

Altruistic Behavior and Inter-Personal Trust among Behavioral Sciences and Engineering Students

Nasrina Siddiqi¹, Sneha Mishra^{1*}, M. Shafiq²

ABSTRACT

The purpose of the present investigation was to compare the levels of Inter-Personal Trust and Altruistic Behavior between Behavioral Sciences and Engineering students. Convenience sampling technique has been used to collect data from 100 college students studying in Jamia Millia Islamia University. Of these 100 students, 50 were from Behavioral Science stream (Sociology, Psychology, Political Science and Social Work) and the other 50 were engineering students. The two groups of students (Engineering and Behavioral Sciences students) were compared on the said variables namely, Inter-Personal Trust and Altruistic Behavior, using independent sample t-test. Results suggest that Students studying Behavioral Sciences and those studying engineering differ significantly in terms of Inter-Personal Trust and Altruistic behavior. Moreover, the mean values indicate that Behavioral science students tend to score higher on Altruism as well as Inter-Personal Trust as compared to engineering students.

Keywords: *Altruistic Behavior, Inter-Personal Trust, Behavioral Sciences*

The rise of behavioral sciences has brought a drastic change in how we conceptualize science. Today, science is something more than just a study of some concrete phenomenon which can be observed directly. Instead, it also entails the study of those abstract phenomenon, such as thinking, behavior, attitudes, society, interpersonal relations and so on, which cannot be observed directly through our senses. This whole shift from concrete to abstract, from brain to mind or from anatomy to individual led to the emergence of behavioral sciences. Today, disciplines such as psychology, sociology or anthropology etc. are viewed as sciences, though not core sciences but social or behavioral sciences. The emergence of behavioral sciences is a relatively recent development. A few decades ago, scientists did not acknowledge these disciplines as sciences. But today behavioral sciences are occupying a pivotal role in the area of research and are growing at a fast pace.

¹ Research Scholar, Department of Psychology, Jamia Millia Islamia, New Delhi

² Professor, Department of Psychology, Jamia Millia Islamia, New Delhi

*Responding Author

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A review of literature reveals that there is a significant impact of academic majors on personality and, therefore, students of different academic majors possess different personality traits (Lievens, Coetsier, Fruyt & Maeseneer, 2002). Studying behavioral sciences, such as Sociology, Psychology, Political Science or Social Work etc., does not only give us a better understanding of ourselves and our surroundings but it also affects the way we look at things and how we interpret various social phenomenon. Therefore, Behavioral sciences impact the values, beliefs, perceptions, thinking and the overall personality of individuals.

The present investigation is an attempt to study how behavioral sciences contribute to social harmony. The two components of social harmony which have been looked into, include inter-personal trust and altruistic behavior. The study attempts to compare behavioral sciences and engineering students in terms of inter-personal trust and altruism to find out whether or not the two groups of students differ significantly on the said variables.

Interpersonal trust

Trust is a very important factor in human relations. Interpersonal trust plays an important role in holding relationships and it may also facilitate performance both at individual as well as group level. Mayer, Davis, and Schoorman (1995) conceptually defined trust as “A willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that party.” Trust has been operationalized in different ways by various thinkers and researchers. Specifically, most operational definitions examine trust as a belief about whether a partner is dependable (McAllister, 1995), cares for your interests (Cook & Wall, 1980), is competent (Mishra, 1993) and/or will act with integrity (Robinson, 1996). The importance of trust lies in the presence of this concept in Erikson’s and Allport’s personality theories. Rotter (1971), in his social relation theory, defines inter-personal trust as "one's generalized expectancy that another individual's word or promise can be relied on in the absence of contrary evidence". In a more recent definition, Deutsch (1973) associates trust with a positive feeling. He describes trust as "A confidence that one will find what is desired from another rather than what is feared. Scanzoni (1979) defines it as an actor's willingness to arrange and repose his or her activities on other because of confidence that other will provide expected gratifications". Apart from expectations from others trust requires to put oneself in a position of risk. Interpersonal trust may also be referred to as a set of assumptions towards others which are gradually developed through inferences from one’s experience about others.

Various studies have been conducted to analyze and investigate the interpersonal trust orientation. In one such study, it was found that male students are more trusting than female students. The same study also revealed that white students and students belonging to higher socio-economic class are more trusting than Black students and students of lower socio-economic class respectively (Terrell & Barrett, 1979). Zi Qiang and Zhang (2012) in their cross-temporal meta-analysis done from 1998 to 2009 of 53 papers revealed that Chinese college

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students' interpersonal trust was declined significantly for both males and females. Results also showed that Interpersonal trust of students from rural area declined significantly, whereas trust of students from urban area remained constant. Apart from Race, sex and socio-economic status some studies have been conducted to explore the significance of educational background in predicting interpersonal trust orientation. Findings of Bisht (1986) showed that interpersonal trust of science undergraduate girls was significantly lower than that of the boys. Further, the interpersonal trust scores of arts students was found to be significantly higher than science students in this study. Iravani & Dindar (2011) in their study on university students found meaningful relationship between network variables, voluntary membership, activity, state of employment and generalized trust. Juan (2007) in his study on interpersonal trust found that students from education department scored higher than medical department students. Science department student scored lower than literature students. Moreover, interpersonal trust level of seniors was the highest and that of freshers was the lowest.

Altruism

Altruism has been conceptualized differently in different disciplines. The different aspect of altruism as well as its own definition lacks agreement among scholars. Despite the controversy, the most basic definition focuses on seeking the welfare of others. Wilson (1975) defined altruism as "Self destructive behavior performed for the benefit of others". Definitions of altruism in psychology focus on two factors: intentions and the amount of benefit or cost to the actor (Krebs, 1987). Bar Tal (1986) notes that, with few exceptions, most of those who emphasize the motivational aspect of altruism agree that: "altruistic behavior (a) must benefit another person, (b) must be performed voluntarily, (c) must be performed intentionally, (d) the benefit must be the goal by itself, and (e) must be performed without expecting any external reward."

Various studies have been conducted to explore the differences in level of altruism among different educational background and different occupation. Nestman (1991) in his study found that people working in social services and related areas have higher altruistic tendencies. In another study, Sawyer (1966) studied the differences of altruistic behavior of social sciences, business graduate, and social service (YMCA) students. Results revealed that the most altruistic group was social service students. Social service students helped everyone but business students helped themselves. Social science students helped who needed them. Haski-Leventhal, Cnaan, Handy et al. (2008) showed that students' vocational choice impacted their tendency to volunteer, more than other background factors, but that the way vocational choice impacted the tendency to volunteer varied in different countries and cultures.

Frey and Meier (2004) found in their study that people differ significantly in their pro-social attitudes. The choice of subjects influences one's pro-social attitude even when other characteristics, such as age and gender etc., are kept constant. The results of their study also suggest that students select different disciplines according to their pro-social preferences.

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Codding and Steinberg (2004) found that social sciences students exhibit more altruistic behavior than natural sciences students.

In the light of above facts, the present study has been planned to explore the significance of behavioral sciences in facilitating social harmony. Interpersonal trust and altruistic behavior have been looked upon as variables of social harmony. Sample has been divided among behavioral sciences and engineering students to see the impact of educational background as contributing factor in social harmony. *With the help of the review, the following objectives were framed for the present study:*

- To compare the level of interpersonal trust among behavioral sciences and engineering students.
- To compare the level of altruism among behavioral sciences and engineering students.

On the basis of the above research objectives, following hypotheses were formulated:

H1: There will be a significant difference between Behavioral Sciences and Engineering students on inter-Personal trust.

H2: There will be a significant difference between Behavioral Sciences and Engineering students on Altruistic Behavior.

METHOD

Sample

The sample for the present study consisted of 100 students selected with the help of convenience sampling from Jamia Millia Islamia University, New Delhi. Out of these 100 students, 50 were behavioral sciences (such as Psychology, Sociology, Social Work and Political Science) students and the other 50 were engineering students. Therefore, two-group design was used in the present study. Each group included both, males as well as females in unequal proportion.

Tools

Interpersonal trust scale by Gupta and Mathur (1991) has been used to assess inter-personal trust. It consists of 20 items. The responses may range from “Totally disagree” (1) to “Totally agree” (4). Previous researches have shown that the split-half reliability of the scale ranges as high as 0.91.

Altruistic behavior has been measured with the help of Altruistic Personality Scale, developed by Rushton, Chrisjohn and Fekken (1981). It is a 20-item scale with responses ranging from Never (0) to Very Often (4). Previous studies show that the internal consistency of these 20 items is extremely high ($\alpha=0.89$) along with high degree of validity and reliability ($r=0.78$).

RESULTS AND DISCUSSION

Table 1, Test of Normality for Behavioral Sciences and Engineering Students

Academic majors	Behavioral sciences			Engineering		
	Shapiro-Wilk test			Shapiro-Wilk test		
	Statistic	df	Sig.	Statistic	df	Sig.
Interpersonal trust	0.967	50	0.171	0.971	50	0.254
Altruism	0.974	50	0.344	0.958	50	0.075

In order to ascertain the normality of sample distribution, Shapiro-Wilk test was administered (table-1) which yielded statistically non-significant values for, both the groups. As a rule of thumb, a sampling distribution can be considered normal if only these values are statistically non-significant i.e. $p > 0.05$ (Field, 2009). Since, in this case, the significance values for the two groups are greater than 0.05, we can safely conclude that the sample of the current study is normally distributed. After determining the normality of research sample, appropriate parametric statistical techniques were applied to further analyze the data.

Table 2, Results of t test and Descriptive Statistics for Interpersonal Trust

Variable	Academic Majors	N	Mean	S.D.	T	Cohen’s d	1-β
Inter-Personal Trust	Behavioral Science Students	50	48.3	11.3	4.04**	0.81 [#]	0.98
	Engineering Students	50	57.7	11.9			

*Significant at *0.05; **0.01 level*

[#]0.2 (small effect size), 0.5 (medium effect size), 0.8 (large effect size)

Since inter-personal trust scale consists of reverse items, low scores on this scale indicate high inter-Personal trust. Therefore, table-2, above, shows that behavioral sciences students score more on interpersonal trust (M=48.3, SD=11.3) than engineering students (M=57.7, SD=11.9), $t_{(49)} = 4.04$, $p < 0.01$, $d = 0.81$. Moreover, the power of test ($1 - \beta = 0.98$) has also been found to be above convention (0.8) which suggests that we can safely reject the null hypothesis stating that there is no significant difference between the two students’ groups on interpersonal trust. Therefore, hypothesis 1 has been fully supported by findings of present investigation.

Although, a number of studies have been conducted on inter-Personal trust among college students but most of these studies have focused on gender differences or class differences in inter-Personal trust. And not much work has been done so far to identify the role of academic

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choices in developing inter-personal trust among college-goers. These results, therefore, are novel for they indicate the important role of academic choices in developing inter-Personal trust and they also reveal, specifically, the significant role of behavioral sciences in developing inter-Personal trust in college students. A similar study was conducted by Bisht (1986), who compared the levels of inter-personal trust among arts and science students and found that the interpersonal trust scores of arts students were significantly higher than those of the science students. The results of the present investigation can be supported by the findings of this research to some extent.

Table 3, Results of t test and Descriptive Statistics for Altruistic Behavior

Variable	Academic Majors	N	Mean	S.D.	T	Cohen's d	1- β
Altruistic Behavior	Behavioral Science Students	50	54.2	10.5	2.22**	0.44 [#]	0.61
	Engineering Students	50	48.8	13.5			

*Significant at *0.05; **0.01 level*

[#]0.2 (small effect size), 0.5 (medium effect size), 0.8 (large effect size)

Table-3 explicitly illustrates that behavioral sciences students are significantly higher on altruism (M=54.2, SD=10.5) as compared to those studying engineering (M=48.8, SD=13.5), $t_{(49)}=2.22$, $p>0.01$, $d=0.44$. Further, the power of test value ($1- \beta= 0.61$) has come out to be lower than convention. Therefore, hypothesis-2 has been fully supported by the findings of present research. These results have been supported by the findings of Nestman (1991) who found in his study that people working in the field of social sciences and other related areas have higher altruistic tendencies.

Furthermore, the findings are also supported by the results obtained by Sawyer (1966) who compared students from social sciences, business studies and social services and found that students studying behavioral or social sciences are higher on altruistic behavior as compared to those from other academic majors. One's academic choice is important as it helps an individual in gaining knowledge through learning and innovation. Knowledge shapes one's perception and hence individuals from different academic majors understand societal needs and their role in it in unique ways. Behavioral sciences focus on human interaction which facilitates traits needed for better adjustment.

CONCLUSION

Thus, the findings of the present investigation, as shown in Table 1 and 2, reveal that behavioral sciences students and engineering students differ significantly from each other in terms of inter-personal trust ($t=4.04$) as well as altruistic behavior ($t=2.22$). Moreover, these results also

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indicate that behavioral sciences students are higher on inter-Personal trust and altruistic behavior as compared to engineering students.

The limitation of present investigation lies in its small sample size. Further, the division of sample in two groups was based on academic choice. The basis of division would have suffered had attempts been made to equalize the number of participants in terms of gender across groups. Future researchers can take this into account and could conduct similar studies on larger samples with greater control over extraneous factors like gender and socio economic status. Despite these limitations, the findings of this investigation are very important in that they reveal the significant role played by academic choices in developing inter-personal trust and altruistic behavior and, consequently, in promoting and boosting social harmony. Therefore, the present research can be used as an empirical support for future researchers on which they can base their work.

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