

Relationship between Social Behaviour and Academic Performance of Science Students at Secondary Level

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Abstract

Science studies demand more concentration and time than other subjects. This makes science students less social in their circles. This study intended to examine the relationship between social behavior and academic performance of science students at the Secondary Level in District Rawalpindi. In this study, the social behavior i.e. aggression and Altruism was studied. The objectives of the study were to examine the relationship between academic performance and the social behavior of science students and to identify the gender-based difference regarding the social behavior of science students. The target population of the study was both boys' and girls' science students of grade 10th from District Rawalpindi. Stratified sampling technique was used to collect data from science students. A sample of 116 male and 178 female science students. To get students' responses, a questionnaire consisted of 25 items was developed. The findings revealed that there is no connection between social behaviour and science students' academic success in secondary school. Besides it, a weak positive correlation between social behavior and academic performance of science students was also found. The study also revealed that there is no significant difference in social behavior between boys' and girls' science students. The result of this study showed that boys have more aggressive behavior as compared to girls in the science section. It was also found that girls have more altruistic (pro-social) behavior as compared to the boys in the science section. The finding of this study also shows that girls have more cooperative behavior as compared to boys. It is recommended that praising and rewards might play an important role in managing aggressive behavior and improving the academic performance of the students.

Keywords: academic performance, aggression, altruism, social behavior

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Introduction

Usually, academic performance is measured by the final grade, Scores earned in the course. The encounters that happen between people are characterized by social behavior. These can be aggressive, and altruistic Campbell (2008). Individuals form social relationships with strangers, friends, members of the same or opposite sex, and members of the same or different generations, and they may form among strangers, friends, members of the same or opposite sex, and members of the same or different generations. Sets of consistent social partnerships create social networks or social institutions that may depart from monogamous or polygamous reproduction themes which include different kinds of cooperative partnership helpers. Ecological and social conditions, demography, and kinship essentially decide the essence of every social structure.

Attitude orientation is behavior that takes interests the intention or need of other people into account (in contrast to anti-social behavior) has played some role in defining the idea or principle, among specific social behavior are regarded aggression, altruism, and shyness (Mackenzie et al. 2010).

Teachers, students, and books are the basic pillars of education. Education brings positive changes to society. Through education the teacher guides the student to the right path, students work with peers in school; the learners learn curricular and co-curricular activities. Every individual is different from others (cognitive, habits, etc.). These differences create changes in personality, academic and social performances. Within the framework of references and mutual exchange, the interaction between social information processing and social transition in childhood is examined and understood. This reformation is a valuable heuristic device for arranging the field since it integrates nearly all previous research. The analysis indicates that overwhelming data confirms the scientific association between the distinctive types of processing and social change of infants, with processing features that are likely to be causative of behaviours, contributing to social states and other aspects (e.g. rough identification bias, cue recognition aim, response pattern and reaction result evaluation) (Sylva et al. 2010). The attitude achievement paradox demonstration that attitude towards education is multidimensional. The first dimension is composed of concrete attitudes; these concrete attitudes are rooted in life experience in which educational credentials may not be fairly rewarded by opportunity structure. The paradoxes of poor grades but positive attitudes are related

to high school grades. Substantively, the study report in this article illustrates how race and class, which are large components of the social content of achievement influence school outcome (Breen & Jonsson, 2005).

The interaction between pro-social and anti-social activity in classrooms and university achievement, including potential mediating consequences for students of academically-oriented teacher behaviour. For students and academic conduct, pro-social and anti-social behaviour are strongly linked to standardised test results and instructor success. Even when academically-oriented behaviour and instructor success for the students, IQ, family structure, sex race, and days absent from school are taken into account, results from multiple regression tests show that both forms of social behaviour are important, independent predictors of classroom grades. According to the regression results, the strong association between social behaviour and academic outcomes can be explained in part by significant social and academic activity in facilitating classroom learning (Meece, Anderman & Anderman, 2006). The school or institutions are the places where students met at a place from different caste, status, religion, nationality, tribes, etc. The teacher facing difficulties in arranging a classroom such as behavioral problems (naughtiness, shyness, passiveness, extraordinary, intelligent, problematic, aggressive, talkative, etc.) intelligence problem (different IQ level) discipline problems (noisy, untidy, latecomers, late home workers). The teacher might have to arrange the class in groups, each group consists of different types of students such as differences in (caste, religion, nation, tribe, shyness, naughty, intelligent, proud, extraordinary, etc.) (O'Connor & Paunonen, 2007). Baroody (2016) stated that social behaviors have a profound impact on the academic achievements of the students in all fields of social sciences and natural sciences. These activities are directly related to the class behavior of the students.

In this way the students might become busy and will productively spend time, the shy students might get rid of shyness and try to utilize their inner quality and might feel proud of self; the average student might learn with their friends it will increase the ratio of learning, respect, and self-responsibility. The classroom might become a symbol of unity, faith, and discipline. The students will be busy in productive and well-mannered. Academic performance and social behavior are the basic components of educational activities. Therefore, the research work is done on the topic "The Relationship between Social Behaviour and Academic Performance of Students at Secondary school level in District Rawalpindi".

Statement of the Problem

Education brings positive change to society. People expect that educated people should behave well. Although the ratio of literacy is increasing day by day yet positive change in behavior or social behavior has not been improved up to the desired level. It has been observed that most of the schools are overcrowded and teachers can't focus individually and also can't give moral attention due to shortage of time and oversized strength that's why behavioral problems are usually neglected. Several studies in this area have been undertaken that investigated the relationship between social behavior and academic achievement of students in the international context. After going through the current literature, it has been found that very little literature is accessible in the Pakistani context concerning the achievement of science students. Therefore, it was planned to conduct this research on "the Relationship between Social Behaviour and Academic Performance of science students at Secondary Level in District Rawalpindi"

Objectives of the Study

The objectives of the study were

- Examine the relationship between academic performance and social behavior of science students at the Secondary school level in District Rawalpindi.
- To identify the gender-based difference regarding social behavior of the science students at the Secondary school level in District Rawalpindi.

Hypotheses

The hypotheses of the study were:

H₀₁: There is no significant relationship between social behavior and academic performance of the science students

H₀₂: There is no significant relationship between Aggressive behavior and the academic performance of science students.

H₀₃: There is no significant relationship between Altruism behavior and the academic performance of science students.

H₀₄: There is no significant difference in Altruism (pro-social) behavior based on gender.

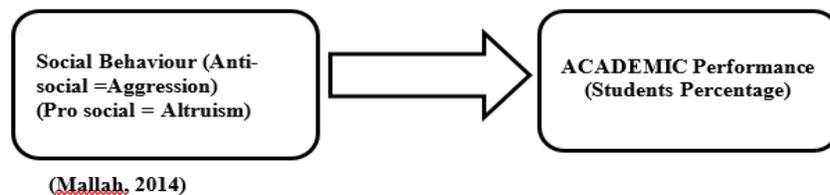
H₀₅: There is no significant difference in Aggression (anti-social)

behavior based on gender.

Significance of Study

This research might be helpful for science teachers and science students. This study can be helpful to science teachers to concentrate on individual differences and develop their teaching methods superlatively. If science teachers can create a learning atmosphere for science students, and promoting rules that produce socially responsible forms of behavior. The science students display more conducive classroom behaviors and feel a stronger sense of connection to their school and share more positive relationships with their teachers. On the other hand, science students can perform better just because of getting an atmosphere giving to their desire. This study might also be helpful for the science teachers that they have to aware of their students' behavior i.e., Altruism, aggression, so in this way, the teachers give moral support to their science students and provide their learning environment according to their student's desires.

Conceptual Framework



Research Methodology

The research work was descriptive and a Stratified sampling technique was used. The data was collected through a questionnaire to confirm the social behavior of proposed students to the annual academic performance of 9th grade.

Research Design

It was a survey and descriptive type of research in which data was collected through a designed questionnaire properly distributed among the concerned teachers of proposed science students of Grade 10th at District Rawalpindi.

Population

The population for the current study was grade 10th science students in District Rawalpindi. For this study among 25 public secondary schools for girls and boys were selected randomly. N=13 for boys' schools and N=12 for girls' schools. The target population of the current study was N=1100 science students.

Sample

For the present analysis, a stratified sampling methodology was used. Using the Krejcie and Morgan (1970) Table for Determining Sample. As per this table total sample size for the current study consist of N= 289 that is 25% of the target population that is 1100. Sample sizes of male N=116 and female N=173 after using the stratified sample technique. The number of science students (grade 9th science students) was chosen based on prior academic results.

Instrument

To get students' responses, a questionnaire consisted of 25 items was developed by the researcher. The questionnaire was based on aggression and altruism behavior.

Table 1
Items of Social behavior

Scale	Dimension	Number of Statement	Number of items
Social behavior	Aggression	1,2,3,4,5,6,7,8,9,10,11,12,13,14	14
	Altruism	15,16,17,18,19,20,21,22,23,24,25	13

Table 1 shows that there were 14 items regarding aggression and 14 items regarding altruism.

Academic Performance

Academic Performance was assessed based on previous academic scores (grade 9th).

Table 2
Academic performance criteria

S. No.	Percentage of Marks	Grade	Remarks
1.	80% and above	AI	Exceptional
2.	70% and above but below 80%	A	Excellent
3.	60% and above but below 70%	B	Very good
4.	50% and above but below 60%	C	Good
5.	40% and above but below 50%	D	Very fair
6.	33% and above but below 40%	E	Fair

Table 2 shows the academic performance criteria for the sample.

Data Collection

Social behavior is the response to others' behavior or actions and reactions. The researcher took different aspects of the science student's responses as social behavior. Like response or dealing at the favor and against situation, aggression, proudest, control of emotions, guilt for failure, the response on social behavior. The data of social behavior was properly collected through a well-designed questionnaire, consisting of 25 items, distributed among the science students of grade 10th. The science teachers provided time and showed personal interest to give accurate results about the social behavior of grade 10th science learners while final results of the academic performance of proposed science students were also granted by the class teachers.

Data Analysis

Ho₁: There is no Significance Relationship Between Social Behaviour and Academic Performance of the Science Students

Table 3
Relationship of social behavior and academic performance

Variable		Social Behavior	Academic performance
Social behavior	Pearson Correlation	1	.024
	Sig. (2-tailed)		.683
	N	289	289
AP	Pearson Correlation	.024	1
	Sig. (2-tailed)	.683	
	N	289	289

Table 3 indicated The Sig. (2-tailed) value as .683 since p-value >0.05, thus failed to reject the null hypothesis. The result also indicated that there is a weak positive correlation between social behavior and academic performance of the science students. In addition to this, it is also indicated that there is no significant relationship between social behavior and the academic performance of science students.

H_{O2}: There is no significant relationship between Aggressive behavior and academic performance of the Science Students

Table 4

Relationship of aggressive behavior and academic performance

Variable		Aggressive Behaviour	Academic Performance
AP	Pearson Correlation	1	.009
	Sig. (2-tailed)		.881
	N	289	289
Aggressive	Pearson Correlation	.009	1
	Sig. (2-tailed)	.881	
	N	289	289

In table 4, a correlation coefficient was used to determine the relationship between behavior (aggression) and the academic performance of the science students. Results indicated that that the Sig. (2-tailed) value as .881 since p-value >0.05, thus we failed to reject the null hypothesis. It is also indicated that is no significant relationship between antisocial behavior (aggression) and academic performance of the science students in district Rawalpindi.

H_{O3}: There is no Significant relationship between Altruism behavior and academic performance of the Science Students

Table 5

Relationship of altruism behavior and academic performance

Variable		Altruism	AP
Altruism	Pearson Correlation	1	.011
	Sig. (2-tailed)		.846
	N	289	289
AP	Pearson Correlation	.011	1
	Sig. (2-tailed)	.846	
	N	.289	289

The results of table 5 indicated that that the Sig. (2-tailed) value as .846 since p-value >0.05 , thus we failed to reject the null hypothesis. It is also indicated that is no significant relationship between antisocial behavior (Altruism) and academic performance of the science students in district Rawalpindi.

H₀₄: There is no significant difference of Social behavior between male and female science students at the secondary school level

Table 6
Gender-Based difference of social behavior

Variable	Gender	N	Mean	df	Sig.
Learning styles	Male	115	99.00	288	.172
	Female	173	97.511		

In table 6, an independent t-test was used to determine the significant difference in social behavior between male and female science students. The results have shown that the Sig. (2-tailed) value as .172 since p-value >0.05 , thus, failed to reject the null hypothesis. It is also indicated that is no significant difference in social behavior between male and female science students of public secondary schools in district Rawalpindi.

H₀₅: There is no significant difference in aggressive (anti-social) behavior between male and female science students

Table 7
Gender-Based difference of aggressive behavior

Variable	Gender	N	Mean	df	Sig.
Learning styles	Male	115	53.64	288	.017
	Female	173	51.97		

Table 7 shows that males (M=53.64, SD=6.90) were having a more aggressive behavior as compared to the females (M=51.97, SD=4.93). The findings are further interpreted based on Sig (two-tailed) value results indicated that that the Sig. (2-tailed) value as .017 since p-value <0.05 , thus we reject the Null hypothesis. The result also revealed that there is a significant difference in aggressive (anti-social) behavior

between male and female science students of secondary schools in district Rawalpindi.

H₀₆: There is no significant difference in altruism (pro-social) behavior between male and female science students of public secondary schools in district Rawalpindi.

Table 8
Gender-Based difference of altruism behavior

Variable	Gender	N	Mean	df	Sig.
Learning styles	Male	115	45.01	288	.028
	Female	173	46.63		

Table 8 shows the significant difference in the learning style of males and females.

Findings

- There is no significant relationship between social behavior and academic performance of the science students at the secondary school level.
- The results also indicated that there is a weak positive correlation between social behavior and academic performance of the science students
- There is no significant difference in social behavior between male and female science students of public secondary schools in district Rawalpindi.
- It is also shown that there is no significant relationship between antisocial behavior (aggression) and the academic performance of the science students in district Rawalpindi.
- The study also revealed that there is no significant relationship between Prosocial behavior (altruism) and the academic performance of the science students in district Rawalpindi.
- The finding of this study also showed that there is a significant difference in aggressive (anti-social) behavior between male and female science students.
- The result indicated that boys having more aggressive behavior as compared to the girls of public secondary schools in district Rawalpindi.

- There is a significant difference in Altruism behavior between male and female science students of public secondary schools in district Rawalpindi.
- The result also revealed that girls are having more cooperative as compared to the boys in the science section.

Discussion

The present study was conducted on the relationship between social behavior and the academic performance of science students. The social behavior included i.e. Aggression and Altruism, and academic performance was assessed based on grade 9th scores. Based on objectives, the researcher makes the 6 Null Hypothesis. The results indicated that no relationship between social behavior and the academic performance of science students. Wentzel (1993) also found that no significant relationship between social behavior i.e. aggression and altruism on students' achievement.

The study has also shown that there is no significant relationship between aggressive and altruistic behavior and the academic performance of the science students in district Rawalpindi. The finding of this study also showed that there is a significant difference in aggressive (anti-social) behavior between male and female science students. The result also indicated that boys having more aggressive behavior as compared to the girls of public secondary schools in district Rawalpindi. There is a significant difference in Altruism behavior between male and female science students of public secondary schools in district Rawalpindi. The result also revealed that girls are having more cooperative as compared to the boys in the science section. Rushton et al. (1986) also found that girls having a more altruism behavior and boys having a more aggressive behavior as compared to female

A healthy mind, peaceful environment, strong family background, and effective methodology affect positively student's performance. Whenever depression disturbs family background and atmosphere, economic status affects barbarically on student's mind, which becomes the cause of aggression, depression, and complex personality. The science students who are not good academically surely are having great troubles and hurdles towards their social and emotional behavior (Mosak & Maniaci, 2013). There are many reasons behind this logic. Maybe because of academic troubles and burden the behavior of science students is challenged, on the other hand, such types of students are not having an interest in academic performance and when work is emphasized on them they become harshly.

According to Marguet et al. (2007) Intervention and restrictions would be imposed on the science students they will behave harshly. And bile will have occurred among them (Killen & Smetana, 2005). Student's academic performance affects social behavior and academic performance (Heckman, Stixrud, & Urzua, 2006).

Conclusion

According to the results of the study, there is no important correlation between social behaviour and science students' academic success. Maybe some other factors have to be involved. Some other factors that directly affect the academic performance of the science students e.g. reading books, hard work, helping others in studies, etc. But it also indirectly affects social behavior. In the same way, some factors like socioeconomic status, educated parents, environment, etc. affect social behavior but indirectly affect the academic performance of the science students as well. The families and school background might also affect the social behavior and academic performance of science students. Awards and rewards also affect the social and academic performance of science students.

Recommendations

The researcher recommends that:

- The home environment and families support highly influence the social and academic performance of students. Therefore, the environment needs to be made good to improve social and academic performance.
- The researcher recommended that praising and rewards might play an important role in managing the aggressive behavior of the students and improving the academic performance of the science students.
- Teachers are role models therefore they have to focus on improving the social behavior and academic performance of students. The students need to be motivated by the heroes, legends, high achievers that they may get inspiration and try to do something great.
- The researcher also recommended that the same research will also be conducted at the Elementary level.

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