.* 83, 208-212.
- Manganielio, J. (1978). Opiate addiction : A Study of identifying three systematically related psychological correlates. *Int. J. Addict*, 13, 839-847.
- Marcovitz, E., & Myers, H.J. (1944). The marijuana addict in the army. *War Medicine*, 6, 382-391.
- Mecandles, B.R. (1970). Adolescents : Behaviour and Development. Hinsdale, Illinois :*The Dryden Press*.
- Meconnell, J.V. (1977). Understanding human behavior : An introduction to psychology, New York : Hott, Rinehart and Winston.
- Nichols (1983). The homeostatic reflex and addictive drugs. *Neurobehavioral Toxicology and Teratology*, 5(2), 237-240.
- O'Connar, E.L., Berry, J., Morrison, A., & Brown,S. (1995). The drug-of-choice phenomenon: Psychological differences among drug userswho preferred different drugs. *The*



- International Journal of Addiction*, 30, 541-555.
- Porrata, J.L., & Rosa, A. (2000). Personality and psychopathology of drug addicts in Puerto Rico. *Psychological Reports*, 86, 275-280.
- Rankin, H., Stockwell, T., & Hodgson, R. (1982). Personality and alcohol dependence. *Personality and Individual Differences*, 3, 145-151.
- Rao, U., & Chen, L. (2008). Neurobiological and psychosocial processes associated with depressive and substance-related disorders in adolescents. *Current Drug Abuse Review*, 1, 68-80.
- Ruiz, M.A., Pincus, A.L., & Dickinson, K.A. (2003). NEO-PI-R predictors of alcohol use and alcohol-related problems. *Journal of Personality Assessment*, 3, 226-236.
- Schiff, S.A. (1959). A self theory investigation of drug addiction in relation to age of onset : Unpublished doctoral dissertation, New York University.
- Shanmugan, E.T. (1979). Personality factors underlying drug abuse among college students. *Psychological Studies*, 24, 24-34.
- Sher, K.J., Bartholow, B.D., & Wood, M.D. (2000). Personality and substance use disorders: A prospective study. *Journal of Consulting and Clinical Psychology*, 68, 818-829.
- Singh, G., & Chopra, N. (1979). Subject variables in drug use. *Indian journal of clinical psychology*, 6, 149-152.
- Sinha, D. (1968). Taylor's Manifest Anxiety Scale (TMAS), Hindi Adaptation. *Rupa Psychological Centre*; Varanasi.
- Skinner, H.A., & Allain, A.N. (1982). Alcohol dependence syndrome: Measurement and validation. *Journal of Psychiatry*, 136, 1463-1465.
- Tarter, R.E. (1988). Are there inherited behavioral traits that predispose to substance abuse? *Journal of Consulting and Clinical Psychology*, 56, 189-196.
- Thakur, G.P. & Thakur, M. (2000). Eysenck Personality Questionnaire (EPQ), Hindi Adaptation. *Manovaiayanik Parichan Sansthan*, Varanasi.
- Tripathi, A.D. (1978). Personality correlates of cigarette smoking in college students. *Indian Journal of Psychology*, 55(3), 151-153.
- Vollrath, M., & Torgersen, S. (2002). Who takes health risks? A probe into eight personality types. *Personality and Individual Differences*, 32, 1185-1197.
- Walton, K.E., & Roberts, B.W. (2004). On the relationship between substance use and personality traits: Abstainers are not maladjusted. *Journal of Research in Personality*, 38, 515-535.
- Zimmering, P., Toolan, J., Safrin, R., & Wortis, S.B. (1952). Drug addiction in relation to problems of adolescence. *American Journal of Psychiatry*, 109, 272-278.