SUMMARY, CONCLUSION, IMPLICATIONS, LIMITATIONS AND FUTURE SUGGESTIONS
CHAPTER - VI

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AND FUTURE SUGGESTIONS

SUMMARY

The present study attempted to assess the differences among the SC, ST and general males and females in arts and science stream on academic self-concept, stress and academic performance.

OBJECTIVES:

The specific objectives of the study were:

1. To find out the main effect of social category on the academic self-concept, level of stress and academic performance of students.

2. To find out the main effect of subject stream on the academic self-concept, level of stress and academic performance of the students.

3. To find out the main effect of gender on the academic self-concept, level of stress and academic performance of students.

4. To find out the interaction effects of social category, subject stream and gender on the academic self-concept, level of stress and academic performance of students.

5. To examine relationships among academic self-concept, level of stress, academic performance, and personal and social variables.

6. To predict the academic performance of different student
groups by using factors of academic self-concept, stress and various personal and social variables as predictors.

**HYPOTHESES:**

The following hypotheses were tested:

1. The academic self-concept, level of stress and academic performance will vary among SC, ST and general category of students.
2. The academic self-concept, level of stress and academic performance will vary between arts and science students.
3. The academic self-concept, level of stress and academic performance will vary between males and females.
4. There will be significant interaction effects of social category, subject stream and gender on academic self-concept, level of stress and academic performance.
5. The academic self-concept, stress and academic performance will relate with each other and to the personal and social variables.
6. Academic performance of different social groups will be differentially predicted by the factors of academic self-concept, stress and various personal social variables.

**RESEARCH DESIGN**

In order to study the main and interaction effects of social category, subject stream and gender on measured variables, an ex-post facto design was used. In a 3 x 2 x 2 factorial design, the first three units of design referred to constitutionally recognised social categories (SC, ST and general), the second
unit to two subject streams (arts and science), and the last two units to gender (male and female). The main effects of social category, subject stream and gender and the interaction effects of social category x subject stream, social category x gender, subject stream gender and social category x subject stream x gender were studied on factors of academic self-concept, stress and academic performance.


SAMPLE

The purposive sampling method was used to select the subjects for the study. The samples were drawn from the Sundargarh and Phulbani districts of western Orissa, and Cuttack and Puri districts of eastern Orissa. A total of 600 students were selected, out of which 200 were SC students, 200 ST students, and 200 general category undergraduate students. The SC students included 100 arts and 100 science students. Among 100 arts students there were 50 males and 50 females. The same sampling procedure was followed for the ST and general category students.

VARIABLES
A. Matching variables:
   a) Social category: Sc, ST and General
   b) Subject stream: Arts and Science
c) Gender: Male and Female.

B. Measured variables:
1) Academic self-concept
2) Stress

C. Criterion variables:
   Academic performance

D. Personal and Social variables:
   These included students' information on age, extra-qualifications, family size, family type, mothers' education and occupation, fathers' education and occupation, family income, place of residence and place of schooling etc.

TOOLS
   The following tools were used
1) Student's personal information sheet.
2) Academic self-concept scale- A modified version of Coopersmith's (1967) Behavioural Academic Self-Esteem (BASE) scale, consisting of factors like self-confidence, initiative, ability to accept failure, leadership qualities and social attention. The reliability of the scale was 0.82 for whole sample.
3) Stress Scale - Based on Hopkins symptom checklist (HSCL) known as Self-Report System Inventory (1974) consisting of factors like anxiety, somatization, mental weakness, depression, lack of efficiency, obsessive-compulsive and psychological fatigue. The Cronbach reliability of the stress scale was 0.87.
4) Student's pre-university examination marks and the final year test examination marks were taken to formulate an index of academic performance.

DATA ANALYSIS

Data were analyzed by using Factor Analysis, ANOVA, 't' tests, Pearson correlation (r) and step wise multiple regression analysis Procedures.

FINDINGS AND CONCLUSIONS

On the basis of the analysis, the following findings and conclusions can be stated:

1. The general category students differed from SC on academic self-concept but not from ST. The SC and ST students differed significantly from general category students on the dimensions of academic self-concept like initiative and social attention. There were no differences between SC and ST. The ST students did not differ significantly from the general category students on academic self-concept and its dimensions of self-confidence, ability to accept failure and leadership qualities. The results were found in line with the previous findings of Wylie (1963), Soares and Soares (1969), Rath (1974), and Padhi (1992), who reported that SC students had lower self-concept than general students. The present study showed a different direction in the finding that general and ST students had comparable academic self-concept. The low academic self-concept of SC students was explained in terms of social stigma attached
to them, because of the structural hierarchy in the society. SC and ST students lacked initiative and social attention.

2. Social category had significant main effects on stress and its dimensions of anxiety, somatization and lack of efficiency. SC students had significantly higher stress, anxiety, somatization and lack of efficiency than general students. They also had significantly higher stress, anxiety and somatization than ST students. The ST students did not differ significantly from general students on stress. An interesting finding was that the SC and ST differed significantly from general students on lack of efficiency factor. These findings were different from the previous findings of Hassan (1977), Misra and Tripathi (1978), Srivastava, Seth, Saxena and Mrinal (1979), Singh (1980), Rani (1980) and Manwani, Srivastava, Saxena and Saxena (1981), who found SC and ST groups reporting higher anxiety than the non-scheduled caste and non-tribals. The results were similar to the findings of Rath (1974), Rao (1993), Sahoo (1993) and Omprakash (1993), who found low caste students experiencing greater anxiety and insecurity.

3. SC and ST students differed significantly from general students on academic performance, but SC and ST students did not differ between themselves on academic performance. The better performance of the general students was explained in terms of their enriched exposure in a non-deprived social milieu. The differential academic
performance has often been found by other researchers associated with the socio-economic status and socialization experiences of groups (Badami and Badami, 1973; Reddy, 1981 and Roy, 1982).

4. There was no significant difference between arts and science students on academic self-concept, except on the dimension of ability to accept failure. Arts students had higher ability to accept failure. The results were not exactly similar to the lone study by Gayathri and Indiressen (1979), who reported differences in the academic self-concept of arts and science students because of their different orientations.

5. The main effect of subject stream was significant on stress. Arts students had significantly greater stress, anxiety, mental weakness and depression than the science students. It was explained in terms of the nature of contents, group size, the methods of evaluation which failed arts students to find a concrete link between their effort and outcome.

6. Science students had significantly better academic performance than arts students. The difference had been interpreted as a consequence of relatively more clear contents, objectivity in evaluation, student-teacher and classroom interactions, and aspects of institutional environment. The results were found to a good extent similar to the earlier findings of Mohanty and Pani (1979), Wallace (1966), and O’shea (1969).
7. Gender differences were significant on academic self-concept. The females showed higher academic self-concept, self-confidence and ability to accept failure. It was explained in terms of role model concept, in-equitable sex role socialization and various legal provisions needed for raising the confidence of women (Popenoe, 1988 and Zongjian, 1993).

8. Females had significantly higher stress, anxiety, mental weakness, depression and obsessive-compulsiveness than male students. This result was in line with the findings of Gove (1972), Gove and Tudor (1973), Pearlin (1975), Rosenfield (1980) and Richman (1988).

9. The main effect of gender was not significant on academic performance. This result was explained in terms of comparable exposure of female and male students to various resources and is in line with recent researches by Jacklin (1989) and Feingold (1988, 1991a).

10. The academic self-concept was found positively related to academic performance of SC/ST, but not general students. The results on SC/ST students confirmed the proposition of Coopersmith (1967) model that academic self-concept was positively related to academic performance. Similar results had been reported by Brookover (1964), Wylie (1979), Byrne (1982) and Boxel and Monks (1992). The insignificant negative relation between a academic self-concept and performance of general students was explained in terms of
their failure to achieve the high academic standards set for them by teachers and parents.

11. The stress did not correlate significantly with academic performance. For SC, general and science students the stress had low positive relationship to academic performance indicating its' links with efforts and outcomes. Similar findings were reported by Sarason (1957), Furneaux (1957), Kelvin Lucas and Ojha (1965), Endler (1960) and Chaudhari (1980), although these findings were based either on foreign university students or school children. There seemed to be some universality in the observation that the pressure need to perform high in academic had necessarily some stress associated with it. The present finding partially supported the Drive theory advocated by Spence and Spence (1966), which suggested that high anxiety had an adverse effect on human performance, as for ST, arts, male and female groups stress was negatively related to academic performance. There were many researches supporting the adverse effects of anxiety on performance as the person felt impaired (Contractor 1981; Sharma and Sud, 1982 and Ploeg, Schawarzer & Spielberger, 1984, 1985).

12. As expected, the academic self-concept was negatively related to stress of students in all the groups. Those having high academic self-concept had low stress and the vice versa. Similar findings had been reported by Gibby and Gibby (1967) and Westerman (1988).

13. The academic self-concept was found positively related to
the socio-economic status of students, specially the mother's education. Self confidence and initiative of male students were positively associated with mother's education. Students coming from higher socio-economic status and particularly with higher level of education of the mother had higher academic self-concept. In case of male students, the higher educational qualification of the mother enhanced their self-confidence and initiative taking. The finding was in line with the findings of Evans and Anderson (1973), Basavanna and Rani (1983) and in the expected direction.

14. Family size was negatively related to initiative and social attention of female students, implying that in large families the female students got low social attention and were not encouraged to take initiative, as they shared family chores behind mothers, without being noticed.

15. Social attention was positively related to family income among arts, science, male and female students. Students received higher social attention in high income families, because of lack of competition for limited goods and absence of financial responsibility. Students from high income families had a high standard of grooming and were often noticed by others.

16. Age was positively related to stress and lack of efficiency for all groups, except the general category students. The older students in arts and science, males and females particularly from SC/ST groups exhibited greater stress and
inefficiency. One explanation of it could be simply their over consciousness which produced stress and lower accomplishment in more time as compared to others. This finding was in line with the earlier studies by Krishna (1972), Ghosh and Singhal (1973) and Styarthi (1979).

17. The education of parents was found negatively related to stress among ST, arts and female students particularly among the ST, arts and female students those who had better educated parents reported low stress, since they were emotionally in a state of preparedness to cope with the problems. Conversely, students having low educated parents suffered greater stress as they were confronting the reality without experience of parents at their hands and fewer coping skills. This result was in line with the findings of Gore, Aseltine and Colton (1992).

18. The academic performance was positively related to parent's education in all groups. The more educated the parents, the higher was the academic performance of off-springs. This was expected because of the ability of better educated parents to provide cognitively stimulating and structured environment to their sons and daughters, because of their realistic orientation and personal experiences.

19. Academic performance was negatively related to institution types, indicating that there were poor educational climate, and poor infrastructural facilities in non government colleges, and these were associated with low academic performance of students. This finding supported the earlier

20. Academic performance was negatively related to age in SC/ST groups. The older students in SC/ST groups performed particularly low in college. Quite likely they had failed even earlier, and although found it difficult to cope continued to be their because of a likely bright future in the job market after completing their degree. This finding was different from the findings of Watson (1965), who found no relationship between age and achievement, but was in the expected direction for these groups. Rani (1980) had reported that SC/ST students entered into the higher education institutions at a relatively later age, faced numerous adjustment problems and had been repeated students in early schooling.

21. Family size affected adversely the academic performance of general, science, arts and female students. This finding showed that in large size families students had poor study facilities, more personal worries arising from lack of support and acute lack of guidance (Shukla, 1984). In fact, the parents didn’t have adequate time to attend to the needs of their offsprings. Rather they were in a situation where they had no other choice but force children to cut on their time and effort on studies.

22. The academic performance of all groups of students could be predicted better by social variables than psychological variables of academic self-concept and stress, indicating
the predominance of former over the latter. For general students, mother’s education, institution types and mother’s occupation predicted their academic performance, but for SC students, the institution types, age and social attention were major contributors. For ST students mother’s education, place of schooling and age were best predictors of academic performance.

IMPLICATIONS

The findings of the research had numerous implications, some of which are discussed below:

1. Social Category Specific:

The findings revealed that although college students had moderate high academic self-concept, their academic performance was just average. This implied that the academic self-concept of college students was not close to reality and did not get reflected in outcomes. The students’ potentialities were not converted into appropriate action either on account of system deficits or personal inadequacies. Such a finding should have some implications for the teachers, administrators and parents. Teachers, administrators and parents should try to find ways in which students could utilise their abilities more meaningfully and get best out of their potential. They should identify strategies to develop in them effective study habits to promote academically oriented behaviour. In this context, it seems that the teachers styles of teaching and the contents they teach
should be reality oriented rather than full of abstraction, which made students’ disinterestedness and uninvolved learners.

The findings that SC and ST students were significantly lower on initiative and social attention, implied the need for teachers to give special attention to the SC/ST students, recognize them for what they are, encourage and motivate them to take the lead in determining their actions. They should foster a classroom climate that would reflect the student body and their communities with due respect to them. Teachers should interact with SC and ST students formally as well as informally and discuss what each of them considered important regarding positive academic behaviour and why. In the process of teaching the teachers should highlight on the cultural elements of SC and ST students on an objective and fair basis. There was thus need for sufficient innovations in terms of the educational policy with regard to the contents of curriculum, methods of teaching, and evaluation.

As the academic performance of most students was not congruent to the levels of their academic self-concepts, the teachers ought to understand the factors leading to gaps between self-images and outcomes of student on the one hand, and also how to make all students do better than at the present levels. Evidently, students ought to acquire positive values of work, sincerity and learning. Only if they valued academic performance, they would make effort. Else, a large part of their abilities would continue to remain unutilized. The researchers should probe
deep into the relevant factors from social psychological perspective. This may result in more refined and close to the reality models of academic self-concept. This would lead to improvements in theory as well as practices. The administrators should enforce the existing legal provisions for the protection of SC/ST people with all sincerity. A better awareness about the provisions can be ensured by using the mass media for relevant statistics and messages. At the community level the administrators should establish direct contacts with SC and ST, to make the families and persons aware about the government laws specially meant for protecting them, how these could be used effectively for their betterment and whom should they contact.

It was seen that stress was higher among the SC and ST than the general students, and was related to academic performance. In this area, there seems to be the need for counselling to be institutionalized where advice could be rendered periodically how to reduce the stress and enhance their academic performance. The provision of structured materials could be helpful, in reducing some stress. The parents should set realistic goal for their wards, and thus save them from trauma of failed expectations. Special intervention programmes should be designed to boost their morale and periodically check on their stress level. This would safeguard their psychological well-being in the long run.

Subject Stream Specific Implications

The finding of a comparable academic self-concept of arts and science students suggested that none of the curricula were
really meaningful to them. Both lacked vocational orientation, were abstract and nonchallenging. It thus seems that some professional elements should be injected in both the streams. The higher stress among arts students can be reduced by reducing abstraction and introducing more objectivity. This can help them in linking their effort with outcome, and achieve close to their real ability level. This may also need some policy related changes.

Gender Specific:

The findings revealed that male students had lower academic self-concept and lower stress than females implying that gender inequality characterised their psychological levels. Females thought they can do more in an expected but they had higher stress. Parents should be given some counselling by teachers for realistic goal setting for sons and daughters according to their abilities. They should not expect more from the sons and less from daughers. They should insist on sons to share the responsibilities in household activities like daughers in order to reduce the stress felt by daughers. Teachers should also guide males and females towards setting clear goals.

Higher academic performance among females revealed that they can excel and can perform at par with males if opportunities were given. The women should be given access to opportunities in all fields. In this respect, the special provisions for females in National Policy on Education (1986) are highly appreciated. Nonetheless, the males should be encouraged to achieve higher by
setting their goals higher, otherwise they would have low morale and helplessness.

The finding that students' academic performance was positively related to parental education should also have implication for adult literacy programme, besides equal access to higher education of females. The adult literacy programmes in rural areas in particular should be intensified. Since the mother education was found to be best predictor of academic performance, girls' education becomes the focal point of personal, academic and social development.

Limitations and Directions for Future Research:

The research in its present form had many limitations, but the findings do offer some directions for future research, such as:

1. The results of this study were sample specific and may not be applicable to other groups like school children, high school students and professional course students. The future researchers should try to include students from different fields of study and test the generalizability of present findings.

2. This study included colleges in western and eastern Orissa, which had a good percentage of SC/ST students. There were many colleges with a low percentage of SC/ST. Future studies can take samples from colleges in different parts of country, and examine the reliability of present findings.
3. The study was based on one time data. It could be replicated after a gap of two/three years to examine if the academic self-concept was stable. In fact, the periodic measurements and monitoring may help the institutions to contain in any behavioural and psychological problems among the youth. Students may be given appropriate feedback to enhance their learning.

4. In terms of the findings, the mainstraming of tribal and scheduled caste students was justified, as they showed academic performance of a comparable level. This may not be a matter of complacency however. Teachers and administrators should continue to be alert and adopt positive practices. The researchers should consider many other dimensions such as teacher’s attitude, organizational climate, parent-teacher involvement while studying the relationship among academic self-concept, stress and academic performance.

5. The present study relied on quantitative data, making it difficult to comment on the processes of cognitive and social functioning. The future studies should incorporate both quantitative and qualitative data, with emphasis on understanding of processes. Students’ home environments, beliefs, values and other personality dispositions of students may be incorporated.

6. The sources, nature and intensity of stress in students could be studied in terms of the causal factors along with
coping strategies. The identification of the causal factors of stress may provide an insight about their future psychological well-being. The effects of social support on stress and academic self-concept can also be explored. The study of relationship among academic self-concept, stress and academic performance can include intervening variables like IQ, SES, institution type, places of residence and schooling through more controlled procedures. Some experimental studies can be taken up to design interventions for enhancing academic self-concept of the college students, and testing effects on their performance at regular intervals. The analytical model proved quite useful, yet it can be further refined by future researchers in accordance with their needs.