Turkish Online Journal of Qualitative Inquiry (TOJQI)
Volume 12, Issue 7, July, 2021:1272 – 1281

Mindfulness and Altruistic Behaviour: A Correlation and Prediction Analysis among the Secondary School Students of Dhemaji District, Assam, India

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Abstract

Mindfulness is a state of mind where an individual pays non-judgemental attention to the present moment. It is a psychological strength that increases the engagement of an individual at their works. Altruistic behaviour includes the unselfish concern of an individual towards the welfare of others. It has a significant contribution to the development of collective wellbeing in society. Scientific studies have shown that mindfulness boosting practices are significantly helpful in increasing the level of altruism. This study is an attempt to analyse the association between the two variables and to predict Altruistic Behaviour based on the Mindfulness level of Secondary School students. The present study was conducted among 274 Students of 12 Secondary Schools of Dhemaji District, Assam. The findings of this study stated that there is a significant relationship between Mindfulness and Altruistic Behaviour. The researchers also found that Mindfulness is a significant predictive variable for Altruistic Behaviour of Secondary School Students of Dhemaji District, Assam.

Keywords: *Mindfulness, Altruistic Behaviour, Secondary School students*

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Introduction

Mindfulness: Mindfulness refers to the process of paying attention to the present. It is the non-judgmental awareness of a person towards the present moment (Stiksma, 2015). The term 'Mindfulness' is derived from the Pali word 'Sati', it refers to have attention, awareness, and remembering (Bodhi, 2000). Generally, the word 'Mindfulness' is used to refer to the individual's psychological state of being aware in the present moment. It can be defined as "Moment by moment awareness" (Germer, Siegel & Fulton, 2005). In Buddhism, mindfulness is one of the major factors of enlightenment (Kang & Whittingham, 2010). Mindfulness is also considered a trainable skill. It can be enhanced through different kinds of activities like- Mindfulness meditation etc. Mindfulness has both physical and psychological impacts. In Positive Psychology Mindfulness is considered as an important character strength of an individual for mental health and Wellbeing.

Altruistic behaviour: Altruistic behaviour includes the selfless actions or practices of an individual for the welfare of others. It is a belief that the well-being of others is equally important as the well-being of the self. It is a willingness to do selfless acts to bring advantage to others and sometimes at the cost of own disadvantage. In Positive Psychology, Altruism is considered as a positive civic virtue that is necessary for individual wellbeing as well as collective well-being in society. The Holy Dalai Lama suggested that we will be more benefited as we think more about practising altruism and good things to others. The term 'Altruism' was first coined by August Comte in 1875. Comte (1875) defined altruism as a social behaviour that derived from the selfless desire to "live for others" (Comte, 1875. P. 556). He has used the term as opposite of selfishness (egoism) in helping behaviours of the individuals in society. The socio-biologist, Wilson defined altruistic behaviour as "self-destructive behaviour performed for the benefit of others." (*Wilson 1975, p. 578).* Margolis (1982) defined altruistic behaviour as, "What defines altruistic behaviour is that the actor could have done better for himself had he chosen to ignore the effect of his choice on others." *(Margolis 1982. p. 15*). Batson considered Altruism as a motivational state having an ultimate goal to 'increase others welfare'. Scientific interest in human altruistic behaviour had started growing from the early 1970s. The concept of altruism is being used across many disciplines that lead to the emergence of many distinct ideologies to explain altruism, viz., Reciprocal altruism (Trivers,1971), Psychological altruism (Wilson,1992), Ethical egoism (Medlin,1957), Rational egoism (Mueller,1986), etc.

Studies suggested that a significant amount of Mindfulness boosts our capabilities in works, behaviours as well as in social actions. Clinical studies found that Mindfulness boosting meditation activities significantly reduce anxiety, stress and depression as well as improves the emotional regulation of an individual. (Goyal, M. *et al*.2014) The mindfulness improving practices are also beneficial for the development of social virtues of the individuals, these can promote cooperativeness as well as intention to help others. Iwamoto et al. (2020) conducted a study among 326 participants to find out the effect of Mindfulness meditation practices on the Altruism of the individual. The result of the study suggested that short-term mindfulness meditation can promote charitable giving. The result also found the possibility that mindfulness meditation can regulate the altruism of an individual and promote cooperation. Therefore, it can be assumed that there is a relationship between Mindfulness and the

Altruistic behaviour of the individual and having a significant amount of Mindfulness will affect the Altruistic behaviour of an individual. In this study, the researchers tried to test the relationship between the two variables and predict altruistic behaviour based on mindfulness among the Secondary School students of Dhemaji District, Assam.

Objectives of the study

To find out the levels of Mindfulness among the Secondary School Students of Dhemaji District, Assam.
To find out the levels of Altruistic behaviour among the Secondary School Students of Dhemaji District, Assam.
To classify the Secondary School Students of Dhemaji District, Assam based on their level of Altruistic behaviour.
To compare the level of Mindfulness between Male and Female Secondary School Students of Dhemaji District, Assam.
To compare the level of Altruistic behaviour between Male and female Secondary School Students of Dhemaji District, Assam.
To Study the Relationship between Mindfulness and Altruistic behaviour of the Secondary School Students of Dhemaji District, Assam.
To predict the level of Altruistic Behaviour based on the level of Mindfulness of the Secondary School Students of Dhemaji District, Assam.

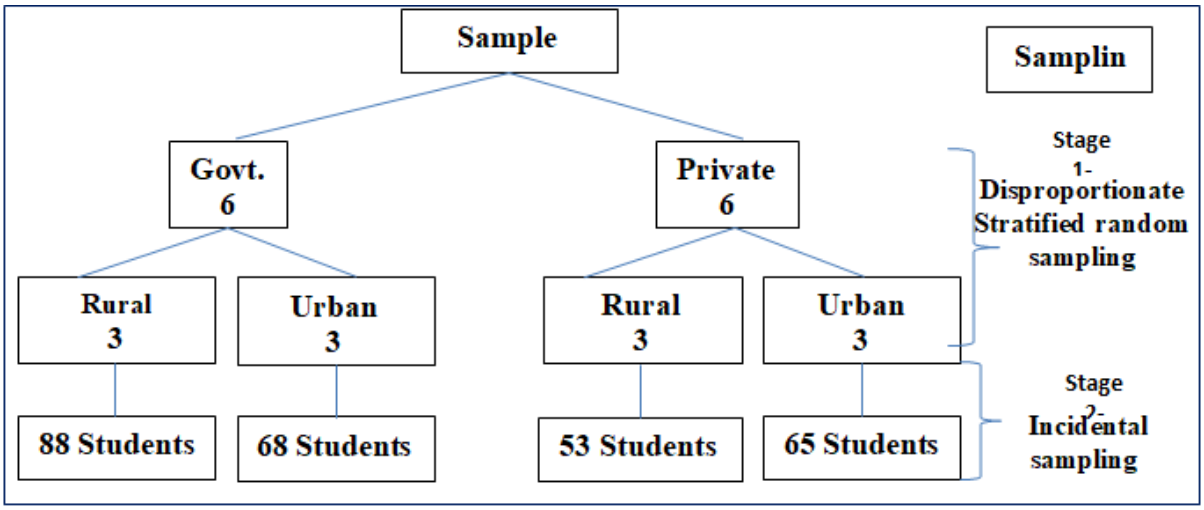
Hypotheses of the study:

H_0 1: There is no significant difference between Male and Female Secondary School students of Dhemaji District, Assam as far as their level of Mindfulness is concerned.
H_0 2: There is no significant difference between Male and Female Secondary School students of Dhemaji District, Assam as far as their level of Altruistic behaviour is concerned.
H_0 3: There is no significant correlation between Mindfulness and altruistic behaviour of the Secondary school students of Dhemaji District, Assam.
H_0 4: The model is not significant to predict the outcome variable.

Methodology:

Method: Descriptive survey method was used to conduct the present study.
Population: The population of the present study comprised of all the students of Class IX and X of all the Government and Private Secondary School students of Dhemaji District Assam.
Sample & Sampling Technique: The sample for this study comprised **274** students from 12 Secondary schools of Dhemaji District, Assam. The sample was selected using two sampling techniques in two stages. The first stage includes a disproportionate stratified random sampling to select the schools and the second stage includes an incidental sampling method to select the students from the targeted schools.

Fig. 1: Sample Design



Tool used:

Mindfulness Attention Awareness Scale (MAAS): The Mindfulness Attention Awareness Scale (MAAS) was developed by Brown & Ryan (2003). The scale consists of 15 items that were developed to assess dispositional mindfulness.

Scoring Procedure: The items of the Mindfulness Attention Awareness Scale (MAAS) was designed with a 1-6 points Likert type scaling technique. Based on the rating of the respondent one score (range from 1-6) is given to each item. The average scores of the total 15 items indicate the level of mindfulness of the particular respondents.

Altruism Scale: The researchers used another scale entitled as 'Altruism Scale' developed by Dr S. N Rai and Dr Sanwat Singh. The scale consists of 30 items. The reliability coefficient of this scale was .84 and the concurrent validity index was .63

Scoring Procedure: Each item of this scale has three different alternatives responses, i.e., Altruistic, neutral and egoistic. For the altruistic response '2', for the neutral response '1' and for the egoistic response '0' is awarded. The total score obtained by a response in all items indicates the level of his/her level of altruistic behaviour. The classification criteria of the respondents are as stated in ***table 1***

Table 1: Classification criteria of the respondents based on Altruism score

Classification for Girls	**Classification for Boys**
51 and above- Very High Altruistic	51 and above- Very High Altruistic
37-50 -High Altruistic	35-48 -High Altruistic
23-36 -Moderate Altruistic	21-34 -Moderate Altruistic
09-22 -Low Altruistic	07-20 -Low Altruistic
08 and below-Very low Altruistic	06 and below-Very low Altruistic

Analysis and Findings of the study:

Levels of Mindfulness among the Secondary School Students of Dhemaji District, Assam: ***Table 2*** shows that the Mean **($\underline{x}$),** Standard Deviation **(σ),** Skewness, and Kurtosis of the distribution are ***3.93, .042, -.375*** and ***.485*** respectively. This distribution is negatively skewed

i.e. more students scored greater than the average score. The Kurtosis value ***.485*** (i.e. > ±3) indicates that the distribution is leptokurtic, i.e. the curve is slightly picked than the normal curve.

Table 2: Level of Mindfulness of Secondary School Students of Dhemaji District, Assam.

Number of Students **(N)**	Mean **($\underline{x}$)**	Standard Deviation **(σ)**		Skewness	Kurtosis
273		**3.93**	**.042**	**-.375**	**.485**

Fig.-2 shows the frequency distribution of the Mindfulness scores obtained by the secondary school students of Dhemaji District, Assam. ***Fig.-2*** indicates that a large number of students (i.e. 59) scored near to average score (i.e., between 3.52-3.89). A small number of students (i.e. 3) obtained very low scores (i.e. <2.04) similarly, a few students (i.e., 3) obtained very high scores (i.e., between 5.37-5.74).

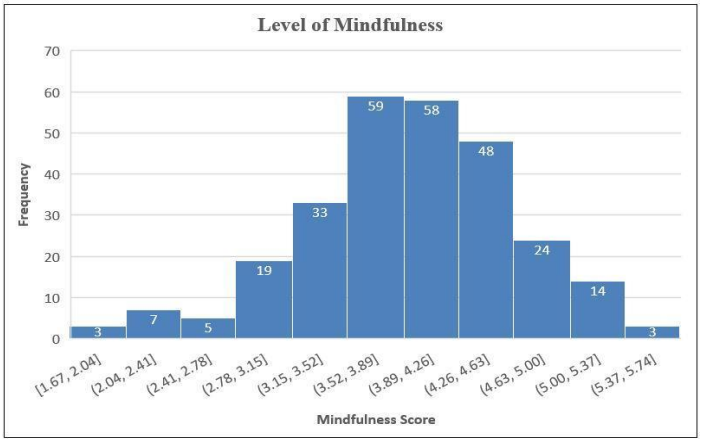


Fig.-2: Histogram of Mindfulness scores of Secondary School Students, Dhemaji District, Assam

Levels of Altruistic behaviour among the Secondary School Students of Dhemaji District, Assam: *Table-3* shows that Mean **($\underline{x}$),** Standard Deviation **(σ),** Skewness, and Kurtosis of the distribution are ***36.58, 4.998. -.082*** and ***-.438*** respectively. This distribution is negatively skewed i.e. more students scored greater than the average score. The Kurtosis value is ***-.438*** (i.e. > ±3) which refers that the distribution is leptokurtic, i.e. the curve is slightly picked than the normal curve.

Table 3: level of Altruistic behaviour of Secondary School Students of Dhemaji District, Assam.

Number of Students (N)	**Mean ($\underline{x}$)**	**Standard Deviation (σ)**	**Skewness**	**Kurtosis**
273	36.58	4.998	-.082	-.438

Fig.-3 shows the frequency distribution (f) of the Altruistic behaviour scores obtained by the secondary school students of Dhemaji District, Assam. ***Fig.-3*** indicates that a large number of students (i.e. 63) scored near to average score (i.e., between *35.5-38.2*). A small number of students (i.e. 1) obtained the lowest level scores (i.e. between *22-24.7*) similarly, fewer students (i.e., 3) scored very high scores (i.e., between *46.3-49*).

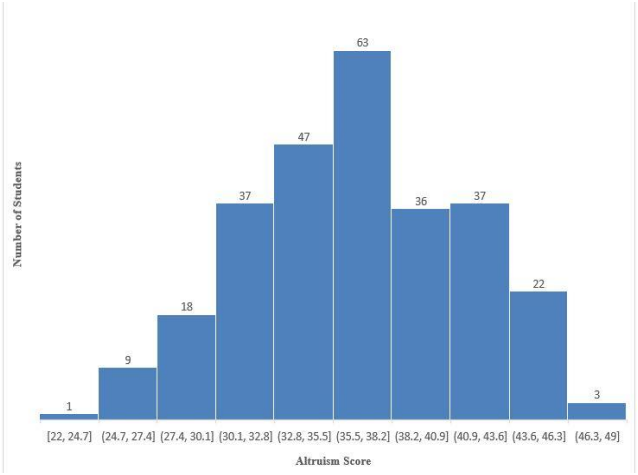


Fig.-3: Histogram of Altruism score of Secondary School Students, Dhemaji District, Assam

Classification of the Secondary School Students of Dhemaji District, Assam based on their level of Altruistic behaviour.

Table-4: Altruistic Behaviour of the students

Category	**Male**	**Female**
Very High	0	0
High	84	78
Moderate	52	59
Low	0	0
Very Low	0	0

Table-4 shows that no male secondary school students in Dhemaji have very high altruistic behaviour. The table shows that 84 male secondary school students have high altruistic behaviour and 52 male secondary school students have scored moderate scores in altruistic behaviour. Accordingly, no female students obtained a very high score in altruistic behaviour. In the case of female students, 78 students scored high scores in altruistic behaviour and 59 students obtained moderate scores regarding their altruistic behaviour. No students were found who possessed a low or very low level of altruistic behaviour among both boys and girls secondary school students of the district, Assam.

Comparison of Mindfulness between Male and Female Secondary School Students of Dhemaji District, Assam.

H_0= There is no significant difference between male and female Secondary School Students of Dhemaji District, Assam as far as their Mindfulness is concerned.

Table-5: Comparison between male and female Secondary School Students in their level of mindfulness

Category	**N**	**Mean**	**SD**	**t**	**df**	**P-value**	**inference**
Male	136	3.92	.6069	.17	271	.86	Not Significant at .05 level
Female	137	3.93	.7596				

Table-5 shows that the t value is .17 which is less than the table value (1.97 at .05 level) and the P-value (.864) is higher than .05 so, the null hypothesis is accepted. Therefore, it can be concluded that there is no significant difference between male and female Secondary School Students of Dhemaji District as far as their mindfulness is concerned.

Comparison of Altruistic behaviour between male and female Secondary School Students of Dhemaji District, Assam.

H_0= There is no significant difference between male and female Secondary School Students of Dhemaji District, Assam as far as their Altruistic behaviour is concerned.

Table-6: Comparison between male and female Secondary School Students in their level of Altruistic behaviour.

Category	N	Mean	SD	t	df	P-value	inference
Male	136	35.90	4.984	2.275	271	.024	Significant at .05 level
Female	137	37.26	5.069				

Table-6 shows that the 't' value is 2.275 which is higher than the table value (1.97 at .05 level at 271 degrees of freedom) and the P-value (.024) is lower than .05 that rejected the null hypothesis. Therefore, it can be concluded that there is a significant difference between male and female Secondary School Students of Dhemaji District as far as their Altruistic behaviour is concerned.

Relationship between Mindfulness and Altruistic Behaviour of Secondary school students of Dhemaji District, Assam.

H_0= There is no significant correlation between Mindfulness and Altruistic Behaviour of Secondary school students of Dhemaji District, Assam.

Table 7: Correlation between Mindfulness and Altruistic Behaviour

Variables	N	Correlation coefficient	P-value
Mindfulness	273	.310	.000
Altruistic Behaviour	273		

Table 7 shows that the coefficient of Pearson Product Moment correlation is = .310, and the P-value is= .000

Since the correlation coefficient is between .3 to .5 and the P-value is less than .001, it indicates that there is a low positive but significant correlation between the two variables. Therefore, the null hypothesis is rejected.

Prediction of Altruistic Behaviour based on the level of Mindfulness of Secondary School Students of Dhemaji District, Assam.

To predict the Altruistic behaviour of the Secondary School Students of Dhemaji District, Assam based on their Mindfulness level, the researcher performed a linear regression analysis considering Altruistic behaviour as a dependent variable (Y) and Mindfulness as an independent variable (X).

Test of Assumptions for Regression Analysis.

a) **Test of Correlation and Scatter Plot:** The coefficient of correlation between Mindfulness and Altruistic Behaviour of Secondary School Students is found .310 (using

Pearson Correlation technique). The p-value (i.e.- .000<.001) shows that there exists a significant correlation between the two variables at the .001 level.

Both Pearson's correlation coefficient (r) i.e. 0.310 (**Table 7)** and Scatter plot **(Fig 4)** suggested that there is a low but positive linear relationship between Mindfulness and Altruistic Behaviour of Secondary School Students of Dhemaji District, Assam.

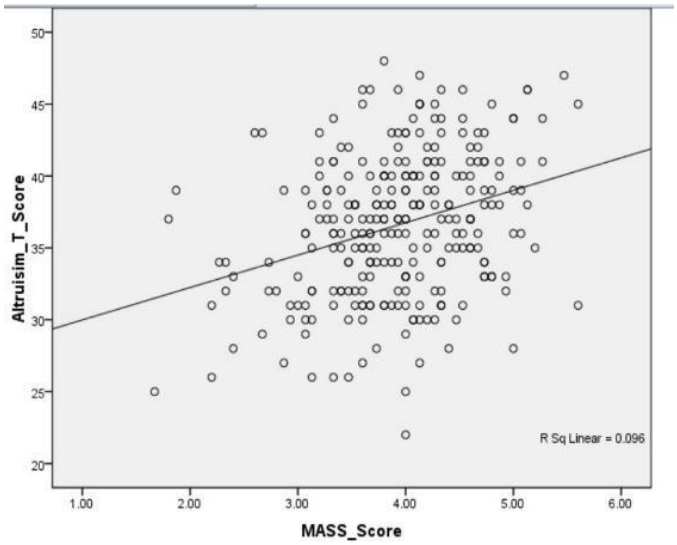
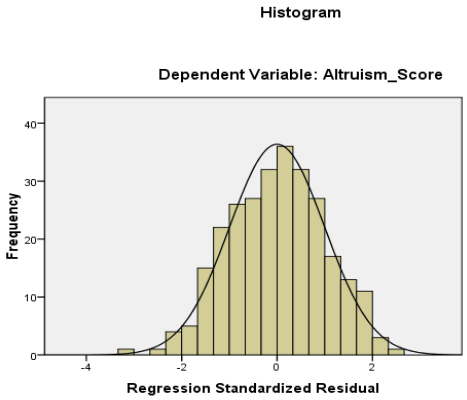


Fig 4: Scatter plot

b) Test of Normality of residuals and

Homoscedasticity: The residuals are approximately normally distributed. There is no pattern in the scatter. So, the assumptions have been met.



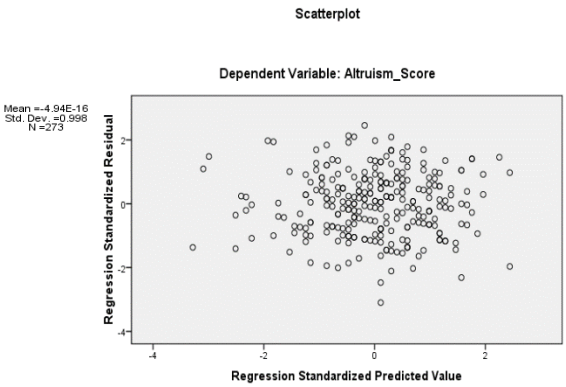


Fig 5: Histrogram (Residuals) **Fig 6: Scatter plot (Homoscedasticity)**

Regression Analysis:

H_o = The model is not significant to predict the outcome variable.

Table 8 shows that, the R-value is=.310 which indicates a low relation between Mindfulness and Altruistic Behavior. The R Square value is =.096, which refers that only 9.6% variance in the data of Altruistic behaviour is explained by the predictor, i.e. Mindfulness.

Table 8: Model Summary

(Predictors: Mindfulness, Dependent Variable: Altruistic Behaviour)

R	R square	Adjusted R square	Std. Error of the Estimate
.310	.096	.093	4.761

The ANOVA table **(Table 9)** shows that the significant value is less than .05, therefore it can be said the model is a significant predictor or the outcome variable. Therefore, the null hypothesis for this model is rejected.

Table 9: ANOVA (Predictor-Mindfulness, Depended Variable-Altruistic Behaviour)

	Sum of Squares	df	Mean Square	F	Sig.
Regression	651.159	1	651.159	28.725	.000[a]
Residual	6143.237	271	22.669		
Total	6794.396	272			

Table 10 shows that the significant value of coefficients is less than .05, therefore we can say that there is a significant impact of the independent variable on the dependent variable. By putting the data in the formula of linear regression, (i.e., **'Y=α+βX+€'**) we get the equation as below -

Happiness= 27.740+2.254*(Mindfulness)

Table 10: Coefficients (depended variable- Altruistic Behaviour)

Model		Unstandardized Coefficients		Standardized Coefficients	b	Sig.
		B	Std. Error	Beta		
1	(Constant)	27.740	1.675		16.564	.000
	Mindfulness	2.254	.421	.310	5.360	.000

Therefore, we can conclude that one level increase in Mindfulness cause 2.254 level increases in Altruistic behaviour of the Secondary School Students of Dhemaji District, Assam.

Conclusion

In the present study, the researchers found a low but significant relationship between Mindfulness and Altruistic Behaviour of the Secondary School Students of Dhemaji District, Assam. The coefficient of correlation was found to be .310, and the P-value was .000, which indicates a significant positive relationship between the two variables. The researchers also found that the Altruistic behaviour of the students can be predicted based on the mindfulness level of the secondary school students of Dhemaji district, Assam. The regression analysis shows that one level increase in Mindfulness cause 2.254 level increases in Altruistic behaviour of the Secondary School Students of Dhemaji District, Assam. It is seen that gender is not a significant factor of difference for the Mindfulness level among the secondary school students of Dhemaji district, Assam. While comparing the mindfulness level between male and female students, the 't' value was found .17 which was less than the table value (1.97 at .05 level) and the P-value (.864) was higher than .05 therefore, the null hypothesis was accepted. The researcher found a significant difference between male and female students regarding their level of Altruistic Behaviour as the 't' value was found 2.275 which was greater than the table value (1.97 at .05 level at 271 degrees of freedom) and the P-value (.024) was lower than .05. The researchers found that more Secondary Students of Dhemaji

District, Assam scored greater than the average scores in both Mindfulness and Altruistic Behaviour.

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