The primary aim of the present investigation was to study the relationship of Sensation Seeking with Eysenckian dimensions of personality, personality dimensions of Impulsiveness and Venturesomeness, Machiavellianism, Vividness of mental imagery in seven sense modalities and total score on Vividness of mental imagery, Murray's needs and Academic achievement among college students. Correlates of Sensation Seeking were studied in both the sexes.

**Sex Differences**

Table 1 shows means and standard deviations for the total sample. Table 2 shows t-ratios calculated to study significance of sex differences on all the measured variables. Sex differences have been graphically portrayed in Figure 4.

A perusal of Table 2 revealed that significant sex differences emerged on Disinhibition and Total Sensation Seeking Score with males scoring higher than females on both these dimensions. Present results are similar to the findings of Zuckerman et al. (1972, 1978) and Zuckerman (1974), who also found men to be higher than women on Disinhibition and Total Sensation Seeking Score. Waters (1974) and Kurtz and Zuckerman (1978) found males
to be higher on Disinhibition in comparison to females. No sex differences emerged on Thrill and Adventure Seeking, Boredom Susceptibility and Experience Seeking, which is in line with earlier findings of Magaro et al. (1979), Fishman (1984) and Corulla (1989). This is not surprising since there is less emphasis on sex-sterotypic behaviour for males and females in today's culture (Waters, 1974).

Regarding sex differences on Eysenckian personality dimensions of Extraversion, Neuroticism and Psychoticism, males were found to score higher than females on Psychoticism. Females scored higher than males on Neuroticism. The sex differences reported on the dimension of Psychoticism are in line with the findings of earlier researchers (Eysenck and Eysenck, 1978; Bhandari and Sarup, 1987; Zuckerman et al., 1988 and Corulla, 1989) who also reported men to have higher scores on Psychoticism in comparison to women.

Present results which revealed that females scored higher on Neuroticism than men, are similar to the findings of Mohan (1975), Eysenck and Eysenck (1978), Mohan and Virdi (1985), Bhandari and Sarup (1987), Mohan and Sheoran (1987), Mohan and Gulati (1988, 1989) and Zuckerman et al. (1988) who also reported the same. No sex differences
emerged on the dimension of Extraversion and Lie (Social Desirability) Scale. Singh and Kumar (1977), Mohan and Jain (1984) and Rana (1989) had also failed to find any sex differences on Extraversion and Lie (Social Desirability) Scale.

On the dimensions of Impulsiveness and Venturesomeness, females scored significantly higher than males on Impulsiveness and males scored significantly higher than females on Venturesomeness. Eysenck and Eysenck (1978), Eysenck et al. (1985) and Corulla (1988, 1989) had also reported similar sex differences on Impulsiveness and Venturesomeness.

No sex differences were obtained on Machiavellianism. Bhandari and Sarup (1987) also found no sex differences on Machiavellianism in college students.

Regarding sex differences on Vividness of mental imagery, significant sex differences were obtained on kinaesthetic, gustatory and olfactory sense modalities as well as on total score on Vividness of mental imagery. Males scored higher than females on all these modalities as well as total score on Vividness of mental imagery. However, review of literature (Marks, 1962; Palmer and Field, 1968; Sheehan, 1967, 1971; Marks, 1973 and White et al., 1977a) revealed females to have more vivid imagery
than males, which is contrary to the present results. No sex differences emerged on Vividness of mental imagery in visual, auditory, cutaneous and organic sense modalities.

Significant sex differences emerged on needs for exhibition, intraception, dominance, abasement, nurturance, change and heterosexuality. Males obtained significantly higher mean scores than females on needs for exhibition, dominance and heterosexuality. Present results are similar to the findings of Klett (1957), Edwards (1959) Sharpe and Peterson (1971) and Dhillon and Nagrath (1987) also reported males to be higher than females on these needs. Costa and McCrae (1988) also found males to be higher than females on need for dominance.

Females scored significantly higher than males on needs for intraception, abasement, nurturance and change. The present results are in line with the findings of Klett (1957) and Edwards (1959). Present results are also similar to the findings of Sharpe and Peterson (1971) and Dhillon and Nagrath (1987) who reported females to be higher than males on need for change. The sex differences on need for nurturance with females scoring higher than males is supported by the findings of earlier researches of Sharpe and Peterson (1971) and Costa and McCrae (1988). No sex differences emerged on needs for achievement,
deference, order, autonomy, affiliation, succorance, endurance and aggression.

Significant sex differences emerged on Academic achievement with females scoring higher than males. Good and Brophy (1977) had also reported that in terms of performance in educational institutions females outperformed males.

As significant sex differences emerged on a large number of the measured variables, it was decided to analyze correlates of Sensation Seeking separately for males and females in addition to studying the correlates of Sensation Seeking in the total sample. For factor analysis and regression analysis also, separate analyses were carried out for males and females.

**Correlational Analysis**

A perusal of the results (Tables 3, 4, 5) revealed that majority of subscales of Sensation Seeking show positive correlations with each other. Keeping in view the aims and focus of the present study, the discussion has been limited to the subscales of Sensation Seeking and its correlates. The inter-correlations among other variables has not been included in the detailed discussion. Only the significant correlations have been discussed.
I. Sensation Seeking and Eysenckian Personality Dimensions

(a) Sensation Seeking and Extraversion

Regarding the relationship between Sensation Seeking, its subscales and Extraversion it was hypothesized that they would be positively related. Researchers have repeatedly found significant positive relationship between Sensation Seeking and Extraversion, especially with its impulsive aspect (Bone and Montgomery, 1970; Kish, 1971; Bone, 1972 and Eysenck and Eysenck, 1977).

Present results showed that as expected, Thrill and Adventure Seeking, Experience Seeking and Total Sensation Seeking Score were found to be positively related with Extraversion in the total sample, males and females. Disinhibition was found to be related positively with Extraversion in the total sample and males. The present results are consistent with the findings of Eysenck (1983), Campbell and Heller (1987) and Corulla (1989) who also reported similar findings. No correlation emerged between Boredom Susceptibility and Extraversion in all the three samples viz., total, male and female. Hence, the hypothesis was supported in the case of Thrill and Adventure Seeking, Disinhibition, Experience Seeking and Total Sensation Seeking Score but not in the case of Boredom Susceptibility.
(b) Sensation Seeking and Neuroticism

It was hypothesized that there would be no relationship between Neuroticism, Sensation Seeking and its subscales. However, Disinhibition, Experience Seeking and Total Sensation Seeking Score were found to be positively related to Neuroticism in the total sample, males and females. A positive relationship was also found between Boredom Susceptibility and Neuroticism in females. Present results are in congruence with the findings of Schalling et al. (1981), Eysenck (1983) and Corulla (1989). No relationship was found between Thrill and Adventure Seeking and Neuroticism in all the three samples i.e., total, male and female. High Neuroticism scorers seek some form of stimulation in less psychologically threatening ways, such as using drugs rather than facing the dangers of mountain climbing (Corulla, 1989), which may explain the present findings. Hence, the hypothesis that there would be no relationship between Neuroticism, Sensation Seeking and its subscales was not supported in the present investigation except in the case of Thrill and Adventure Seeking.

(c) Sensation Seeking and Psychoticism

It was hypothesized that Sensation Seeking and its subscales would be positively related with Psychoticism.
Results indicated that Disinhibition, Experience Seeking and Total Sensation Seeking Score were positively related with Psychoticism in the total sample, males and females. Boredom Susceptibility was found to be positively related to Psychoticism in the total sample and females. The present results are in line with earlier findings of Eysenck and Zuckerman (1978), Schalling et al. (1981), Eysenck (1983) and Corulla (1988, 1989). No correlation was found between Thrill and Adventure Seeking and Psychoticism in all the three samples viz., total, male and female.

Psychoticism measures some of the non-conforming aspects of behaviour. Present results support the findings of Strelau (1983) that some aspects of Sensation Seeking represent psychopathological propensities. Hence, the hypothesis that Sensation Seeking would be positively related with Psychoticism was supported in the case of Disinhibition, Boredom Susceptibility, Experience Seeking and Total Sensation Seeking Score but not in the case of Thrill and Adventure Seeking.

(d) Sensation Seeking and Lie (Social Desirability) Scale

Disinhibition and Total Sensation Seeking Score
were found to be negatively related to Lie (Social Desirability) Scale in the total sample, males and females. Boredom Susceptibility was found to be negatively related to Lie (Social Desirability) Scale in females only. A negative correlation was also found between Experience Seeking and Lie (Social Desirability) Scale in the total sample and females. The present results are consistent with the findings of Eysenck and Zuckerman (1978), Schalling et al. (1981), Eysenck (1983) and Corulla (1989) who reported similar results.

II. Sensation Seeking, Impulsiveness And Venturesomeness

Regarding the relationship among Impulsiveness, Venturesomeness, Sensation Seeking and its subscales, a positive relationship was expected. Results indicated that Thrill and Adventure Seeking was positively related with both Impulsiveness and Venturesomeness in the total sample. In males and females, only the relationship between Thrill and Adventure Seeking and Venturesomeness was positive and significant. Disinhibition was found to be positively related to Impulsiveness and Venturesomeness in the total sample. In males and females, Disinhibition was positively related to Impulsiveness only. Boredom Susceptibility was related positively with Impulsiveness in the total sample, males and females. Experience Seeking
was found to be positively related with Impulsiveness and Venturesomeness in the total sample and females. In males, only Impulsiveness was positively correlated with Experience Seeking. Results further showed that Total Sensation Seeking Score was positively related to both Impulsiveness and Venturesomeness in all the three samples viz., total, male and female. Earlier researchers (Eysenck, 1983; Zuckerman, 1983; Campbell and Heller, 1987 and Corulla, 1989) reported a positive correlation between Sensation Seeking, its subscales and Impulsiveness. Corulla's (1989) results also showed a positive correlation between Venturesomeness, Thrill and Adventure Seeking, Experience Seeking and Total Sensation Seeking Score.

One may clearly see that the hypothesis stating a positive relationship between Sensation Seeking, its subscales and Impulsiveness and Venturesomeness has been overwhelmingly upheld in the case of Total Sensation Seeking Score and partially upheld in the case of the subscales of Sensation Seeking.

III. Sensation Seeking And Machiavellianism

It was hypothesized that Machiavellianism would be positively associated with Sensation Seeking and its subscales. A glance at the results (Tables 3, 4, 5) reveals
that Disinhibition and Boredom Susceptibility were positively related with Machiavellianism in the total sample and females. Machiavellianism was also found to be related to Experience Seeking and Total Sensation Seeking Score in all the three samples, i.e., total, male and female. Present results are in congruence with the findings of Miller and Magaro (1977 a and b). They also found Sensation Seeking and Machiavellianism to be positively associated with each other.

No relationship emerged between Thrill and Adventure Seeking, Experience Seeking and Machiavellianism in all the three sample, viz., total, male and female. Hence, the hypothesis that Sensation Seeking, its subscales and Machiavellianism would be positively related was supported in the case of Disinhibition, Boredom Susceptibility and Total Sensation Seeking Score but not in the case of Thrill and Adventure Seeking and Experience Seeking.

IV Sensation Seeking And Vividness Of Mental Imagery

It was hypothesized that Vividness of mental imagery in seven sense modalities and total score on Vividness of mental imagery would be positively associated with Sensation Seeking and its subscales. Results (Tables 3, 4, 5) clearly show that Thrill and Adventure Seeking
was negatively related to each of the seven sense modalities as well as the total score on Vividness of mental imagery in the total sample, males and females with one exception in the female sample where an insignificant (negative) correlation was seen between olfactory imagery and Thrill and Adventure Seeking. Disinhibition was found to be positively related with gustatory and olfactory imagery in females and negatively related with auditory, gustatory, olfactory sense modalities and total score on Vividness of mental imagery in males.

Experience Seeking was negatively related with total score on Vividness of mental imagery in all the three samples. In addition in the total sample, Experience Seeking was found to be negatively related with visual, auditory, cutaneous, kinaesthetic, gustatory and organic sense modalities. In males, Experience Seeking was negatively related to gustatory imagery. In females, a negative correlation was observed between Experience Seeking and kinaesthetic and organic imagery. Total Sensation Seeking Score was negatively related to visual, auditory, kinaesthetic and organic imagery and total score on Vividness of mental imagery in the total sample, males and females.

*Keeping in view the scoring pattern, a high score on test for Vividness of mental imagery indicates low vividness of mental imagery and vice-versa. Therefore, a positive correlation indicates negative association and a negative correlation indicates positive association.*
In the total sample a negative correlation was also observed between Total Sensation Seeking Score and cutaneous and gustatory imagery. In males also, Total Sensation Seeking Score was negatively related to cutaneous, gustatory and olfactory sense modalities. Wherever, a positive association between Vividness of Mental imagery and its subscales has been reported in the present results, these results are in line with Rao's (1978) finding, who also found a negative correlation between Vividness of mental imagery and Sensation Seeking i.e., a positive association between the two.

No correlation was found between Boredom Susceptibility and Vividness of mental imagery in any sense modality. The hypothesis stating a positive relationship between Sensation Seeking, its subscales and Vividness of mental imagery has been partially supported in the case of Thrill and Adventure Seeking, Disinhibition, Experience Seeking and Total Sensation Seeking Score but not in case of Boredom Susceptibility.

V. Sensation Seeking And Needs

Regarding the relationship between needs and Sensation Seeking it was hypothesized that there would be no relationship between needs, Sensation Seeking and its subscales.
A perusal of results (Tables 3, 4, 5) indicates that Thrill and Adventure Seeking was positively related with need for dominance and negatively to needs for order and nurturance in the total sample and males. Thrill and Adventure Seeking was also positively related to need for change and negatively to need for succorance in the total sample and females. In males, Thrill and Adventure Seeking was positively related to need for heterosexuality also. Disinhibition was found to be positively related with need for heterosexuality and negatively with needs for deference and order in all the three samples viz., total, male and female. Disinhibition was also positively related with needs for exhibition, autonomy and aggression and negatively to needs for nurturance and endurance. In the total sample, Disinhibition was also positively related to need for dominance and negatively to needs for affiliation, abasement and change. In addition Disinhibition was negatively related to need for intraception in the total sample and males.

Boredom Susceptibility was positively related to need for autonomy and negatively to need for order in the total sample, males and females. Boredom Susceptibility was also positively related to need for achievement and negatively to needs for affiliation and succorance
in the total sample and males. Boredom Susceptibility was found to correlate positively with need for heterosexuality in both the total sample and females. In males, a positive correlation was also observed between Boredom Susceptibility and need for change. Boredom Susceptibility was found to be related negatively to need for intraception in the total sample and to needs for deference and nurturance in females. Experience Seeking was found to be positively related with need for change and negatively with need for order in all the three samples i.e., total, male and female. Experience Seeking was also positively related to needs for autonomy and heterosexuality and negatively to needs for deference and endurance in the total sample and females. In addition, Experience Seeking was positively correlated with need for affiliation in females.

Total Sensation Seeking Score was positively related to needs for autonomy, change and heterosexuality and negatively to needs for order and nurturance in the total sample, males and females. Total Sensation Seeking Score was positively related to needs for exhibition and aggression and negatively to need for deference in the total sample and females. In addition, a positive correlation was seen between Total Sensation Seeking Score and need for dominance and a negative correlation between Total
Sensation Seeking Score and needs for abasement and endurance in the total sample. Total Sensation Seeking Score was related negatively to need for intraception in the total sample and males. The results of the present study are in line with the findings of earlier researchers (Zuckerman and Link, 1968; Daitzman and Tumility, 1974; Zuckerman 1975 and Zuckerman et. al., 1988) who reported similar results. However, Zuckerman and Link (1968) also found a negative relationship between Sensation Seeking and need for heterosexuality which is contrary to the present results.

Therefore, the hypothesis that there would be no relationship between needs, Sensation Seeking and its subscales was clearly not supported in the present investigation.

VI. Sensation Seeking And Academic Achievement

It was hypothesized that Sensation Seeking and its subscales would be negatively related to Academic achievement. However, no relationship was found between Sensation Seeking, its subscales and Academic achievement in the total sample and males (Tables 3, 4, 5). For females, a positive correlation between Thrill and Adventure Seeking and Academic achievement was observed. The results of the present study (only in case of female sample) are
in accordance with the findings of earlier researchers (Kish and Busse, 1968; Pemberton, 1971; Kish and Donnenwerth, 1972; Buchsbaum and Murphy, 1972 and Carrol and Zuckerman, 1977) who also reported a positive correlation between Sensation Seeking and Academic achievement. Therefore, the hypothesis that Academic achievement and Sensation Seeking would be negatively related was not supported in the present investigation in case of total sample, males and females.

The above results clearly show that whereas some correlates of Sensation Seeking are common for both sexes, some distinctly different correlates of Sensation Seeking also emerged for both sexes.

**Factor Analysis**

The (34 x 34) intercorrelation matrix (Total Sensation Seeking Score and total score on Vividness of mental imagery were excluded) was factor analysed by Principal Axis Method and eleven factors were extracted for the total sample, twelve factors for males and eleven factors for females. These factors were then rotated by the Varimax Method. The next step was to identify the content and nature of the factors. In general, only variables that have a loading of .30 or above have been considered in interpreting a factor.
The interpretation of significant factor loadings on different factors yielded the following information:

**Factor Analysis For The Total Sample**

The following eleven factors extracted in the total sample accounted for 59.98% of the variance. The results of this factors analysis are presented in Table 6 (Unrotated) and Table 7 (Rotated).

**Factor 1**

This factor accounted for 11.89% of the total variance. The significant factor loadings are on the following variables:

- Visual imagery + .67
- Auditory imagery + .72
- Cutaneous imagery + .78
- Kinaesthetic imagery + .72
- Gustatory imagery + .72
- Olfactory imagery + .75
- Organic imagery + .78

The loading pattern on this factor shows the presence of highly significant loadings on each of the seven imagery sense modalities viz., visual, auditory, cutaneous, kinaesthetic, gustatory, olfactory and organic. This points to the existence of a fairly strong and close knit single
factor of imagery and therefore may be appropriately named as the factor of 'Vividness of mental imagery'.

Extensive psychometric analysis of the Shortened Version of Questionnaire of Mental Imagery by Sheehan (1967) and Richardson (1969) have also shown that all the seven of the imagery subtests tend to load on a single 'total vividness of imagery' general factor.

**Factor 2**

This factor accounted for 6.97% of the total variance. The significant factor loadings are on the following variables:

- Neuroticism: +.71
- Lie (Social Desirability) Scale: -.59
- Impulsiveness: +.66
- Machiavellianism: +.40
- need for deference: -.35
- need for order: -.35
- Academic achievement: +.51

The loading pattern on this factor suggests that college students who are high on Neuroticism are also high on Impulsiveness, Machiavellianism and Academic achievement and low on Lie (Social Desirability) Scale, need for deference and need for order. The presence of
highly significant factor loadings on Neuroticism and Impulsiveness is in congruence with the findings of earlier studies regarding the relationship between Neuroticism and Impulsiveness (Eysenck and Eysenck, 1978 and Corulla, 1989). According to Gray et al. (1983) there are two kinds of impulsive individuals one who are high on Extraversion and low on Neuroticism and the other who are high on Extraversion and high on Neuroticism with both kinds being high on Psychoticism. In the present investigation the college students seem to be of the latter type. This is an interesting finding which needs further replication.

Presence of significant factor loadings on Neuroticism and Machiavellianism lend support to the findings of Nigro and Galli (1985) and Poderico (1987) who also found moderate anxiety to be associated with higher Machiavellianism scores. The significant loadings on Neuroticism and Academic achievement is in contrast to the findings of Dhawan (1987) who found Neuroticism to be negatively related to Academic achievement. The significant factor loadings on needs for order and deference is in line with the findings of Sharpe and Peterson (1971) who also found these needs to be positively associated.

The loading pattern on this factor further suggests that need for deference and need for order are associated
with Lie (Social Desirability) Scale, i.e., individuals who are characterized by a tendency to fake good seem to be under pressure to conform socially and also tend to be high on need for deference. Such conforming students like to take suggestions from others, do what is expected of them (need for deference) and prefer to have things organized so that they can work smoothly without change (need for order).

**Factor 3**

This factor accounted for 6.95% of the total variance. The significant factor loadings are on the following variables:

- Extraversion \(+.30\)
- need for exhibition \(+.56\)
- need for intraception \(-.65\)
- need for abasement \(-.65\)
- need for endurance \(-.41\)
- need for heterosexuality \(+.66\)

The factor loading pattern reveals that need for heterosexuality is positively associated with need for exhibition and Extraversion and negatively with needs for intraception, abasement and endurance. The presence of significant factor loadings on need for heterosexuality
(+.66) and need for endurance (-.41); and need for exhibition (+.56) and need for abasement (-.65) are in accordance with the findings of Sharpe and Peterson (1971). Presence of significant loadings on Extraversion and need for exhibition are in congruence with the earlier studies regarding the relationship between Extraversion and need for exhibition (Costa and McCrae, 1988 and Livneh and Livneh, 1989). Furthermore, the positive loadings on need for heterosexuality and Extraversion lend support to the findings of Wilson and Nias (1975) who reported that extraverts confess to higher levels of libido, enjoy sexual humour and prefer variety in sexual partners.

Therefore, it may be concluded that college students who like to engage in social activities with the opposite sex, say witty and clever things, tell amusing jokes and stories are inclined to be more sociable, uninhibited and outgoing persons.

**Factor 4**

This factor accounted for 6.02% of the total variance. The significant factor loadings are on the following variables:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disinhibition</td>
<td>-.60</td>
</tr>
<tr>
<td>Experience Seeking</td>
<td>-.56</td>
</tr>
<tr>
<td>Psychoticism</td>
<td>-.70</td>
</tr>
<tr>
<td>need for heterosexuality</td>
<td>-.34</td>
</tr>
<tr>
<td>Academic achievement</td>
<td>+.48</td>
</tr>
</tbody>
</table>
An examination of the factor loading pattern reveals that Psychoticism is associated positively with Disinhibition, Experience Seeking and need for heterosexuality and negatively with Academic achievement. According to Corulla (1989), Psychoticism is a composite factor composed of stimulation seeking expressed in a nonconforming life style. The presence of significant factor loadings on Psychoticism, Disinhibition and Experience Seeking lend substantial support to the findings of Schalling et al. (1981), Eysenck (1983) and Corulla (1989). The significant factor loadings on Psychoticism and Academic achievement is supported by the findings of Goh and Moore (1978) who reported Psychoticism to be negatively related to Academic achievement.

Keeping in view the nature of the factor loadings it can be concluded that college students who are cold, unempathic, have a liking for odd and unusual things prefer a non-conforming lifestyle, tend to seek variety in sexual partners and show poor academic achievement.

**Factor 5**

This factor accounted for 5.24% of the total variance. The significant factor loadings are on
the following variables:

Machiavellianism  
need for exhibition  
need for affiliation  
need for nurturance

The loading pattern on this factor suggests that individuals who are high on need for nurturance and affiliation are low on Machiavellianism and need for exhibition. The presence of highly significant factor loadings on need for affiliation and need for nurturance is in accordance with Edward's (1959) and Sharpe and Peterson's (1971) findings that need for affiliation and need for nurturance are positively related. The nature of factor loadings also reveal that the needs for exhibition and nurturance are negatively related thereby lending support to the findings of Livneh and Livneh (1989).

A Machiavellian person is characterized by the tendency to manipulate others in a deceptive and unscrupulous fashion, shows a relative lack of affect in interpersonal relationships, has a cynical attitude towards others and a lack of concern with conventional morality (Christie and Geis, 1970a; Gemill and Heisler, 1972; Schlenker, 1980 and Sinha et al., 1982). Thus, it would be expected
that individuals scoring high on Machiavellianism would be low on needs for nurturance and affiliation.

Keeping in view the nature of factor loadings, it can be concluded that individuals who are generous, loyal and form strong attachments with others tend to be less deceitful, manipulative and do not always feel the need to talk about personal achievements, adventures and experiences.

**Factor 6**

This factor accounted for 5.06% of the total variance. The significant factor loadings are on the following variables:

- need for deference: -0.43
- need for order: -0.49
- need for autonomy: +0.64
- need for endurance: -0.36
- need for aggression: +0.65

The factor loading pattern suggests that students who are high on needs for aggression and autonomy are low on needs for order, deference and endurance. The presence of significant factor loadings on needs for aggression (+0.65), autonomy (+0.64) and deference (-0.43)
is in accordance with the findings of Sharpe and Peterson (1971) who also found needs for aggression and autonomy to be negatively related to need for deference. Presence of significant loadings on need for autonomy and need for aggression; and need for order and need for endurance are in congruence with the earlier studies regarding the relationship between needs for autonomy and aggression (Livneh and Livneh, 1989) and needs for order and endurance (Sharpe and Peterson, 1971). Further, the loading pattern reveals the presence of significant loadings on need for autonomy and need for endurance which is in contrast to the findings of Kumar (1976) who found these needs to be positively related.

Therefore, it may be concluded that college students who criticize others publicly and like to attack contrary points of view tend to make independent decisions. They dislike taking suggestions from others, do not persist at a job undertaken and avoid order and routine.

**Factor 7**

This factor accounted for 4.01% of the total variance. The significant factor loadings are on the following variables:

- Extraversion: -.37
- need for succorance: +.65
- need for dominance: -.69
The loading pattern on this factor suggests that need for dominance is associated positively with Extraversion and negatively with need for succorance. The presence of highly significant factor loadings on needs for dominance (−.69) and succorance (+.65) lend support to the findings of Sharpe and Peterson (1971). Presence of significant factor loadings on need for dominance and Extraversion is in line with the findings of Eysenck and Eysenck (1985), Costa and McCrae (1988) and Livneh and Livneh (1989) who also reported need for dominance and Extraversion to be positively associated.

Keeping in view the nature of factor loadings it can be concluded that students who want to be regarded as leaders tend to be outgoing, uninhibited, impulsive and sociable individuals and do not actively seek encouragement and sympathy from others.

**Factor 8**

This factor accounted for 3.95% of the total variance. The significant factor loadings are on the following variables:

- need for change +.85
- need for endurance −.33

The loading pattern on this factor suggests that
students who are high on need for change are low on need for endurance. According to Edwards (1959), need for change involves the need to do new and different things, while need for endurance refers to putting in long hours of work without distraction. Presence of significant positive loadings on need for change and significant negative loadings on need for endurance are in line with the findings of Edwards (1959) and Sharpe and Peterson (1971) but contrary to the findings of Livneh and Livneh (1989).

Thus, the factor loading pattern reveals that individuals who need change and variety in their environment and routine are not likely to stick to a problem for long or complete every job undertaken.

Factor 9

This factor accounted for 3.58% of the total variance. The significant factor loadings are on the following variables:

Extraversion  -.38
need for achievement  +.83

The loading pattern on this factor suggests that individuals who are high on need for achievement are
low on Extraversion, lending support to the findings of Eysenck (1962) and Lynn (1962), they also reported a negative correlation between need for achievement and Extraversion. Present results are contrary to the findings of Rattan (1986) and Costa and McCrae (1988) who reported a positive relationship between need for achievement and Extraversion.

Therefore, it may be concluded that college students who like to be successful and accomplish tasks requiring skill and effort tend to be introverted.

Factor 10

This factor accounted for 3.36% of the total variance. The significant factor loadings are on the following variables:

Boredom Susceptibility  +.79
need for autonomy       +.30
need for succorance     -.32
need for endurance      +.35

The loading pattern on this factor suggests that persons scoring high on Boredom Susceptibility also score high on needs for endurance and autonomy and low on need for succorance. Individuals scoring high on Boredom Susceptibility tend to have an aversion for repetitive experience
and boring people (Zuckerman, 1979). The nature of factor loadings reveals that students scoring high on the Boredom Susceptibility subscale of Sensation Seeking tend to be independent and will persist at a job until it is completed. The significant factor loadings on Boredom Susceptibility and need for autonomy are in congruence with the findings of Zuckerman and Link (1968) who reported sensation seekers to be high on need for autonomy. The factor loading pattern on needs for autonomy (+.30), endurance (+.35) and succorance (-.32) provide support to the findings of Sharpe and Peterson (1971) and Kumar (1976).

Keeping in view the nature of factor loadings it may be concluded that individuals who have an aversion for routine work and dull people do not seek encouragement from others rather they are independent and keep at a job until it is finished.

**Factor II**

This factor accounted for 2.95% of the total variance. The significant factor loadings are on the following variables:

- Thrill and Adventure Seeking +.77
- Venturesomeness +.81

The pattern of loadings on this factor indicates
that college students scoring high on Venturesomeness also score high on the Thrill and Adventure Seeking subscale of Sensation Seeking. Eysenck and Eysenck (1975) describe an individual scoring high on Venturesomeness as someone who perceives risk but still chooses to take a gamble. According to Zuckerman (1979) individuals high on Thrill and Adventure Seeking are characterized by a desire to engage in sports or activities involving some risk or physical danger. The factor loading pattern clearly supports the findings of Gorman (1970), Zuckerman et al. (1972), Campbell and Heller (1987) and Corulla (1988), who also found Venturesomeness and Thrill and Adventure Seeking to be positively related.

Factor Analysis For Males

The following twelve factors extracted for males accounted for 64.72% of the variance. The results of this factor analysis are presented in Table 8 (Unrotated) and Table 9 (Rotated).

Factor 1

This factor accounted for 12.99% of the total variance. The significant factor loadings are on
the following variables:

- Visual imagery +.72
- Auditory imagery +.79
- Cutaneous imagery +.79
- Kinaesthetic imagery +.73
- Gustatory imagery +.80
- Olfactory imagery +.76
- Organic imagery +.83

This factors has already been discussed as the structure found herein is similar to the Factor I of the total sample (pp.141-142).

**Factor 2**

This factor accounted for 8.19% of the total variance. The significant factor loadings are on the following variables:

- Disinhibition +.62
- Experience Seeking +.54
- Psychotism +.64
- Neuroticism +.58
- Lie (Social Desirability) Scale - .51
- Impulsiveness +.71
- Machiavellianism +.33
- need for order -.36

The loading pattern on this factor indicates that
college students who are high on Impulsiveness are also high on Disinhibition, Experience Seeking, Psychoticism, Neuroticism and Machiavellianism and low on Lie (Social Desirability) scale and need for order. Presence of highly significant loadings on Impulsiveness and Psychoticism are in line with the findings of Eysenck and Eysenck (1978). Similarly, significant factor loadings on Impulsiveness and Neuroticism lend support to the findings of earlier researchers (Eysenck and Eysenck, 1978 and Gray et al., 1983).

Further, the presence of significant factor loadings on Impulsiveness (+.71), Disinhibition (+.62), Experience Seeking (+.54), Psychoticism (+.64), Neuroticism (+.58) and Lie (Social Desirability) Scale (-.51) lend support to the findings of Zuckerman (1978) and Corulla (1989). The significant factor loadings on Disinhibition, Experience Seeking and need for order are in accordance with the findings of Zuckerman (1975) who found these subscales of Sensation Seeking to be negatively related to need for order. Presence of significant loadings on Lie (Social Desirability) Scale and Machiavellianism are in congruence with the findings of earlier researchers (Geis, 1978 and Bhandari and Sarup, 1990).
Therefore, it may be concluded that college students who are impulsive, hostile, aggressive, anxious and irrational like to have an unconventional lifestyle. They seek variety in sexual partners and resist order, routine as well as the pressure to conform socially.

**Factor 3**

This factor accounted for 5.98% of the total variance. The significant factor loadings are on the following variables:

- need for order: +.64
- need for exhibition: -.67
- need for endurance: +.70
- need for heterosexuality: -.61

The factor loading pattern suggests that persons who are high on needs for endurance and order are low on needs for exhibition and heterosexuality. The presence of highly significant factor loadings on needs for order and endurance is in congruence with the findings of Sharpe and Peterson (1971) regarding the relationship between need for order and need for endurance. Furthermore, the loading pattern on this factor reveals the presence of highly significant loadings on needs for exhibition and heterosexuality, lending support to the findings.
of Livneh and Livneh (1989), who also found these needs to be positively associated with each other.

Keeping in view the nature of the loading pattern, it may be concluded that students who are orderly and persistent neither crave for attention nor want to be physically attractive to the opposite sex.

**Factor 4**

This factor accounted for 4.98% of the total variance. The significant factor loadings are on the following variables:

- need for exhibition: -.34
- need for affiliation: +.66
- need for nurturance: +.88

The loading pattern on this factor suggests that individuals who score high on needs for nurturance and affiliation tend to score low on need for exhibition. The highly significant factor loadings on need for nurturance and need for affiliation are in congruence with the findings of earlier researchers (Edwards, 1959; Sharpe and Peterson, 1971 and Kumar, 1976). Further examination of the factor loading pattern reveals that need for nurturance and need for exhibition are negatively associated.
with each other, lending support to the findings of Livneh and Livneh (1989).

Therefore, it can be concluded that college students who like to treat others with kindness and sympathy, form strong attachments and tend to speak less about their personal achievements and experiences.

**Factor 5**

This factor accounted for 4.89% of the total variance. The significant factor loadings are on the following variables:

- need for achievement  
  +.70
- need for intraception  
  -.54
- need for change  
  -.52

The loading pattern on this factor suggests that students high on need for achievement are low on needs for intraception and change. Presence of significant factor loadings on need for intraception and need for change is supported by the findings of Edwards (1959) and Sharpe and Peterson (1971), who found need for intraception and need for change to be positively associated. Further, the loading pattern reveals that need for achievement is negatively related to need for change, lending support to the findings of Kumar (1976).
Keeping in view the nature of the factor loadings it can be concluded that persons who like to accomplish tasks requiring skill and effort tend to avoid novelty and change.

**Factor 6**

This factor accounted for 4.85% of the total variance. The significant factor loadings are on the following variables:

- need for affiliation: +.34
- need for intraception: -.42
- need for succorance: +.69
- need for deference: -.80

The loading pattern on this factor suggests that need for deference is positively associated with need for intraception and negatively with needs for succorance and affiliation. Presence of significant factor loadings on need for deference (-.80) and need for succorance (+.69) are contrary to the findings of earlier studies (Sharpe and Peterson, 1971 and Kumar, 1976). The significant loadings on need for affiliation and need for succorance are in accordance with the findings of Edwards (1959) and Sharpe and Peterson (1971).
Therefore, it may be concluded that individuals who fail to analyze and understand the motives or feelings of others are not likely to be sympathetic and loyal.

**Factor 7**

This factor accounted for 4.69% of the total variance. The significant factor loadings are on the following variables:

- need for deference: -.32
- need for autonomy: +.76
- need for aggression: +.67

The loading pattern on this factor reveals that students who are high on needs for autonomy and aggression are low on need for deference. The significant factor loadings on need for autonomy (-.76), need for aggression (-.67) and need for deference (-.32) is in accordance with the findings of Sharpe and Peterson (1971) who also reported that needs for autonomy and aggression are negatively related to need for deference. Furthermore, presence of significant positive loadings on need for autonomy and need for aggression lend support to the findings of Livneh and Livneh (1989).

Keeping in view the nature of the loading pattern, it may be concluded that individuals who are independent,
unconventional and aggressive do not like to take suggestions from or accept the leadership of others.

**Factor 8**

This factor accounted for 4.41% of the total variance. The significant factor loadings are on the following variables:

- Thrill and Adventure Seeking: +.54
- Disinhibition: +.35
- Extraversion: +.74

The loading pattern on this factor suggests that individuals who are high on Extraversion are also high on Thrill and Adventure Seeking and Disinhibition. According to Eysenck and Eysenck (1985), Extraversion comprises the following subtraits: sociable, assertive, sensation seeking, dominant and venturesome. Therefore, it would be meaningful to name this factor as the 'Extraversion' factor. The loading pattern on this factor is in congruence with the findings of Eysenck and Zuckerman (1978), Campbell and Heller (1987) and Corulla (1989).

Keeping in view the nature of the factor loadings it can be concluded that college students who are lively, active and carefree, like to indulge in physically dangerous
and risky activities and seek variety in sexual partners.

**Factor 9**

This factor accounted for 3.90% of the total variance. The significant factor loadings are on the following variables:

- Neuroticism: -.30
- need for abasement: -.77
- need for change: +.49

The loading pattern suggests that need for abasement is positively associated with Neuroticism and negatively with need for change. The need for abasement refers to the need to feel guilty, when one does something wrong and to feel the need for punishment for wrong doing (Edwards, 1959), while Neuroticism is characterized by subtraits such as anxiety, depression, guilt feelings, irrationality, moodiness and emotionality (Eysenck and Eysenck, 1985). Therefore, it would be expected that need for abasement and Neuroticism would be positively related. The presence of significant loadings on need for abasement and need for change is also in accordance with the findings of Kumar (1976).

Keeping in view the nature of the factor loadings it may be concluded that college students who feel guilty
and accept blame when things go wrong, are moody and emotional and tend to avoid novelty and change in their daily routine.

**Factor 10**

This factor accounted for 3.86% of the total variance. The significant factor loadings are on the following variables:

- Thrill and Adventure Seeking: +.44
- Venturesomeness: +.81

The loading pattern on this factor indicates that persons who are high on Venturesomeness are also high on Thrill and Adventure Seeking. The factor loading pattern clearly supports the findings of Gorman (1970), Zuckerman et al. (1972) and Corulla (1988, 1989) who also found Venturesomeness and Thrill and Adventure Seeking to be positively associated. Individuals who like to gamble inspite of the risk involved have a high need to engage in sports or activities involving physical risk or danger.

**Factor 11**

This factor accounted for 3.69% of the total variance. The significant factor loadings are on
the following variables:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lie (Social Desirability) Scale</td>
<td>-.37</td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>+.45</td>
</tr>
<tr>
<td>need for deference</td>
<td>-.58</td>
</tr>
<tr>
<td>Academic achievement</td>
<td>+.59</td>
</tr>
</tbody>
</table>

The loading pattern on this factor indicates that students who are high on Academic achievement and Machiavellianism are low on need for deference and Lie (Social Desirability) Scale. The significant loadings on Machiavellianism and Academic achievement are supported by the findings of Singer (1964) who found that male college students with high scores on Machiavellianism achieved higher grade point averages. According to Christie and Geis (1970a) highly Machiavellian individuals tend to be emotionally detached, skilled in controlling others and most effective in face to face interpersonal interactions, these attributes lead them to be more successful in college and professional advancement. The presence of significant loadings on Machiavellianism and Lie (Social Desirability) Scale is in congruence with the findings of earlier researchers (Geis, 1978 and Bhandari and Sarup, 1990).

Therefore, it may be concluded that persons who
show academic prowess are high on manipulative tendencies and do not feel the need to conform socially.

**Factor 12**

This factor accounted for 2.29% of the total variance. The significant factor loadings are on the following variables:

- Boredom Susceptibility: +.82
- need for succorance: -.35
- need for change: +.43

The loading pattern on this factor reveals that individuals who are high on Boredom Susceptibility and need for change are low on need for succorance. Boredom Susceptibility, a subscale of Sensation Seeking, refers to an aversion for repetitive experience and a restless reaction when things are unchanging (Zuckerman, 1979). Presence of significant factor loading on Boredom Susceptibility and need for change are supported by the findings of Zuckerman (1975) who found a positive correlation between them. The significant factor loadings on need for change (+.43) and need for succorance (-.35) are in line with the findings of Sharpe and Peterson (1971).

Keeping in view, the nature of the factor loadings it can be concluded, that college students who are more...
susceptible to boredom, like change in their daily routine and do not feel the need to seek encouragement from others.

Factor Analysis For Females

The following eleven factors extracted for females accounted for 63.44% of the variance. The results of this factor analysis are presented in Table 10 (Unrotated) and Table 11 (Rotated).

Factor 1

This factor accounted for 10.11% of the total variance. The significant factor loadings are on the following variables:

- Visual imagery +.59
- Auditory imagery +.62
- Cutaneous imagery +.78
- Kinaesthetic imagery +.67
- Gustatory imagery +.61
- Olfactory imagery +.76
- Organic imagery +.73

This factor has already been discussed, as the structure found herein is similar to the Factor I of the total sample (pp. 141-142) and males.
This factor accounted for 7.70% of the total variance. The significant factor loadings are on the following variables:

- Disinhibition  - .73
- Experience Seeking  - .64
- Psychoticism  - .64
- Lie (Social Desirability) Scale  + .37
- need for deference  + .36
- need for order  + .30
- need for nurturance  + .30
- need for heterosexuality  - .53

The loading pattern on this factor indicates that Disinhibition is positively associated with Experience Seeking, Psychoticism and need for heterosexuality and negatively with Lie (Social Desirability) Scale, needs for deference, order and nurturance.

According to Zuckerman and Link (1968), a sensation seeker is someone who is independent, unconventional and low in social values or conformity, he needs variety and does not value order and routine. Thus, it would
be expected that Disinhibition and Experience Seeking subscales of Sensation Seeking would be positively related to Psychoticism (Eysenck and Zuckerman, 1978; Schalling et al., 1981; Eysenck, 1983 and Corulla, 1989) and negatively to Lie (Social Desirability) Scale (Eysenck and Zuckerman, 1978 and Corulla, 1989).

The loading pattern further reveals the presence of significant loadings on Disinhibition, Experience Seeking and needs for deference, order and nurturance, which lends support to the findings of Zuckerman and Link (1968) who reported Sensation Seeking to be negatively related to needs for deference, nurturance and order. Furthermore, the loading pattern suggests that need for heterosexuality is negatively associated to needs for deference, order and nurturance which supports the findings of Edwards (1959).

Therefore, it may be concluded that individuals who are cold, unempathic and have a liking for odd and unusual things prefer a non-conforming life style and tend to seek variety in sexual partners. Such individuals do not like to accept the leadership of others, help friends when they are in trouble and tend to avoid order and routine.
Factor 3

This factor accounted for 6.24% of the total variance. The significant factor loadings are on the following variables:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thrill and Adventure</td>
<td>+.80</td>
</tr>
<tr>
<td>Seeking</td>
<td></td>
</tr>
<tr>
<td>Venturesomeness</td>
<td>+.85</td>
</tr>
<tr>
<td>need for succorance</td>
<td>-.39</td>
</tr>
<tr>
<td>need for change</td>
<td>+.41</td>
</tr>
</tbody>
</table>

The loading pattern on this factor suggests that students who are high on Venturesomeness, Thrill and Adventure Seeking and need for change are low on need for succorance. Venturesomeness, according to Rawlings (1984), is the tendency in people to perceive risk but to choose to take a gamble, while Thrill and Adventure Seeking refers to a desire to engage in activities involving some physical danger or risk (Zuckerman, 1979). Thus, it would be expected that individuals scoring high on Venturesomeness would score high on Thrill and Adventure Seeking. Present results are supported by the findings of Gorman (1970), Zuckerman et al. (1972), Campbell and Heller (1987) and Corulla (1988) who found a positive relationship between Venturesomeness and Thrill and Adventure Seeking. Presence of significant factor loadings on Thrill
and Adventure Seeking and need for change are in congruence with the findings of Zuckerman and Link (1968) and Zuckerman (1975). The significant factor loadings on need for change (+.41) and need for succorance (-.39) is in accordance with the findings of Sharpe and Peterson (1971).

Therefore, it may be concluded that individuals who like to indulge in physically risky sports and activities, like change in their routine and do not like to talk about personal problems or ask for help when in trouble.

**Factor 4**

This factor accounted for 6.04% of the total variance. The significant factor loadings are on the following variables:

- Neuroticism +.80
- Lie (Social Desirability) -.47
- Impulsiveness +.60
- need for deference -.41
- need for heterosexuality +.32
- Academic achievement +.45

The loading pattern on this factor suggests that college students who are high on Neuroticism are also
high on Impulsiveness, Academic achievement and need for heterosexuality and low on Lie (Social Desirability) Scale and need for deference. Presence of significant factor loadings on Neuroticism and Impulsiveness are in congruence with the findings of earlier studies regarding the relationship between Neuroticism and Impulsiveness (Eysenck and Eysenck, 1978; Gray et al., 1983 and Corulla, 1989). Presence of significant loadings on Neuroticism and Academic achievement are in contrast to Eysenck's (1971) and Dhawan's (1987) contention that high Neuroticism scorers show poor academic achievement.

The loading pattern on this factor further suggests that Impulsiveness and Lie (Social Desirability) Scale are negatively associated, lending support to Corulla's (1989) findings. Presence of significant loadings on need for deference (-.41) and need for heterosexuality (+.32) is in accordance with the findings of Edwards (1959) and Sharpe and Peterson (1971).

Keeping in view the nature of the factor loadings, it can be concluded that persons who are emotional and impulsive like to interact socially with the opposite sex and do well academically. They do not feel the pressure to conform to social rules or take suggestions from others.
Factor 5

This factor accounted for 5.62% of the total variance. The significant factor loadings are on the following variables:

- need for order \(-.44\)
- need for affiliation \(+.71\)
- need for succorance \(+.44\)
- need for nurturance \(+.73\)
- need for endurance \(-.71\)

The factor loading pattern suggests that individuals who are high on needs for nurturance, affiliation, succorance are low on needs for endurance and order. Presence of highly significant factor loadings on need for nurturance and need for affiliation are in accordance with the findings of Edwards (1959) and Sharpe and Peterson (1971) regarding the relationship between these needs. The loading pattern on this factor further reveals that need for affiliation is negatively associated with need for endurance (Edwards, 1959 and Kumar, 1976). Furthermore, presence of significant factor loadings on need for endurance \((- .71)\), need for order \((- .44)\) and need for succorance \(+ .44\) lend support to the findings of Sharpe and Peterson (1971) who also found needs for endurance and order to be negatively
associated with need for succorance.

Keeping in view the nature of the factor loadings it can be concluded that individuals who like to treat others with kindness and sympathy, are loyal to their friends and seek encouragement from others. However, they do not like to persist at a job and tend to avoid order and routine.

**Factor 6**

This factor accounted for 5.59% of the total variance. The significant factor loadings are on the following variables:

- need for exhibition \(-.61\)
- need for intraception \(+.72\)
- need for abasement \(+.69\)
- need for heterosexuality \(-.43\)

The loading pattern on this factor suggests that students who are high on needs for intraception and abasement are low on needs for exhibition and heterosexuality. Presence of significant loadings on need for intraception and need for heterosexuality lend support to the findings of Edwards (1959) and Kumar (1976) who reported that these needs are negatively related to each other. The
significant loadings on need for exhibition (-.61), need for heterosexuality (-.43) and need for abasement (+.69) are in accordance with the findings of Edwards (1959) and Sharpe and Peterson (1971).

Therefore, it may be concluded that persons who like to say witty and clever things, like to indulge in social activities with the opposite sex and talk about personal achievements and experiences. They are not inclined to analyze their motives and feelings or suffer from guilt feelings.

**Factor 7**

This factor accounted for 5.30% of the total variance. The significant factor loadings are on the following variables:

- Lie (Social Desirability) - .43
- Scale
- Impulsiveness + .31
- Machiavellianism + .72
- Visual imagery - .36
- need for change + .39
- need for endurance - .42
- Academic achievement + .32

The loading pattern on this factor suggests that
college students who are high on Machiavellianism, Impulsiveness, need for change and Academic achievement are low on Lie (Social Desirability) Scale, visual imagery and need for endurance. Presence of significant loadings on Machiavellianism and Academic achievement are in accordance with the findings of Singer (1964) and Christie and Geis (1970a). The presence of significant loadings on Machiavellianism and Lie (Social Desirability) Scale is supported by the findings of Geis (1978) and Bhandari and Sarup (1990).

An impulsive individual can be characterized as someone who shifts excessively from one activity to another and has difficulty organizing work (American Psychiatric Association, 1980). Thus, a high scorer on Impulsiveness would be expected to be high on need for change and low on need for endurance. Furthermore, the presence of significant loadings on need for change and need for endurance are supported by the findings of Edwards (1959) and Sharpe and Peterson (1971), who found these needs to be negatively associated.

Keeping in view the nature of the factor loadings, it may be concluded that individuals who are high on manipulative tendencies tend to be impulsive, need change
in their daily routine and have academic prowess. They do not persist on a job for long or feel the need to conform to customs and are low on visual imagery.

**Factor 8**

This factor accounted for 4.83% of the total variance. The significant factor loadings are on the following variables:

- need for affiliation: +.36
- need for dominance: -.70
- need for change: +.51
- need for aggression: -.60
- Academic achievement: -.30

The loading pattern on this factor suggests that need for dominance is positively associated with need for aggression and Academic achievement and negatively with needs for change and affiliation. Presence of significant factor loadings on need for dominance and need for affiliation lend support to the work of earlier researchers (Edwards, 1959 and Kumar, 1976). Further, the loading pattern reveals the presence of significant loadings on need for aggression and Academic achievement, which is in contrast to the findings of Milich and Loney (1979).
who found aggression and Academic achievement to be negatively related. Presence of significant loadings on need for dominance (-.70) and need for change (+.51) are in line with the findings of Sharpe and Peterson (1971).

Keeping in view, the nature of the factor loadings it can be concluded, that college students who like to be leaders in their groups are aggressive and tend to do well academically. However, such individuals do not like to form strong attachments or to experience novelty and change in daily routine.

**Factor 9**

This factor accounted for 4.49% of the total variance. The significant factor loadings are on the following variables:

- need for deference +.33
- need for order +.32
- need for autonomy -.87
- need for endurance +.35

The loading pattern on this factor indicates that need for autonomy is negatively related with needs for deference, order and endurance. Present results are supported by the findings of Edwards (1959) and Sharpe and Peterson
(1971), who reported that need for autonomy is negatively related to needs for deference, order and endurance. Presence of significant factor loadings on needs for autonomy (-.87) and endurance (+.35) contradicts the findings of Kumar (1976).

Therefore, it may be concluded that persons who are independent in making decisions, avoid order, routine and do not persist on jobs undertaken.

**Factor 10**

This factor accounted for 3.95% of the total variance. The significant loadings are on the following variables:

- Boredom Susceptibility: -.77
- Extraversion: +.43
- Need for aggression: -.35

The loading pattern on this factor suggests that Boredom Susceptibility is positively associated with need for aggression and negatively with Extraversion. Presence of significant loadings on Boredom Susceptibility (-.77) and need for aggression (-.35) are supported by Zuckerman's (1975) findings, who also reported a positive association between Boredom Susceptibility and need for aggression. Presence of significant loadings on Boredom
Susceptibility and Extraversion however, contradict the findings of Zuckerman (1978), Campbell and Heller (1987) and Corulla (1989) who found them to be positively related.

Keeping in view the nature of the factor loadings it can be concluded, that students who have an aversion for dull or boring people and routine work are aggressive and revengeful. They are not likely to be sociable, active, carefree or venturesome.

**Factor II**

This factor accounted for 3.62% of the total variance. The significant factor loadings are on the following variables:

- Extraversion \(-.44\)
- need for achievement \(+.73\)

The loading pattern on this factor suggests that people who are high on need for achievement are low on Extraversion. Present results are in line with the findings of Eysenck (1962) and Lynn (1962) but contradictory to the findings of Rattan (1986) and Costa and McCrae (1988) who found need for achievement and Extraversion to be positively related.
Therefore, it may be concluded that college students who like to accomplish tasks requiring skill and effort are low on traits such as sociability and liveliness.

**Regression Analysis**

Keeping in view Guilford's (1956) and McNemar's (1969) criteria, the following seven variables turned out to be relevant out of thirty variables and were retained as predictors in case of the total sample (Table 12). They are Impulsiveness ($X_1$), Venturesomeness ($X_2$), need for heterosexuality ($X_3$), Psychoticism ($X_4$), Extraversion ($X_5$), need for nurturance ($X_6$) and kinaesthetic imagery ($X_7$). In males, eight variables were relevant out of the thirty variables which were retained as predictors. They are Extraversion ($X_1$), Psychoticism ($X_2$), need for heterosexuality ($X_3$), gustatory imagery ($X_4$), Impulsiveness ($X_5$), Venturesomeness ($X_6$), Academic achievement ($X_7$) and need for nurturance ($X_8$). In the case of females six variables turned out to be relevant out of thirty variables and were retained as predictors. They are Venturesomeness ($X_1$), Psychoticism ($X_2$), Impulsiveness ($X_3$), need for nurturance ($X_4$), Lie (Social Desirability) Scale ($X_5$) and need for deference ($X_6$).
The regression equation for the total sample was:

\[ Y = 12.85 + .27x_1 + .28x_2 + .11x_3 + .25x_4 + .17x_5 - .15x_6 - .91x_7 \]

Y stands for the criterion variable.

It can be noted that some regression coefficients are positive while others are negative. Keeping in view the direction and magnitude of regression coefficients, it may be suggested that in the total sample Impulsiveness, Venturesomeness, need for heterosexuality, Psychoticism, and Extraversion contributed positively and need for nurturance and kinaesthetic imagery* contributed negatively to the variance in Total Sensation Seeking Score.

The regression equation for males was:

\[ Y = 16.05 + .38x_1 + .26x_2 + .14x_3 - .20x_4 + .21x_5 + .13x_6 - .64x_7 - .13x_8 \]

Y stands for the criterion variable.

In males, Extraversion, Psychoticism, need for heterosexuality, Impulsiveness and Venturesomeness contributed

* Keeping in view the scoring pattern, a high score on test for Vividness of mental imagery indicates low Vividness of mental imagery and vice-versa. Therefore, a negative correlation between kinaesthetic imagery and Total Sensation Seeking Score indicates a positive association and vice-versa.
positively and gustatory imagery*, Academic achievement and need for nurturance contributed negatively to the variance in Total Sensation Seeking Score.

The regression equation for **females** was:

\[ Y = 16.37 + 0.58x_1 + 0.29x_2 + 0.19x_3 - 0.18x_4 - 0.15x_5 - 0.15x_6 \]

Y stands for the criterion variable.

In the female sample, Venturesomeness, Psychoticism and Impulsiveness contributed positively and need for nurturance, Lie (Social Desirability) Scale and need for deference contributed negatively to the variance in Total Sensation Seeking Score.

A perusal of the three regression equations clearly shows that in all the three samples viz., total, male and female, Impulsiveness, Venturesomeness and Psychoticism contributed positively to variance in Total Sensation Seeking Score. In addition, Extraversion and need for heterosexuality also contributed positively to variance in Total Sensation Seeking Score in the total sample as well as in males. Kinaesthetic imagery was found to

* Keeping in view the scoring pattern, a high score on test for Vividness of mental imagery indicates low Vividness of mental imagery and vice-versa. Therefore, a negative correlation between gustatory imagery and Total Sensation Seeking Score indicates a positive association and vice-versa.
be positively associated with Total Sensation Seeking Score in the total sample and gustatory imagery was positively associated with Total Sensation Seeking Score in males.

Need for nurturance contributed negatively to the variance in Total Sensation Seeking Score in all three samples i.e., total sample, males and females. Academic achievement contributed negatively to the variance in Total Sensation Seeking Score in males. In females, Lie (Social Desirability) Scale and need for deference contributed negatively to the variance in Total Sensation Seeking Score.