CHAPTER VI
DISCUSSION

The present study has been aimed at investigating the relationship of nAch and its components i.e. intrinsic need achievement and extrinsic need achievement with sex role orientation, locus of control, risk-taking tendency, vocational maturity, values and interests. The data of 400 subjects was drawn from colleges of Himachal Pradesh. In line with the aims of the present study half of the data comprised of tribals and other half of the non-tribal college sample consisting of equal number of males and females. The data of tribal and non-tribal students in males and females has been mainly treated through intercorrelations, regression and factor analysis. In the present study regression analysis was done to find out the contributary variance explained by sex-role orientation, locus of control, risk-taking tendency, vocational maturity, values and interests in achievement motivation and its components i.e. intrinsic need achievement and extrinsic need achievement in all the four subsamples, separately. The purpose of computing factor analysis has been to study the pattern of loading for I-nAch and E-nAch with the above mentioned variables. The two types of analyses i.e. regression and factor analysis may corroborate each other to a greater extent in terms of predictors and patterns of loadings and provide additional information which might prove useful in explaining the obtained
results.

First of all for the four subsamples, correlations were computed to see the relationship of achievement motivation and its components, intrinsic need achievement and extrinsic need achievement with independent variables (For details of intercorrelations, see Tables VI, VII, VIII & IX).

Further, in order to find out the variance accounted by each factor controlling for the others, regression analysis was carried out and to observe the total variance explained, taking all the factors into account multiple correlations were computed. Multiple R is an extension of bi-variable 'r' coefficients to multivariate analyses. It is the method of studying the effects and magnitudes of more than one independent variables using principle of correlation and regression.

The results regarding the co-efficients of correlation of achievement motivation of tribal male sample are intrinsic need achievement, extrinsic need achievement and interest in sports are positively related and interest in science is negatively related with nAch. Political value, interest in literacy, interest in science and interest in technical activity are negatively and interest in craft is positively related with I-nAch in tribal male sample. External locus of control is negatively related and interest in sports is positively related with E-nAch in the same sample (see table VI).
In tribal female sample the intrinsic need achievement, extrinsic need achievement and interest in sports are positively related and political value is negatively related with need achievement. The correlation of I-nAch in tribal female sample is significant with interest in craft. Theoretical value, social value, and interest in sports is positively and interest in agriculture is negatively related with E-nAch in the same sample (see Table VII).

In non-tribal male sample the correlations of nAch are significant with intrinsic need achievement, extrinsic need achievement and vocational maturity. Risk taking tendency is negatively related and interest in fine arts is positively related with intrinsic need achievement in non-tribal males. The correlations of E-nAch in non-tribal male sample are significant with risk-taking tendency, vocational maturity, theoretical value and interest in literacy (see Table VIII).

In the sample of non-tribal female the correlation of achievement motivation are significant with intrinsic need achievement and extrinsic need achievement and political value is negatively related with nAch. In the same sample political value is negatively and interest in medical activity is positively related with intrinsic need achievement. There is no significant correlation of E-nAch, with other independent variables in non-tribal female sample (see Table IX).

The major aim of the investigation undertaken currently is to observe the significant variance contributed by sex-role
orientation, locus of control, risk-taking tendency, vocational maturity, values and interests in nAch, I-nAch and E-nAch hence regression analysis was carried out. And in order to observe the patterns of loading of above mentioned factors with I-nAch and E-nAch factor analysis was computed for all the four subsample respectively.

Guilford and Fruchter (1978) are of the view: one variable is found associated with, or dependent upon more than one variable at the same time. When we can think of some variables as being causes of another one even when we merely want to predict that one variable from our knowledge of others correlated with it, we call the one variable the dependent variables. The independent variables are so called because we can manipulate them at will or because they vary by the nature of things, and consequently we expect the dependent variables to vary accordingly.

After computing the correlations stepwise regression was performed. Stepwise regression is a powerful variation of multiple regression which provides a means of choosing independent variables which will provide the best prediction possible with the fewest independent variables (Mitchell, 1970). For the purpose of identifying the crucial variables, independent variables were arranged in order of magnitude of their correlations with the dependent variable and stepwise regression analysis was performed which computes the sum of squares in the criterion variables with each independent
variables entering at a particular step accounts for after adjusting for the effects of other independent variables are ranked according to their ability to reduce the variation in the dependent variable at each step. This method constructs a prediction equation incorporating one independent variable at a time, the second independent variable to be added to regression equation is that which provides the best prediction in conjunction with the first variable. One then proceeds in the recursive fashion adding variables stepwise until no other variable will make a significant contribution to the prediction equation. The total effect of independent variables is determined by the coefficient of multiple correlation.

A 't' test of regression coefficient if significant, indicates that the regression weights differs significantly from zero, which means that the variable with which it is associated contributes significantly to the regression, the other independent variables being taken into account. Beta weights (B) on the other hand, indicate the relative importance of independent variables in the prediction of dependent variable. The 'F' ratio shows the significance of $R^2$ (or $R^2$ change) in the stepwise multiple regression analysis. As regression analysis has been performed on the four subsamples of the present study hence it would be proper to present a summary of results.

In tribal male sample when using nAch as criterion variable 't' values are significant for interest in science,
political value, interest in sports and interest in outdoor activity at .05 level (see Table X). When I-nAch was criterion variable, the 't' value are significant for interest in craft, interest in political value and interest in fine arts at .05 level (see Table XI). When used E-nAch as criterion in tribal male sample the 't' values are significant for interest in sports (p<.05), theoretical value (p<.05), political value (p<.10), external locus of control (p<.05) and aesthetic value (p<.05) (see Table XII).

In tribal female sample when using nAch as criterion the 't' values are significant in interest in sports and political value at .05 level (see Table XIII). When used I-nAch as criterion then 't' value are significant for interest in crafts (p<.01), interest in technical activity (p<.01), interest in fine arts (p<.05) and interest in sports (p<.10) (see Table XIV). When used E-nAch as criterion variable then 't' values are significant for theoretical value (p<.05), political value (p<.05), social value (p<.05), aesthetic value (p<.10) and interest in agriculture (p<.10) in tribal female sample (see Table XV).

In the non-tribal male sample, when used nAch as criterion variable 't' values are significant for interest in outdoor activity (p<.01), vocational maturity (p<.05), political value (p<.10), interest in science (p<.05) and interest in technical activity (p<.10) (see Table XVI). When used I-nAch as criterion then 't' values are significant for
risk-taking tendency (p<.01), interest in fine arts (p<.01) and interest in science (p<.05) (see Table XVII). In case of E-nAch the 't' values are significant for risk-taking tendency (p<.05), vocational maturity (p<.05), theoretical value (p<.05), femininity (p<.05) and interest in craft (p<.10) (see Table XVIII).

In the non-tribal female sample, when nAch was used as criterion variable 't' values are significant for political values (p<.01), interest in fine arts (p<.01), economic value (p<.10), interest in outdoor activity (p<.05), external locus of control (p<.10), interest in literacy (p<.10) and interest in crafts (p<.10) (see Table XIX). When used I-nAch as criterion 't' values are significant for political value (p<.05) and interest in medical activity (p<.05) (see Table XX) and in the case of E-nAch (criterion variable) 't' values are significant for vocational maturity (p<.15), interest in technical activity (p<.05), aesthetic value (p<.05), economic value (p<.05) and interest in outdoor activity (p<.10) (see Table XXI).

After stepwise regression analyses, in order to find out the patterns of relationship between E-nAch, I-nAch and other independent variables, factor analyses was applied on the data of 400 subjects (100 tribal male, 100 tribal female, 100 non-tribal male and 100 non-tribal female) separately. The factor analysis was performed separately for the subsamples. According to Fruchter (1967) factor analysis is a method of
analysing set of observation from their intercorrelation to determine whether the variation represented can be accounted for adequately by a number of basic categories smaller than that with which the investigation was started. Thus data obtained from a large number of a priori measures may be explained in terms of smaller reference variables.

Principle Axis Method of factor analysis was used on 253 values of correlations for tribal male, tribal female, non-tribal male and non-tribal females separately. The obtained factor matrices were subjected to rotation through varimax method (Kaiser, 1958).

The varimax method has proved very successful as an analytic approach obtaining an orthogonal rotation of factors. Even in those cases where the results do not meet the investigator's concept of a simple structure, the solution usually is close enough to greatly reduce the labour of finding a satisfactory rotation (Nunnally, 1967).

From the original factorization the number of factors for different subsamples which were extracted from intercorrelation matrix were further subjected to varimax rotation, since all had a latent root of more than one, this is in accordance with the recommendation of (Kaiser, 1950).

In tribal male sample the fourth factor comprises significant loadings on extrinsic need achievement, risk taking tendency, social value and interest in agriculture. In this factor extrinsic need achievement has
positive common variance with social value and risk-taking tendency and negative with interest in agriculture. And on seventh factor intrinsic need achievement has positive common variance with interest in craft and negative with political value. On factor ninth E-nAch has positive common variance with vocational maturity and interest in fine arts (see Table XXIII).

In tribal female sample on factor six, intrinsic need achievement has negative common variance with risk taking tendency and interest in technical activity. On factor eight extrinsic need achievement has negative common variance with political value (see Table XXV).

In non-tribal male sample, extrinsic need achievement has positive common variance with vocational maturity on factor six and intrinsic need achievement has negative common variance with risk taking tendency on factor nine (see Table XXVII).

In non-tribal female sample intrinsic need achievement and extrinsic need achievement have common variance with economic value (see Table XXIX) on factor eight.

The commonness between regression analysis and factor analysis in tribal male sample is that craft is contributing significantly in regression analysis and has common variance with I-nAch in factor analysis (see Table XI & XVIII).

The common feature of the significant aspect of regression and factor analysis, are that in tribal female sample, technical activity is contributing significantly and
has common variance with I-nAch and political value with E-nAch (see Table XIV, XV & XXV).

The common feature of the significant aspect of regression and factor analysis are that in non-tribal male sample risk-taking tendency is contributing significantly and has common variance with I-nAch and vocational maturity with E-nAch (see table XVII, XVIII & XXVII).

The common feature of the significant aspect of regression and factor analysis is that in non-tribal female sample economic value is contributing significantly and has common variance with E-nAch (see Table XV & XXIX).

The results of present investigation are manifold and varied. Some of the findings, support the hypotheses framed earlier and others do not. The discussion would follow the framework in which, the present problem was envisaged in the form of hypothesis, and one by one each salient feature will be unfolded. The main purpose of study was to see the relationship of nAch and its components I-nAch and E-nAch with sex-role orientation, locus of control risk-taking tendency, vocational maturity, values and interests in tribal and non-tribal students of both sexes.

**Sex-Role Orientation and Achievement Motivation**

Sex role orientation has not emerged as a significant predictor of achievement motivation and its components i.e. intrinsic need achievement and extrinsic need achievement in tribal male, tribal female and non-tribal female sample in
regression analysis. In factor analysis also the factors of masculinity and femininity are loaded separately from E-nAch and I-nAch.

In the non-tribal male sample the results of regression analysis indicates that femininity is significantly but negatively related with E-nAch only. The 't' value for femininity is significant (p<.05) in predicting E-nAch and 'F' ratio is also significant (p<.01) (see Table XVIII).

The majority of results for tribal male, tribal female and non-tribal female of the present study are not in accordance with the hypothesis framed earlier in (Chapter-III) that masculinity and androgyny may be significantly related with nAch irrespective of gender and tribal and non-tribal population.

The basis of above contention that nAch and masculinity and androgyny would be highly related was based on certain research investigations carried out in the past. Brenda (1979) reported that persons who are androgynous would be more achievement motivated as compared to feminine and undifferentiated persons. Similarly, many other research investigators have reported essentially the same results (Ho Robert and Robert 1980; Berg et al. 1981; Zieglar et al. 1985; Panda and Mishra, 1985; Gaeddert, 1985, Paul, 1985 and Nye, 1986).

These above mentioned studies have tried to resolve the enigmatic problem of lower nAch in women by emphasizing
tribal males higher nAch indicates lower interest in outdoor and science. It is because tribals do not consider outdoor activities as part of interest but it is in their routine work. So the low contribution of interest in outdoor activity with nAch score and its high correlation with interest in sports is an indication that interest in outdoor acts as a suppressor variable. It, thus, increases the contribution of interest in sports to the nAch score. The 't' value for interest in sports is significant (p<.05), for interest in outdoor activity (p<.05) and for science is (p<.05) in predicting nAch in tribal male sample (see Table X). In the same sample interest in craft is significantly related with I-nAch but fine arts is negatively related with I-nAch. This indicates that higher interest in craft reveals higher I-nAch and higher I-nAch reveals lower interest in fine arts. The reason being that these tribals are not exposed to such activities involving any kind of fine arts and hence scored lower. The 't' value for interests in craft is significant (p<.05) and for fine arts is (p<.05) in predicting I-nAch in tribal male sample (see Table X).

And interest in sports is positively related with E-nAch, this indicate that higher E-nAch reveals higher interest in sports. The 't' value for interest in sports is significant (p<.05) in predicting E-nAch in tribal male sample (see Table XII).

In tribal female sample, interest in sports is significantly related with nAch, this indicate that higher
interest in sports reveals higher nAch. In the same sample interest in sports is significantly related with I-nAch, it means that higher interest in sports reveals higher I-nAch. In tribal male sample it is significantly related with E-nAch. It may be that sports is more personalized in females than being a team or group event, as compared to males. The 't' value for interest in sports is significant (p<.05) in predicting nAch (see Table XIII) and is also significant (p<.10) in predicting I-nAch in the same sample (see Table XIV).

In the same sample of tribal females interests in craft and sports are positively related and interest in technical activity and fine arts are negatively related with I-nAch. This means that higher interest in craft and sports reveals higher I-nAch whereas low interest in technical activity and fine arts reveals higher I-nAch in tribal females. The reason could be that technical activity is almost nil among tribal females and they are not exposed to such activities involving any kind of fine arts. The 't' value for interest in craft is significant (p<.01), interest in technical activity (p<.01), for interest in fine arts (p<.05) and for sports is (p<.10) in predicting I-nAch in tribal female sample (see Table XIV).

In non-tribal male sample interest in outdoor activity and interest in science are positively related with nAch, it means that higher interest in outdoor activity and science reveals high nAch. The 't' value for interest in outdoor
activity is significant (p<.01) and for interest in science (p<.05) in predicting nAch in non-tribal male sample (see Table XVI).

Interest in fine arts and interest in science as hypothesized earlier are significantly related with I-nAch in the same sample. It indicates that higher interest in fine arts and science reveals higher I-nAch. The 't' value for interest in fine arts is (p<.01) and for science is (p<.05) in predicting I-nAch (see Table XVII). Keeping in view the description of high I-nAch persons', because person works alone to achieve his goal with all standards of excellence. Interest in craft is related negatively with E-nAch in non-tribal male sample. This indicates that low interest in craft reveals higher E-nAch in non-tribal male sample. These are urban people, and may not interested in craft, as measured by the scale. So this is the reason that low interest in craft contributes to higher E-nAch. The 't' value for interest in craft is significant (p<.10) in predicting E-nAch (see Table XVIII).

In non-tribal female sample there is positive relationship with interest in fine arts and nAch and interest in outdoor activity and interest in craft are negatively related with nAch. This means that higher interest in fine arts reveals higher nAch. Whereas, low interests in outdoor activity, and craft indicates higher nAch in non-tribal female sample. These are urban people and they may not be interested
in traditional craft, so this is the reason that low interest in craft contributes to higher E-nAch. As is also in non-tribal male sample. The 't' value for interest in fine arts is significant (p<.01), for outdoor activity (p<.05), and for craft is (p<.10) in predicting nAch in non-tribal female sample (see Table XIX).

Interest in medical activity is related with I-nAch positively, indicates that higher interest in medical activity reveals higher I-nAch in non-tribal female sample. There are various forms of medical activity. Medical activity should contribute with both the components of nAch. But in the present study it is related only with I-nAch. I-nAch is concern over standard of excellence or doing something well for its own sake i.e. to attain an inner feeling of personal accomplishment without regard to other benefits. So there is personal need to perform well in serving others, that is how interest in medical activity contributes significantly to I-nAch (see Table XX).

Interest in technical activity is related significantly but negatively with E-nAch in non-tribal female sample, indicates that lower interest in technical activity reveals higher E-nAch. These urban females are not interested in these activities it seems. The 't' value for interest in technical activity is significant (p<.05) in predicting E-nAch in non-tribal female sample (see Table XXI).
In the results of factor analysis interest in craft is contributing specific variance with I-nAch in tribal male sample on factor seven which indicates that higher interest in craft reveals higher I-nAch as is evident in regression analysis also. Interest in agriculture activity is contributing specific but negative variance with E-nAch on factor four in the same sample indicates that higher the E-nAch lower will be the interest in agriculture activity (see Table XXIII). The reason of the low contribution of interest in agriculture activity with E-nAch in tribal male sample is that these tribals do not consider agriculture activity as part of interest but it is in their routine work.

And in the same sample interest in fine arts is contributing common variance with E-nAch on factor nine, which reveals that higher interest in fine arts indicates higher E-nAch in tribal male sample (see Table XXIII). Fine arts is a groups of activities, these are also aesthetic in nature. As E-nAch is a concern over success in competition with others involving social competition and social recognition. In these group of activities they (tribal male) want social recognition on competition with others, so fine arts is positively related with E-nAch in tribal male sample.

In tribal female sample interest in technical activity is contributing significant but negative loading with I-nAch on factor six, which indicates that higher I-nAch reveals low interest in technical activity. Because these people are not trained in technical activities, especially tribal females (see Table XXV).
In factor analysis in the sample of non-tribal male as well as non-tribal female there is no significant loading of interests with I-nAch and E-nAch.

Aside from the main discussion in terms of predictors of nAch and its components, a comparison can be made between tribals and non-tribal samples of the present study of college Ss in terms of their score on nAch, I-nAch, E-nAch, masculinity, femininity, locus of control, risk-taking tendency, vocational maturity, theoretical, economic, aesthetic, social, political, religious, fine arts, literacy, science, medical, agriculture, technical, craft, outdoor, sports and household activity.

It may be significantly pointed out at the very outset that even the non-tribal subjects of the present study are not truly cosmopolitan i.e. they belong to those areas like Kullu, Mandi etc. which are economically and educationally backward. But still the point which is to be carried home is that tribals inspite of their being in colleges to study are significantly lagging behind on important dimensions of the psychological variables which have a bearing on their success in terms of settling down in life.

For the present study the comparison between the tribal and non-tribal students the findings reveal that tribal students are more external in terms of locus of control and in accordance with that they believe that everything which is happening is sheer out of the luck, fate or chance. These people are fatalistic in nature it seems at the proper time they fail to put in their best because they believe that it is
some external force which will help them. Their scoring significantly higher on externality is further borne out by their scoring higher on religious belief in terms of religious value which further substantiates the above contention (for t-values see table-XXX).

The tribal students are less vocationally mature as compared to non-tribal students, the reason being that, the level of educational and income aspiration as well as job requirements are extremely low in these people. So inspite of several incentives of central and state governments in educational and employment opportunities the tribal students have not been able to compete with their non-tribal counterparts. Tribals are less theoretical as compared to non-tribal students. These tribals are less interested in science, medical and technical activities as compared to non-tribal sample. Because these people are not trained in such activities. Tribal students are more interested in agriculture and household activities. (For t-values see table XXX).

The differences between the tribal and non-tribal students may be due to these factors that traditionally these people are very backward and the children are brought up in such environment and circumstances that they can not compete with their non-tribal counterparts. There is no training of independence for these students in their childhood. Mostly they depend on their parents, since their parents are
### TABLE XXX

Mean, SD and 't'-values of the differences between Tribals and Non-Tribals on nAch, E-nAch, I-nAch, SRO, LOC, RT, VM, Values and Interests

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>NON-TRIBAL STUDENTS</th>
<th>TRIBAL STUDENTS</th>
<th>'t'</th>
</tr>
</thead>
<tbody>
<tr>
<td>nAch</td>
<td>5.03</td>
<td>4.83</td>
<td>3.59</td>
</tr>
<tr>
<td>I-nAch</td>
<td>2.12</td>
<td>1.75</td>
<td>2.11</td>
</tr>
<tr>
<td>E-nAch</td>
<td>3.45</td>
<td>3.54</td>
<td>3.10</td>
</tr>
<tr>
<td>Masculinity</td>
<td>95.79</td>
<td>92.64</td>
<td>11.83</td>
</tr>
<tr>
<td>Femininity</td>
<td>94.76</td>
<td>94.27</td>
<td>11.98</td>
</tr>
<tr>
<td>External(LOC)</td>
<td>10.89</td>
<td>11.95</td>
<td>2.42</td>
</tr>
<tr>
<td>Risk-Taking</td>
<td>21.47</td>
<td>20.52</td>
<td>2.73</td>
</tr>
<tr>
<td>Vocational Naturity</td>
<td>14.08</td>
<td>12.88</td>
<td>2.46</td>
</tr>
<tr>
<td>Theoretical</td>
<td>35.23</td>
<td>31.85</td>
<td>6.77</td>
</tr>
<tr>
<td>Economic</td>
<td>38.26</td>
<td>37.69</td>
<td>9.37</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>37.17</td>
<td>38.23</td>
<td>5.78</td>
</tr>
<tr>
<td>Social</td>
<td>41.22</td>
<td>40.81</td>
<td>6.14</td>
</tr>
<tr>
<td>Political</td>
<td>34.61</td>
<td>35.03</td>
<td>5.61</td>
</tr>
<tr>
<td>Religious</td>
<td>34.82</td>
<td>37.04</td>
<td>6.73</td>
</tr>
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<td>Fine Arts</td>
<td>28.89</td>
<td>29.53</td>
<td>6.89</td>
</tr>
<tr>
<td>Literacy</td>
<td>30.73</td>
<td>29.87</td>
<td>5.97</td>
</tr>
<tr>
<td>Science</td>
<td>30.55</td>
<td>26.22</td>
<td>7.78</td>
</tr>
<tr>
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<td>26.00</td>
<td>8.59</td>
</tr>
<tr>
<td>Agriculture</td>
<td>28.18</td>
<td>30.55</td>
<td>7.89</td>
</tr>
<tr>
<td>Technical</td>
<td>28.28</td>
<td>20.18</td>
<td>5.39</td>
</tr>
<tr>
<td>Craft</td>
<td>21.90</td>
<td>21.12</td>
<td>6.73</td>
</tr>
<tr>
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<td>29.45</td>
<td>7.81</td>
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<tr>
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<td>30.21</td>
<td>7.60</td>
</tr>
<tr>
<td>Household</td>
<td>26.38</td>
<td>29.22</td>
<td>6.92</td>
</tr>
</tbody>
</table>

Level of significance: **p<.01, and *p<.05
uneducated they can not tell them about outer world. It may be also due to the fact that rural youth's limited educational and occupational ambitions are the results of factors, such as geographic inaccessibility of institutions of higher learning lack of diversity of occupational role models and the relatively limited curricula of smaller rural schools. These may partially be the reason that some of the hypotheses of the present study have not been fully rationalised and in some cases are even contrary to expectations.

Today, there is growing emphasis on tribal development by the government of India to bring them into mainstream of the national life. But very few attempts have been made to study achievement motivation in tribal population which is a substantially important factor. The present study is a step toward this, to see the nAch in tribal and non-tribal students of Himachal Pradesh.

So if the government wants significant and substantial contribution comes from every quarter of the society then they have to make an allout effort, with the help of social agencies to bring them economically and educationally at par with the rest of population and in this regard child rearing practices needs to be changed to suit the achievement orientation environment generally in backward areas, and more specifically in tribal population.