SCIENTIFIC TEMPER, EMOTIONAL INTELLIGENCE SES AND ACADEMIC ACHIEVEMENT AMONG TRIBAL AND NON-TRIBAL ADOLESCENTS OF KASHMIR

ABSTRACT

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ABSTRACT

Education is the fundamental right of every citizen of India and various constitutional provisions are provided for equalising the educational opportunities to all the sections of Indian society with special considerations of the weaker sections. Scheduled tribes constitute 8.6% of the total population of India occupying the lowest rung in the educational ladder. So various schemes have been implemented by the Ministry of Tribal Affairs for the development of these people. In the state of Jammu and Kashmir inhabiting 10.9% tribals (Census 2001), the Scheduled tribe literacy rate is 50.6% which is far behind the national ST literacy rate i.e. 59.0%. Though there is increment in the literacy rate of STs from 2001 to 2011, but still it is very low and hence there is a need to identify the main action areas which should be addressed with properly planned strategies. More comparisons of tribals and non tribals are needed in order to have an idea about the present situation and for diagnosing the causes of slow educational growth of tribal students. Academic achievement is the chore of the entire educational growth, it is therefore necessary to identify the main factors that may lead to better achievement and to relate them with tribal students. Therefore the investigator made a humble attempt to make a review of the studies done for finding out the predictors of academic achievement. A gap in prior research indicated the need for additional quantitative research for revealing more psychological and personal predictors of academic achievement. Recognising the importance of this, the present study was carried out to compare tribal and non tribal adolescent students on the variables of scientific temper, socioeconomic status, emotional intelligence and academic achievement and to identify the significant predictors of academic achievement in both the groups.

Objectives:

The study was guided by the following objectives.

1. To compare tribal and non-tribal students on the selected variables, viz. scientific temper, emotional intelligence, socio-economic status and academic achievement.
2. To identify the significant predictors of academic achievement and their extent of predictability for the total sample.

3. To identify the significant predictors of academic achievement and their extent of predictability for the tribal and non-tribal sample.

4. To identify the significant predictors of academic achievement and their extent of predictability for the male and female samples.

5. To identify the significant predictors of academic achievement and their extent of predictability for the tribal male sample.

6. To identify the significant predictors of academic achievement and their extent of predictability for the tribal female sample.

7. To identify the significant predictors of academic achievement and their extent of predictability for the non-tribal male sample.

8. To identify the significant predictors of academic achievement and their extent of predictability for the non-tribal female sample.

**Null Hypotheses:**

Based on the above research objectives, the following hypotheses have been framed for the present research study:

1. There is no significant difference between the scientific temper, emotional intelligence, socio-economic status and academic achievement of tribal and non-tribal adolescents of Kashmir.

2. None of the predictive variables is found to be the significant predictors of academic achievement for the total sample.

3. None of the predictive variables is found to be the significant predictors of academic achievement for tribal and non-tribal samples; and the two groups would show no difference with respect to their predictors or predictability strength.
4. None of the predictive variables is found to be the significant predictors of academic achievement for the male and female samples; and the two groups would show no difference with respect to their predictors or predictability strength.

5. None of the predictive variables is found to be significant predictors of academic achievement for the tribal male and non-tribal male samples; and the two groups would show no difference with respect to their predictors or predictability strength.

6. None of the predictive variables is found to be the significant predictors of academic achievement for the tribal female and non-tribal female samples; and the two groups would show no difference with respect to their predictors or predictability strength.

7. Tribal male and tribal female groups would show no difference with respect to their predictors of academic achievement or predictability strength of the significant predictors.

8. Non-tribal male and non-tribal female groups would show no difference with respect to their predictors of academic achievement or predictability strength of the significant predictors

Methodology

The study consisted of three independent variables (scientific temper, emotional intelligence and socio-economic status) and one dependent variable (academic achievement). The sample of the study was comprised of tribal and non-tribal students. A total sample of 664 students was selected by stratified random sampling technique from government schools of Anantnag and Kupwara districts of Kashmir. The data were collected by applying four standardised scales viz. 1). Scientific Temper scale by Showkat and Nadeem (2008), 2). Emotional Intelligence Inventory by Mangal and Mangal (2012), 3). Socio-Economic Status Scale (SESS) by Singh and Vinay (2013). The data collected were subjected to appropriate statistical techniques such as t-test, Pearson coefficient of correlation and multiple regression.
Findings

The main findings emanating from the present investigation are as follows:

1. Non-tribal adolescent students performed comparatively better on the measures of scientific temper, emotional intelligence, socio-economic status and academic achievement than their tribal counterparts. The difference is significant at 0.001 level of confidence.

2. Socio-economic status and scientific temper emerged as significant predictors of academic achievement for the total sample and together they accounted for 9.4% of variance in academic achievement of total sample.

3. Socio-economic status explained 7.2% variance in academic achievement followed by scientific temper 2.2%.

4. Socio-economic status emerged as the only significant predictor variable for the tribal sample and contributed 2.5% variance in the academic achievement. Whereas for non-tribal sample scientific temper is the most contributing variable accounting 8.1% of total variance and socio-economic status also emerged as a significant predictor contributing 5.5% variance.

5. Socio-economic status is the common predictor of academic achievement for the two groups; socio-economic status playing more important role for non-tribals.

6. Scientific temper emerged as additional significant predictor only for non-tribal adolescents.

7. Socio-economic status and scientific temper are found to be significant predictors of academic achievement for the male sample and have the predictability strength of 15.2%

8. For the male sample, the maximum of the predictable variance is shared by socio-economic status 11% followed by scientific temper 4.2%.

9. Socio-economic status is the only significant potential predictor and contributed 3.9% variance in the academic achievement for the female sample.
10. Scientific temper emerges as additional significant predictor only for male adolescents.

11. Socio-economic status is the common predictor of academic achievement for the two groups; socio-economic status playing more important role for male sample.

12. Socio-economic status emerged as the only potential significant predictor variable and contributed 4.5% variance in the academic achievement for the tribal male sample.

13. Scientific temper emerged as the most contributing variable that accounted for 9.2% variance in the academic achievement for the non-tribal male sample. Socioeconomic status is the next significantly contributing variable that accounted for 6.6% variance in the academic achievement of the non-tribal male sample.

14. Socio-economic status is the common predictor of academic achievement for the two groups; socio-economic status playing more important role for non-tribal male sample.

15. Scientific temper emerges as additional significant predictor only for non-tribal male adolescents.

16. None of the three independent variables viz; scientific temper, emotional intelligence and socio-economic status, was significant in predicting the academic achievement scores of female tribal adolescents.

17. Socio-economic status emerged as the most contributing variable that accounted for 8% variance in the academic achievement for the non-tribal female sample. Scientific temper is the next significantly contributing variable that accounted for 3.9% variance in the academic achievement of the non-tribal female sample.

18. Scientific temper and Socio-economic status are found to be the common potential significant predictors for both the non-tribal groups; scientific temper was playing more important role for non-tribal male sample, whereas socio-economic status has high prediction strength for non-tribal females.
Conclusion

The overall findings of the present research study revealed that the adolescents’ overall development is significantly influenced by their social and political status in the society. Comparison of tribal and non-tribal adolescents on the measures of socio-economic status, scientific temper, emotional intelligence and academic achievement showed that non tribal adolescents are much better in socio-economic status, possess more scientific temper, are emotionally intelligent and have higher educational achievement than their respective tribal counterparts. Thus it can be concluded that non tribal community provides better physical, social, emotional, mental and educational developments avenues than tribal community.

Prediction results obtained by multiple regression analyses revealed socio-economic status as the most potential predictor of academic achievement of both tribal and non-tribal adolescents but scientific temper is significantly predicting the academic achievement of non-tribal adolescents only. However emotional intelligence is not significant in predicting the academic achievement of tribal and non-tribal adolescents clearly indicating that socio-economic status has a strong positive relationship with academic achievement and thereby affecting the educational success of the adolescents in Jammu and Kashmir.

Gender wise comparison also revealed socio-economic status as the significant predictor of academic achievement in female adolescents whereas academic achievement of male adolescents is predicted by socio-economic status and scientific temper both. Community wise females’ comparison showed scientific temper and socio-economic status as significant predictors of academic achievement of non-tribal female adolescents however academic achievement of tribal females is independent of all the three variables (viz. socioeconomic status, scientific temper and emotional intelligence). Similarly comparison of males also reported scientific temper and socio-economic status as significant predictors of academic achievement of non-tribal male adolescents whereas socio-economic status is the only significant predictor of academic achievement in tribal male adolescents.

On the basis of multiple regression analyses results, it is therefore concluded that socio-economic status and scientific temper are the significant predictors of
academic achievement of the adolescents of Jammu and Kashmir. Socio-economic status is the most contributing variable in academic achievement irrespective of community and gender and thus has the highest prediction strength. However academic achievement is independent of emotional intelligence of adolescent students of Jammu and Kashmir.

**Implications of the research**

The findings emerged from the present study highlighted the need for better educational development of the backward classes. It is therefore recommended that the efforts for the educational development of backward classes either by state, school or other agencies need to be strengthened and should be given more impetus.

The present study showed that academic achievement of the adolescent students is influenced by the community revealing high achievement scores of non tribal students in comparison to tribal adolescent students. It means tribal students have low academic performance than non tribal ones. Based on this finding, it is implied that efforts should be made for reducing the academic gap between tribal and non tribal students. The schools should therefore adapt better strategies and provide good incentives for tribal students for increasing their motivation towards studies which may include merit scholarships, high attendance rewards, providing grants for uniform, books and other learning materials and regular arrangement of good quality mid day meals.

Schools should take special care about the medium of instruction for tribal students. The teachers should teach in a simpler language which is known to them so that they will be able to understand the concepts well thereby helping in gaining better achievement scores. The teachers should teach with different types of individualised instruction programmes to better explain the subject content for good understanding. Regular guidance and counselling sessions along with special coaching classes from expertise of different subjects should also be organised for improving their academic performance.

The second finding of the present study revealed that SES is also a significant factor influencing the academic achievement of the adolescent students. It was found
that parents’ lower status of educational, occupational and financial backgrounds has deteriorating effect on the academic performance of their children. It is therefore suggested that students having low socio-economic status should be given proper educational facilities like supervised study after school hours, distribution of self study materials and provision of timely educational guidance. The teachers should provide adequate help by arranging remedial classes accompanied with proper guidance and counselling. Teachers should treat all students equally without being partial on account of SES backgrounds giving individual attention to all students with regular work assessment that may foster the academic performance of students having low SES. Moreover such students should be given good incentives by the schools that may include distribution of free textbooks, notebooks, stationary, uniform, school bags, special scholarships, fee concession, free hostel accommodation etc. which are likely to improve their academic performance.

The present study also revealed a significant relationship between scientific temper and academic achievement indicating that scientific temper has a significant influence on the academic achievement of adolescent students. Therefore school teaching should cater the development of scientific temper and scientific attitude in the students which is also an important objective of science teaching in order to develop an active and informed learner who can apply the learned knowledge in his daily life which is an indication of better understanding and logical reasoning thereby improving the academic performance. It is therefore implied that the curriculum should be designed in such a way that it will talk to the learner and enables him to examine and analyse everyday experience. As per the National Curriculum Framework recommendations, the spirit of children’s science congress should be revolutionised in order to promote discovering learning across the nation which also helps in developing scientific temper among students. It is also suggested that efforts should be made to encourage use of innovative teaching learning aids and instruction material that also promote scientific temper development in the students. Further, students should be engaged in more science activities like science clubs, science fairs, visit to science museums etc. Organisation of science exhibitions and competitions like science quiz and science Olympiads etc. also help in developing scientific temper among the students.
With the advancements of ICT, a number of ways are available for science communications that may also develop scientific temper like blogs; social media including facebook, google plus, etc.; e-newspapers; wall newspapers; science based satellite broadcasts; i-pads and even mobile phones are some of the ultra modern and innovative means of science communications through which scientific temper can be developed that may lead to better academic performance of students.

Suggestions for Future Research:

(i) The study may be replicated in various geographic locations to see if the findings are similar. Broadening the population would provide further support for the generalizability of the findings.

(ii) Present study explored the educational development of scheduled tribes using a cross-sectional study. It is suggested that a few longitudinal studies of the tribal students entering education through various schemes may be undertaken to monitor and compare the educational attainment.

(iii) Studies to define and map out the needs and problems of tribal children may be undertaken to facilitate the alternate strategies under the backward class development policy.

(iv) The present study has been conducted on rural students only. A similar study may also be conducted on urban students to make the findings more comprehensive and dependable.

(v) Academic achievement of the adolescents is also influenced by many social factors peculiar to Indian society. Studies can be conducted to find out those factors for getting better educational benefits.

(vi) It seems pertinent to study the effect of the various components of socio-economic status, i.e., education, occupation and income of parents separately on academic success. Additionally, a comparative study of different levels of SES groups may also yield interesting results.