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DETERMINING PSYCHOMETRIC PROPERTIES OF PROSOCIAL BEHAVIOUR MEASURE THROUGH EXPLORATORY AND CONFIRMATORY FACTOR ANALYSIS

1

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INTRODUCTION

Prosocial behaviour has the purpose of fostering social bonds. Empathy is a common prosocial behaviour in which one person demonstrates concern and personal unease over the misfortune or unhappiness of another. Altruistic behaviour comprises actions performed for entirely selfless reasons, their purpose instead of being the benefit of others. During early childhood, a child develops self-control and conscience. For a child to become a member of their social group, they must learn to get along with this group with their peers. This learning involves controlling their aggression and showing empathy. Prosocial Behaviour refers to “voluntary actions that are intended to help or benefit another individual or group of individuals” (Eisenberg & Mussen, 1989). These behaviours include a broad range of activities: sharing, comforting, rescuing, and helping. Prosocial behaviour refers to a pattern of activity, whereas, altruism

is the motivation to help others out of pure regard for their needs rather than how the action will benefit oneself.

Furthermore, they explain that these acts are intrinsically motivated; that is, they are “acts motivated by internal motives such as concern and sympathy for others or by values and self-rewards (such as feelings of self-esteem, pride, or self-satisfaction) rather than personal gain. The term prosocial is an umbrella term that incorporates such fields as character education, moral education, social and emotional learning, civic education and school culture/ climate. Developing prosocial behaviour in students is grounded in the theories of social and emotional intelligence that lead to a more caring, respectful and responsible individual.

REVIEW OF RELATED STUDIES

Prosocial behaviour includes those actions tending to help or benefit other people, irrespective of the intention to be

pursued with this help. Such behaviour is the result of multiple individual and situational factors including parental variables and empathic traits (Eisenberg & Fabes, 1998). It is understood as a tendency to give rise to actions, belonging to the sphere of habits, practices and social interactions, which are characterized by the beneficent effects, which they produce on another person (Caprara et al., 2005).

Prosocial behaviour is a “voluntary behaviour intended to benefit another” (Eisenberg et al., 2006). Helping and rescuing behaviours are innate in primates, helper bees, ants, wild dogs, and other species (Wilson, 2019). The comprehensive studies related to prosocial behaviour were given in the book “The Roots of Prosocial Behaviour in Children” (Eisenberg & Mussen, 1989). The prosocial tendency measure (PTM) was developed to measure prosocial behaviour tendencies on six subscales for late adolescents (Carlo & Randall, 2002). A revised version, consisting of 25 items, adding one item to altruistic and one item to emotional prosocial behaviour was later published (Carlo et al., 2003). Another example of global prosociality measures is the Prosociality Scale (Caprara et al., 2005), which describes the individual variability of prosocial behaviour as a stable attribute, and is designed for young adults.

Since the Prosociality Scale is recognized internationally, it is of great scientific and practical interest to evaluate its psychometric characteristics

and variance across diverse populations. Indeed, a recent systematic review of measures of prosocial behaviour reported that PS is among the measures with few validation studies carried out in adults with excellent internal consistency (Martí-Vilar et al., 2019). Moreover, all studies that have used the Prosociality Scale other than by Caprara et al., 2005 have applied linear models (structural equation modelling) that included latent variables.

NEED AND SIGNIFICANCE

In the present scenario the helping tendency was found to be in a declining phase due to enormous factors like life style, nuclear family, education system and stress on academics. However helping anyone without expecting anything in return might be referred as endangered. The investigator want to measure such social behaviour among students of high and higher secondary school. While investigating such behaviour there aroused a need for an instrument in measuring prosocial behaviour. Most of the instrument cannot be readily used in the Indian context, hence with the help of review and opinion of the experts the scale were constructed and modified accordingly. Validation is inseparable aftermath sequence in the tool development, but the real challenge came across in this study was handling the missing data. Thus research study prioritized from prosocial behaviour analysis to the development and validation of the research tool with proper handling

of missing values through exploratory and confirmatory means.

MATERIALS AND METHODS

The normative survey was employed with the objective of Missing Value Analysis of initial Prosocial Behaviour Measure (PBM) and Factorial Validation of the final form of PBM. Initially, 24 items were framed from critical prosocial behaviour, emotional prosocial behaviour, altruistic prosocial behaviour, personal prosocial behaviour etc. The items are given in Table 1. Responses 'Does Not Describe Me At All' is given 1 point, 'Describes Me A Little' is given 2 points, 'Somewhat Describes Me' is given 3 points, 'Describes Me Well' is given 4 points and 'Describes Me

Greatly' is given 5 points. Three items Q14, Q16 and Q17 were negative, for them the scoring was reversed. At first, the tool was administered to samples of 49 high school students as a pilot study. The duration of filling up the tool with the students was around 10 minutes. To establish reliability, the Cronbach Alpha coefficient was estimated for initial PBM ($M = 92.45$ & $SD = 15.641$ using SPSS version 26. It was calculated to be 0.863. The intrinsic validity co-efficient was established by taking the square root of the reliability coefficient, which was found to be 0.929. However, Q16 and Q17 were dropped out for further analysis as 'Corrected item-total Correlation' scored less than 0.16, which was kept as a criterion for retaining the items (Table 1).

Table 1: Item-total Statistics for Pilot Study

No	Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Decision
1.	I help others who are physically hurt.	88.56	232.996	0.197	0.866	Retained
2.	I help someone who fell down.	88.13	228.707	0.490	0.857	Retained
3.	I helped a child who got lost.	88.52	217.871	0.674	0.85	Retained
4.	I solve peer problems.	89.41	227.004	0.382	0.859	Retained
5.	I help those who are in crisis.	88.41	221.847	0.566	0.853	Retained
6.	I don't hesitate to help others when asked.	88.96	216.336	0.655	0.85	Retained
7.	I help those who are emotional.	89.15	224.788	0.420	0.858	Retained
8.	I help others when they are very upset.	88.62	221.707	0.567	0.853	Retained
9.	I comfort someone worried.	88.31	218.454	0.704	0.85	Retained
10.	I help those being harassed.	88.39	221.295	0.578	0.853	Retained
11.	I help those who hurt themselves badly.	89.27	209.821	0.676	0.848	Retained

No	Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Decision
12.	I cheer up someone who feels sad.	88.52	223.146	0.561	0.854	Retained
13.	I help others without any expectation.	88.45	230.951	0.288	0.862	Retained
14.	I help others with expectations.	88.45	234.994	0.169	0.867	Retained
15.	I help any unfamiliar person.	88.88	223.077	0.452	0.857	Retained
16.	I help others better when I am being watched.	88.62	253.358	-0.239	0.879	Omitted
17.	I help others because it makes me look good.	88.76	236.138	0.138	0.868	Omitted
18.	I donate money without anyone knowing.	88.88	221.166	0.466	0.856	Retained
19.	I think twice before acting.	88.27	223.672	0.658	0.852	Retained
20.	I play by the rules of the game.	88.74	229.043	0.357	0.86	Retained
21.	I manage my failures.	88.25	225.906	0.493	0.856	Retained
22.	I listen to others' points of view.	88.13	232.777	0.362	0.86	Retained
23.	I share materials/books with others.	88.24	225.478	0.506	0.856	Retained
24.	I lead the team (games/activities).	88.51	224.111	0.405	0.859	Retained

SAMPLE AND SAMPLING TECHNIQUE

The sample of the present study included 310 students studying Tamil medium in Five schools in Sendurai

Taluk of Ariyalur District in Tamil Nadu selected by using random sampling technique. The distribution of the sample was presented in Table 2.

Table 2: Distribution of Sample

Categories	Sub-categories	Frequency	Per cent
Gender	Girls	142	45.8
	Boys	168	54.2
Age	up to 14 Years	112	36.1
	15 Years	64	20.6
	16 Years	105	33.9
	17 Years & above	29	9.4

Categories	Sub-categories	Frequency	Per cent
Type of Management	Government	104	33.5
	Government Aided	106	34.2
	Private	100	32.3
Type of Family	Joint Family	88	28.4
	Nuclear Family	222	71.6
Order of Birth	First	108	34.8
	Second	128	41.3
	Third	49	15.8
	Fourth & above	25	8.1
Number of Siblings	No sibling	5	1.6
	One sibling	117	37.7
	Two siblings	119	38.4
	Three siblings	55	17.7
	Four siblings	9	2.9
	Five siblings & above	5	1.6
Total		310	100

DATA ANALYSIS AND INTERPRETATION

After analyzing the missing values, it is revealed that Q20 has the highest missing count of 6 and it is followed by

Q7 and Q21 contain 5 missing counts each. The table also revealed that 1 high extreme missing value is observed in Q4 (Table 3).

Table 3: Missing Value Analysis for Core Study

Univariate Statistics						No. of Extremes@	
Items	N	Mean	Std. Dev.	Missing Count	Per cent	Low	High
Q1	310	3.83	1.187	0	0	0	0
Q2	309	3.87	1.170	1	0.3	0	0
Q3	308	3.55	1.302	2	0.6	0	0
Q4	309	3.39	1.692	1	0.3	0	1
Q5	309	3.60	1.222	1	0.3	0	0
Q6	307	3.80	1.187	3	1	0	0
Q7	305	3.01	1.258	5	1.6	0	0
Q8	306	3.60	1.170	4	1.3	0	0

Univariate Statistics						No. of Extremes@	
Items	N	Mean	Std. Dev.	Missing Count	Per cent	Low	High
Q9	308	3.51	1.275	2	0.6	0	0
Q10	309	3.37	1.370	1	0.3	0	0
Q11	309	2.66	1.291	1	0.3	0	0
Q12	310	3.85	1.115	0	0	0	0
Q13	309	3.72	1.195	1	0.3	0	0
Q14	309	3.73	1.485	1	0.3	0	0
Q15	310	2.62	1.376	0	0	0	0
Q18	310	2.27	1.340	0	0	0	0
Q19	310	3.86	1.283	0	0	0	0
Q20	304	3.51	1.372	6	1.9	0	0
Q21	305	3.64	1.265	5	1.6	0	0
Q22	307	3.72	1.350	3	1	0	0
Q23	307	3.66	1.336	3	1	0	0
Q24	310	3.55	1.280	0	0	0	0

@ Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

The investigator has applied multiple imputations missing value analysis that seems insufficient in deciding the omission of cases. Using the multiple imputation procedures, patterns of missing values were analyzed for 22 variables and found that much information would likely be lost if simple list-wise deletion were used.

Overall Summary of Missing Values

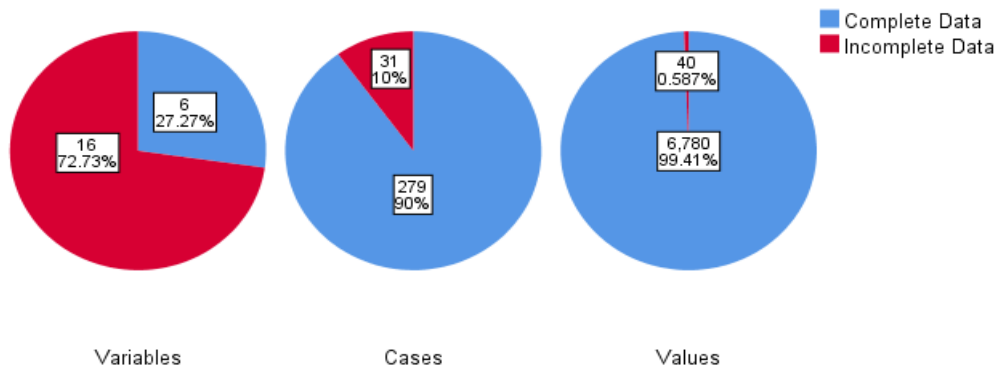


Figure 1: Overall Summary of Missing Values

The overall summary of missing values displayed three pie charts that showed different aspects of missing values in the data (Fig.1). The variables chart showed that each of the 16 of the 22 variables has at least one missing value on a case. The cases chart showed

that 31 of the 310 cases have at least one missing value on a variable. The values chart showed that 40 of the 6780 values are missing. The summary of missing values suggested that, list wise deletions would lose much of the information in the dataset.

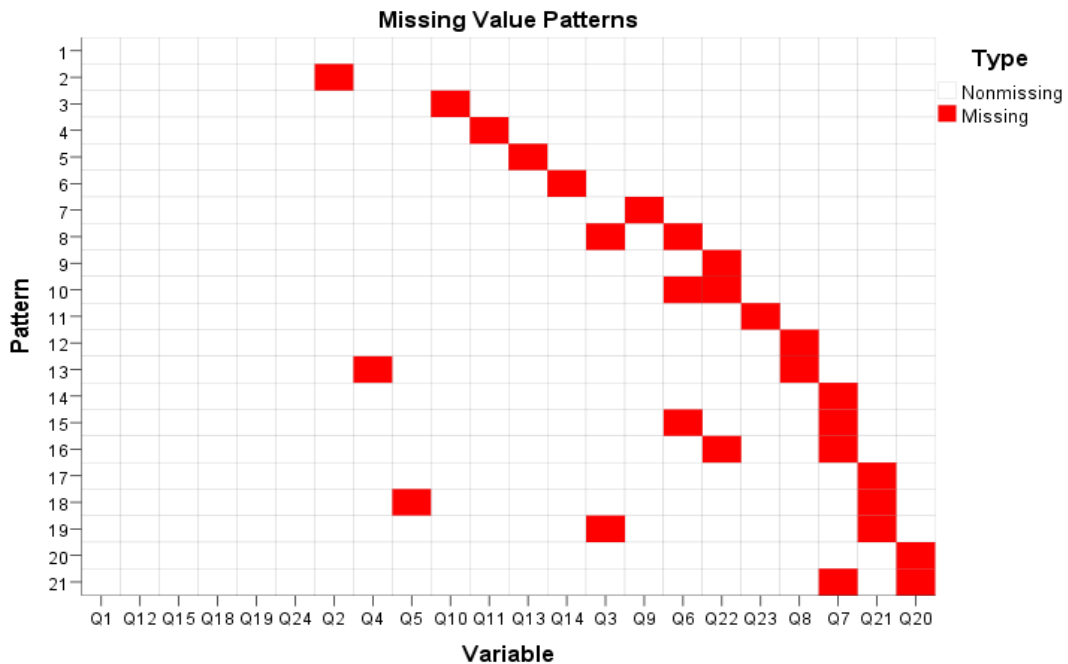


Figure 2: Missing Value Patterns

The pattern chart displayed missing value patterns for the 22 variables (Fig 2). Each pattern corresponded to a group of cases with the same pattern of incomplete and complete data. For example, Pattern 1 represents cases that have no missing values, while Pattern 2 represents cases that have missing values on Q2. Like-

wise pattern 8 represents cases that have missing values on both Q3 and Q6. A dataset can potentially have two number of variables patterns. For 22 analysis variables, this is $2^{22}=4194304$; however, only 21 patterns are represented in the 310 cases in the dataset.

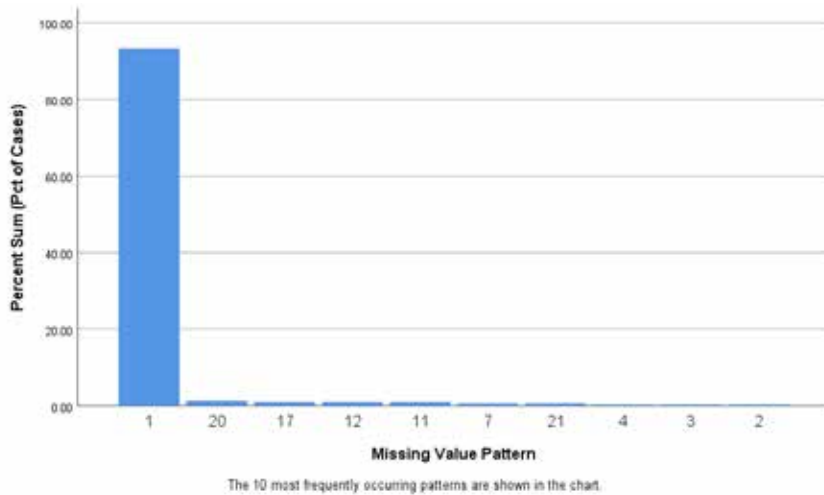


Figure 3: Missing Value Pattern Chart

The chart orders analysis variables and patterns to reveal monotonicity where it exists (Fig. 3). Specifically, variables were ordered from left to right in increasing order of missing values. Patterns were then sorted first by the last variable (nonmissing values first, then missing values), then by the second to last variable, and so on, working from right to left. This revealed whether the monotone imputation method can be used for the data, or, if not, how closely the data approximate a monotone pattern. If the data are monotone, then all missing cells and nonmissing cells in the chart would be contiguous; that is, there would be no “islands” of nonmissing cells in the lower right portion of the chart and no “islands” of missing cells in the upper left portion of the chart. This dataset was non-monotone and many values would need to be imputed to achieve monotonicity. Further Little’s MCAR (Missing

Completely At Random) test: Chi-Square = 480.147, $df = 412$, Sig. = 0.011 indicated that the missing data were not at random or non-ignorable (Tabachnick & Fidell, 2007). With the knowledge of missing values, the investigator wants to validate PBM along with the missing values as only 0.587% of values were missing in this dataset.

To establish reliability, the Cronbach Alpha coefficient was estimated for 22 Prosocial Behaviour items ($M = 76.44$ and $SD = 13.504$). It was calculated to be 0.835. The intrinsic validity coefficient was established by taking the square root of the reliability coefficient, which was found to be 0.914. Moreover, Q14 and Q18 were not included in the further analysis as ‘squared multiple correlation’ scored less than 0.2, which was kept as a criterion for retaining the items at this stage of tool construction given in Table 4.

Table 4: Item-Total Statistics for Core Study

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted	Decision
Q1	72.61	164.973	0.528	0.369	0.823	Retained
Q2	72.57	167.577	0.441	0.314	0.826	Retained
Q3	72.92	164.810	0.474	0.276	0.825	Retained
Q4	73.05	164.727	0.331	0.257	0.833	Retained
Q5	72.81	163.843	0.555	0.364	0.822	Retained
Q6	72.63	167.887	0.429	0.257	0.827	Retained
Q7	73.40	166.946	0.429	0.297	0.827	Retained
Q8	72.86	165.917	0.499	0.363	0.824	Retained
Q9	72.95	164.789	0.494	0.358	0.824	Retained
Q10	73.11	164.459	0.452	0.327	0.826	Retained
Q11	73.78	169.704	0.330	0.227	0.831	Retained
Q12	72.59	167.315	0.480	0.351	0.825	Retained
Q13	72.72	165.661	0.497	0.338	0.824	Retained
Q14	72.67	179.158	0.027	0.128	0.845	Omitted
Q15	73.83	174.687	0.161	0.203	0.838	Retained
Q18	74.15	177.356	0.091	0.189	0.841	Omitted
Q19	72.56	166.923	0.416	0.318	0.827	Retained
Q20	72.93	166.506	0.397	0.303	0.828	Retained
Q21	72.77	166.105	0.458	0.303	0.826	Retained
Q22	72.71	164.342	0.464	0.322	0.825	Retained
Q23	72.76	165.090	0.458	0.284	0.825	Retained
Q24	72.86	165.391	0.465	0.292	0.825	Retained

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy provided an index (between 0 and 1) of the proportion of variance among the variables that might be common variance (i.e., that might be indicative of underlying or latent common factors). For the present study, the KMO measure of sampling adequacy was employed to identify the validity of the scale, which was found to be 0.883. For the *df* of 190, the Approx. Chi-Square value for Bartlett's Test of Sphericity was identified as 1276.676, which was found to be significant at 0.001 level. This estimation proved to be appropriate for the factor analysis. After reliability analyses, the number of items subject to the factor analysis was 20. Factor analysis showed that the initial Eigenvalue greater than 1 suggested that

there were 5 factors, which accounted for 51.891% of the total scale variance. The investigator had decided to go with the 2 factors based on the Eigenvalue of more than 1.5. Factor analysis showed that the initial Eigenvalue greater than 1.5 suggested that there were 2 factors, which accounted for 35.48% of the total scale variance. Principal Component Analysis with varimax (with Kaiser Normalization) rotation and forced solution of two factors was executed that produced the final version, which converged in 3 iterations and shown in Table 5. It was decided to apply the Structural Equation Measurement (SEM) model through AMOS ver.23 selecting intercept and means in the estimation tab for confirmatory factor analysis for the constructs obtained from EFA.

Table 5: Rotated Component Matrix

Item No.	Component 1 (Subtle Behaviour)	Item No.	Component 2 (Critical Behaviour)
Q19	0.679	Q9	0.630
Q22	0.662	Q7	0.594
Q20	0.652	Q4	0.582
Q21	0.584	Q1	0.577
Q24	0.563	Q8	0.542
Q12	0.536	Q10	0.506
Q23	0.502	Q5	0.484
Q2	0.473	Q15	0.447
Q13	0.461	Q6	0.443
Q3	0.436	Q11	0.426

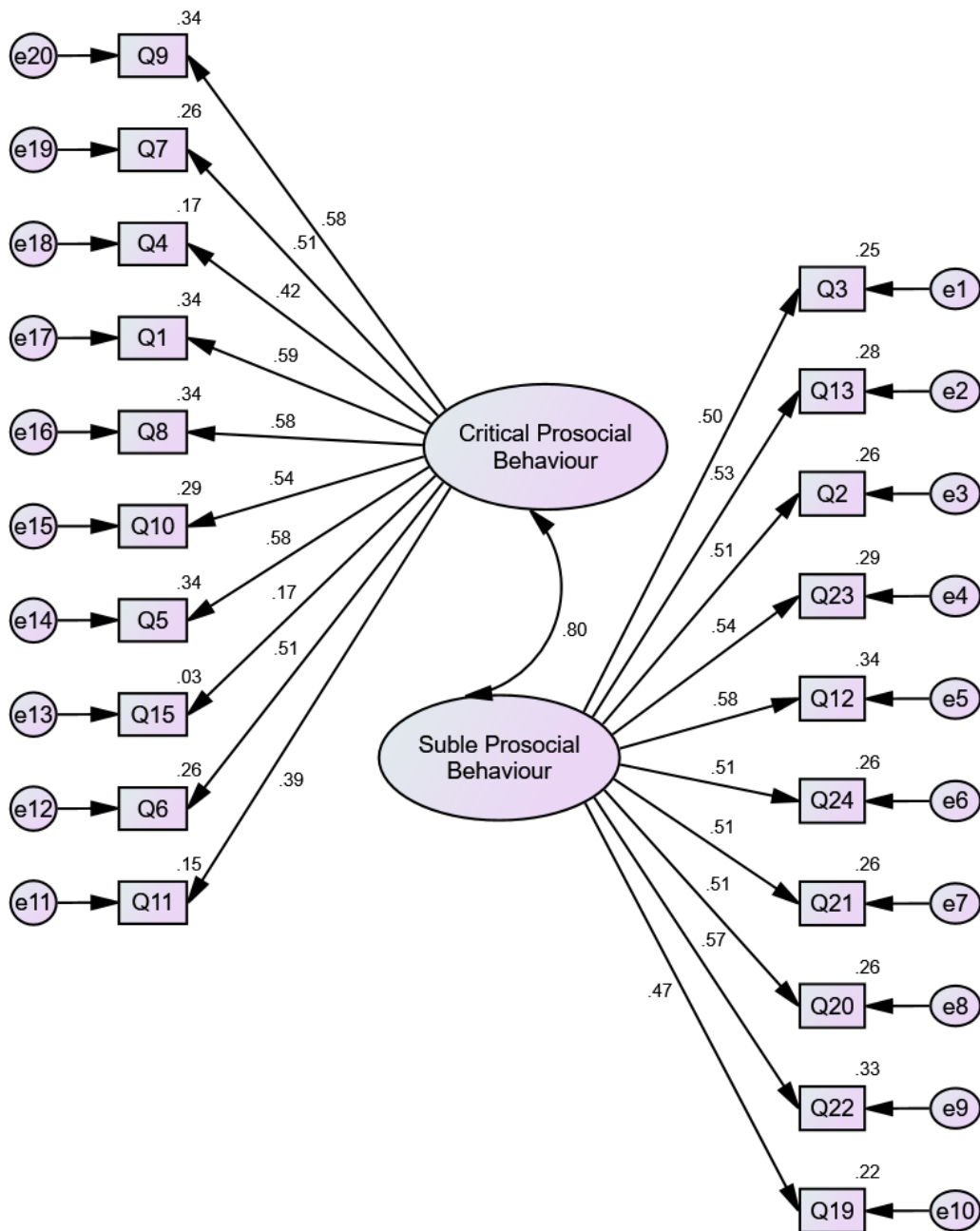


Figure 4: Structural Equation Measurement Model obtained after EFA (2 factors)

SEM of data-driven measurement (Suble prosocial behaviour) obtained model with 2 constructs (Critical and Suble prosocial behaviour) from AMOS achieved absolute model fit

with CMIN = 268.647, DF = 169, CMIN/DF = 1.590, CFI = 0.917, SRMR = 0.054, RMSEA = 0.044 and PClose = 0.855 (Hair et al., 2006) and was presented

in the figure 4. Moreover, Cronbach's alpha reliability and intrinsic validity coefficients of PBM was found to be 0.852 and 0.923 respectively (Table 6).

Table 6: Reliability and Validity of Final PBM

Measure	Total Items	Valid Cases	Excluded Cases	Total	Cronbach's Alpha Reliability	Intrinsic Validity
Subtle Prosocial Behaviour	10	290	20	310	0.798	0.893
Critical Prosocial Behaviour	10	294	16	310	0.752	0.867
Prosocial Behaviour	20	280	30	310	0.852	0.923

RESULTS AND DISCUSSION

This article sets as an example, where the omission of cases is not advisable, however gives an in-depth insight into the construction of PBM. Four items were dropped, 2 items from the pilot study and 2 more items based on core data item wise reliability analysis resulting in the retention of 20 items on the final version. Exploratory factor analysis revealed that the items on the final version of PBM loaded on 2 factors (forced-choice), which accounted for 35.48% of the total scale variance. The PBM had a Cronbach's Alpha reliability coefficient of 0.852. The two factors are Subtle Prosocial Behaviour ($\alpha = 0.798$) and Critical Prosocial Behaviour ($\alpha = 0.752$). The prosocial behaviour measure developed in this study have similar items with the prosocial tendency measure by Carlo and

Randall (2002) and prosociality scale by Caprara et al., (2005) but the dimensions were not correlated with these measuring instruments.

CONCLUSION

After the statistical treatment of reliability and factor analysis, 20 out of 24 items were retained. It was concluded that the 20 items PBM in its present form was capable of effectively measuring students' prosocial behaviour along with its two factors subtle and critical prosocial behaviour among high school and higher secondary school students. The concept of prosocial behaviour and its psychological foundations are extremely important in furthering research and practice in several fields like education, social work, health science, criminal justice and law.

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STUDY OF EMOTIONAL MATURITY IN RELATION TO STUDY HABITS OF SENIOR SECONDARY SCHOOL STUDENTS

2

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INTRODUCTION

In modern times with rapid advancements in all walks of life, problems have also multiplied in that proportion. Life is becoming fast with the increasing impact of science and technology. Though man has conquered time and space to greater interest by the present level of scientific advancement yet there is a great threat to his existence. The Indian society is becoming increasingly materialistic. Incidences of mental ill health have tremendously increase and has placed a serious problem before the nation as they generally imbalance the individual's equilibrium. In the present life style dynamics, everything seems to explode. Emotional pressure is increasing day by day especially at school stage. Emotional maturity, study habits provide endless opportunities for mental growth and development. Therefore, this is need for developing positive emotional maturity, study habits among pupils of all ages.

REVIEW OF RELATED LITERATURE

Shanmuganathan and Chinnappan (2014) explored the relationship of emotional maturity and parental encouragement with academic achievement among higher secondary course students. The findings of the study revealed that emotional maturity and parental encouragement had significantly positive relationship with academic achievement of students.

Nikhat and Afeefa (2015) investigated emotional maturity of secondary school students in relation to academic achievement among 400 students (200 boys and 200 girls) studying in class IX in Aligarh. In order to collect data, adapted version of 'Emotional Maturity Scale' standardised by Dr. Yashvir Singh and Dr. Mahesh Bhargava (1990) was used. The annual examination marks obtained by students in class VIII were considered as academic achievement scores. The study revealed that most

of the secondary school students were extremely unstable regarding emotional maturity and high positive correlation was existed between emotional maturity and academic achievement of secondary school students.

Aquino (2011) has investigated study habits and attitude towards teaching methods of freshmen students. A sample of 313 students were selected randomly from the schools. The revised version of study habits and attitudes instrument developed by Brown and Holtzman (2006) was used in this study. The results showed that the students had favourable study habits irrespective of their demographic differences and their attitude towards teaching methods was not favourable. It was stated that students generally do not approve traditional teacher methods, classroom management and have inefficient time management.

NEED AND SIGNIFICANCE OF THE STUDY

Emotional maturity is one of the recent developments in the area of maturity. It is a novel area with regard to test emotional maturity and establishing the role of emotional maturity at influence ones' study habit. Emotional maturity is getting much attention these days the reason perhaps lies in the recognition that our individualized self centered society is looking for a different perspective to assess achievement and success. Without emotional skills needed to cope up with growing life. IQ has limited benefits. Geeta and Vijay (2009) stated that

emotional maturity had strong impact on stress and academic self-confidence of adolescents. Goleman (1998) explained that strong emotions were the basis for the impulse to action. According to him, an emotionally maturity student would tend to seek mature and rational solution to problem. Adolescence is a time of heightened emotional state resulting from the physical and glandular changes that are taking place. Thus its importance to teach young adolescence how to use coping strategies, how to acquire and use information. How to work with others and how to manage personal growth which are important components in all spheres of life. It is emotional maturity that motivated adolescence to pursue their unique potential and purpose. It also activated their innermost values and aspirations values and transforming them from the areas they think about to what they live. Thus emotional maturity is likely to affect their study habits.

OBJECTIVES

- To find out the significant difference in emotional maturity between male and female senior secondary school students.
- To find out the significant difference in emotional maturity between rural and urban senior secondary school students.
- To find out the significant difference in study habits between male and female senior secondary school students.

- To find out the significant difference in study habits between rural and urban senior secondary school students.
- To find significant correlation between emotional maturity and study habits of senior secondary school students.

HYPOTHESES

- There is no significant difference in emotional maturity between male and female senior secondary school students.
- There is no significant difference in emotional maturity between rural and urban senior secondary school students.
- There is no significant difference in study habits between male and female senior secondary school students.
- There is no significant difference in study habits between rural and urban senior secondary school students.
- There is no significant correlation between emotional maturity and study habits of senior secondary school students.

METHODOLOGY

In order to carry out the study the researcher has adopted survey method. The variables included were emotional maturity and study habits. The population of the study included all the senior secondary school students (Class

XII) and sample included 200 students who were selected randomly. In order to collect data, revised version of Emotional Maturity Scale by Yashvir Singh and Mahesh Bhargava (2009) and Study Habits Inventory by Palsane and Sharma (2007) were used. The validity and reliability of the tools were established by the researcher and they were found to be reliable. The revised tools were administered among the students and data were collected. In order to analyse the data descriptive analysis (mean, standard deviation) and differential analysis (t-ratio) were calculated to find out the differences.

The sample were selected from the following schools.

- Government Senior Secondary School, Boys, Nabha. - 50 students
- Government Senior Secondary School, Kakrala. - 50 students
- S.S.S.S. Public Senior Secondary School, Sidhsar Aloharan - 50 students
- Guru Gobind Public Senior Secondary School, Binaheri - 50 students

ANALYSIS AND INTERPRETATION OF DATA

Hypothesis 1:

There is no significant difference in emotional maturity between male and female senior secondary school students.

Table 1: Differences in Emotional Maturity between Male and Female Students

Group	N	Mean	SD	SED	t-value	Significant
Male	100	59.02	8.20	1.20	0.47	Not significant
Female	100	59.60	9.05			

Table 1 showed that mean scores of emotional maturity of male students is 59.02 and female students is 59.60, with standard deviation 8.20 and 9.05 respectively. The calculated t-value 0.47 is lesser than the table value at 0.05 level of significance. Hence, it is stated that there is no significant difference in emotional maturity between male and female senior

secondary school students. Hence the null hypothesis is accepted.

Hypothesis 2:

There is no significant difference in emotional maturity between rural and urban senior secondary school students.

Table 2: Differences in Emotional Maturity between Rural and Urban Students

Group	N	Mean	SD	SED	t-value	Significant
Rural	104	58.50	8.75	1.20	0.80	Not Significant
Urban	96	60.55	8.60			

The Table 2 showed that mean scores of emotional maturity rural and urban senior secondary school students are 58.50 and 50.55 respectively with standard deviation 8.75 and 8.60. The calculated t-value 0.80 is lesser than the table value at 0.05 level of significance. Hence, it is stated that there is no significant difference in emotional

maturity between rural and urban senior secondary school students. Hence the null hypothesis is accepted.

Hypothesis 3:

There is no significant difference in study habits between male and female senior secondary school students.

Table 3 : Differences in Study Habits between Male and Female Students

Group	N	Mean	SD	SED	t-value	Significant
Male	100	59.10	4.75	0.60	1.50	Not Significant
Female	100	60.12	4.70			

The Table 3 showed that mean scores of study habits of male and female are 59.10 and 60.12 respectively with standard deviation 4.75 and 4.70. The calculated t-value 1.50 is lesser than the

table value at 0.05 level of significance. Therefore, it is stated that there is no significant differences in the study habits between male and female students. Hence the null hypothesis is accepted.

Hypothesis 4:

There is no significant difference in study habits between rural and urban senior secondary school students.

Table 4: Differences in Study Habits between Rural and Urban Students

Group	N	Mean	SD	SED	t-value	Significant
Rural	104	60.60	4.65	0.60	3.02	Significant
Urban	96	58.70	5.01			

The Table 4 showed that mean scores in the study habits of rural and urban senior secondary school students are 60.60 and 58.70 respectively with standard deviation 4.65 and 5.01 respectively. The calculated t-value 3.02 is greater than the table value at 0.05 level of significance. Therefore, it is stated that there is a significant difference existed in

the study habits between rural and urban students. Hence the null hypothesis is rejected.

Hypothesis 5:

There is no significant correlation between emotional maturity and study habits of senior secondary school students.

Table 5: Relationship between Emotional Maturity and Study Habits

Group	r- value	Remark
Emotional Maturity	0.33	Positive Correlation
Study Habits		

The Table 5 showed that the correlation value is 0.33. Hence, it is stated that there is a positive significant correlation existed between emotional maturity and study habits.

FINDINGS

- There is no significant differences in emotional maturity between male and female students.
- There is no significant difference in emotional maturity between rural and urban students.
- There is no significant difference in study habits between male and female students.
- There is a significant difference existed in study habits between rural and urban students.
- There is a positive correlation existed between emotional maturity and study habits of senior secondary school students.

CONCLUSION

The study revealed that there is a significant relationship existed between emotional maturity and study habits of students. Emotionally matured students have favourable study habits compared to their counterparts. Hence it is recommended that teachers and parents should assist students to develop emotional maturity of students from grass root level.

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MID-DAY MEAL SCHEME IN GOVERNMENT AND PRIVATE AIDED SCHOOLS

3

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INTRODUCTION

Literacy and level of education are the basic indicators of any Nation's development. Higher levels of education and attainment leads to a learned community and additionally contribute to the improvement of economic and social attributes. Ministry of Human Resource Development (MHRD) undertakes the responsibility of launching and implementing schemes under elementary education and adult education. One such programme is Mid-Day Meal scheme (MDM). The level of education is positively correlated with the beneficial programme mid-day meal (MDM). Under article 24, paragraph 2c of the Convention on the Rights of the Child, to which India is apart, India has committed to provide "adequate nutritious food" for children. The programme has undergone several changes since its launch in 1995 (MHRD, 2019).

The Mid day Meal Scheme is roofed by the National Food Security Act, 2013.

The roots of the programme dates back to the pre-independence era, when a mid-day meal programme was introduced in 1925 in Madras Corporation by the British administration. A mid-day meal programme was also introduced within the Union Territory of Puducherry by the French administration in 1930. Initiatives by state governments to children began with the launch of a mid-day meal programme in primary schools in the 1962-63 school year. Tamil Nadu is a pioneer in introducing mid-day meal programmes in India to increase the number of kids coming to school. Malnutrition is still an untracked challenge in all states of India. MDM programme has a history of three decades and the scheme is successful in terms of nutritional aspect of its beneficiaries (Madhu Pandit, 2016).

Implementation of Mid-Day Meal scheme and consequent improvement in nutrition levels of school age children potentially increases Enrolment, reduces

absenteeism, improves skills and lowers dropout rates. The Indian Government is trying to do the same by implementing Mid-day Meal scheme. Government of India launched National Programme of Nutritional Support to Primary Education (Commonly known as Mid-Day Meal Scheme) on August 15, 1995 to provide mid-day meal to the children studying at primary stage. In India most of the children from low socio economic section of society suffer from under nutrition, more often they drop out from schools at an early age, which directly affects their overall development

Also, a hungry child would not attend schools regularly. Chronic hunger can cause or lead to malnutrition and even lead the children to pay less importance to studies as well as divert their attention from the studies. Mid-Day Meal programme became an essential part of school education to enhance the Enrolment, retention, attendance and simultaneously improving nutritional level among children. (Kushal,2018). Due to the successful outcome of the programme, enrolment, retention and attendance has increased phenomenally in Primary, Upper Primary and High schools. The scheme of providing Mid-Day Meal (MDM) has two major objectives of improving health and education of the poor children. The scheme has the mandate to ensure one-third of the nutritional requirements of child for which the administrative and logistical responsibilities are enormous. The present study aimed to investigate the

implementation and effectiveness of the Mid-Day Meal scheme in Government and Private aided schools of Hyderabad city.

OBJECTIVES

- To assess the enrolment status of the students in the Government and Private Aided schools due to MDM scheme.
- To find out the health status in MDM receivers of Government and Private aided schools.
- To understand about the implementation of MDM scheme in Government and Private aided schools.
- To study the teachers' opinion towards the implementation of MDM scheme in Government and Private aided schools.

HYPOTHESES

- There is a significant difference existed in the enrolment status between Government and Private aided schools due to MDM.
- There is a significant difference existed in the health status of MDM receivers of Government and Private aided schools.
- There is a significant difference in implementation of MDM scheme between Government and Private aided schools.
- There is a difference in the opinion of teachers towards the implementation of MDM scheme between Government and Private aided schools.

METHODOLOGY

The study was conducted using Mixed Method Research integrating quantitative and qualitative methods. The independent variable includes Type of Management (Private and Government aided) and Dependent Variable included Implementation of Mid-Day-Meal (MDM) Scheme. The population of the present study included high school students and teachers. The sample for the study comprised of total 180 students and 22 teachers randomly selected from 2 Government schools and 2 Private Aided schools. In order to collect data, the researchers have constructed a questionnaire based on three components namely Food and Health, Enrolment and Opinion. The tool consisted of 24 questions in total with three-point scale.

Out of them 12 questions were related to food and health, 7 questions related to enrolment and 5 questions related to the opinion of teachers regarding the implementation of MDM Scheme. Also, a structured interview questions were used. The tools were administered and data were collected. In order to analyse the data descriptive and differential analyses were used.

ANALYSIS OF DATA AND INTERPRETATIONS

Hypothesis 1:

There is a significant difference existed in the enrolment status between Government and Private aided schools due to MDM.

Table 1: Differences in the means, standard deviation and t-value in the Enrolment Status between Government and Private Aided Schools due to MDM Scheme.

Description	Sample	Mean	Standard Deviation	t-value	Significance Level
Government School	90	26.90	3.31	2.318	Significant at 0.05 level
Private Aided School	90	25.83	2.84		

df=(178), t-table value =1.653

The Table 1 showed that the mean value of the enrolment status of government schools due to MDM schemes is 26.90 which is more than the mean value 25.83 of the enrolment status of Private aided schools. The obtained t-value is 2.318. The actual t-value at df 178 is 1.653 at 0.05 level of significance.

Since the obtained t value is greater than the table value, the research hypothesis is accepted. It showed that there is a significant difference existed in the enrolment status between Government and Private aided schools due to MDM schemes.

Hypothesis 2:

There is a significant difference existed in the health status of MDM receivers of Government and Private aided schools.

Table 2: Differences in the mean, standard deviation and t-value in the Health Status of MDM receivers of both Government and Private Aided Schools

Description	Sample	Mean	Standard Deviation	t-value	Significance Level
Government School	90	26.48	3.02	1.60	Not Significant at 0.05 level
Private Aided School	90	26.25	2.98		

The Table 2 showed that the health status of MDM receivers of government schools is (26.48) and the mean value of private aided schools is 26.25. The obtained t-value is 1.60. Since the obtained t-value 1.60 is lesser than the tabulated value 1.653 the research hypothesis is not accepted. This clearly indicated that there is no significant difference in Health Status of MDM receivers in both the

Government and Private aided schools. It showed that students in both the schools had good quality mid day meal.

Hypothesis 3:

There is a significant difference in the implementation of Mid Day Meal scheme between Government and Private aided schools.

Table 3: Differences in the mean, standard deviation and t-value in the implementation of Mid Day Meal scheme between Government and Private Aided Schools

Description	Sample	Mean	Standard Deviation	t-value	Significance Level
Government School	90	60.71	4.87	4.027	Significant at 0.05 level
Private Aided School	90	57.86	4.63		

The table 3 showed that the mean scores obtained with respect to the implementation of MDM scheme in Government schools is 60.71 and the mean value of the Private aided schools is 57.86. The obtained t-value 4.027 is greater than tabulated value 1.653 at 0.05 level of significance. It showed that there is a significant difference existed in the implementation of MDM scheme

between Government and Private aided schools. Hence the research hypothesis is accepted.

Hypothesis 4:

There is a significant difference in the opinion of teachers towards the implementation of MDM scheme in both Government and Private aided schools.

Table 4: Opinion of Government and Aided School Teachers regarding implementation of Mid Day Meal Programme

S. No	Teachers Response to Statements	Government School		Aided School	
		N	%	N	%
1	MDM satisfies to eradicate hunger of the students and they feel energetic and actively participate in class room activities.	11	14%	10	16%
2	There is an improvement in physical growth and fitness in MDM receivers.	8	10%	3	5%
3	There is only moderate change in academic performance of MDM receivers.	5	7%	7	11%
4	There is a tremendous increase in the enrolment of students in our school after implementing MDM programme.	10	13%	5	8%
5	This programme has to be continued for ever as it is merging both academic and physical growth of low income family children.	8	11%	9	14%
6	Sufficient amount of food is provided form every child in the school.	9	12%	8	12%
7	The attendance of the children is rapidly increased after implementing MDM.	10	13%	2	3%
8	For every 6 months the inspection is carried out with a team of 3 delegates from Delhi and the records of MDM were checked thoroughly.	4	5%	6	9%
9	Provision of same food items in the whole week makes child boredom to eat so the menu should be reviewed for change of food items. Fruits should be included in the menu at least once in a week.	3	4%	4	6%
10	MDM is truly beneficial for all economically backward children. It not only satisfies the hunger of children but also improves the health status as well as encourages child towards education which would result in increasing the literacy rate and decreases the dropout rate.	8	11%	10	16%

The above mentioned pie-chart showed that the maximum number (11) of Government teachers (14%) were agreed that MDM satisfies to eradicate the hunger of the students and they actively

participate in class room activities both the curricular and co-curricular areas. It was clear from above representation that most of the government teachers expressed that there is a tremendous

increment in Enrolment of students and a minimal margin of dropouts. They also suggested that the Government has to continue this MDM Scheme for the upliftment of economically backward children.

Teacher working in Private Aided Teachers (16%) expressed that MDM is truly beneficial for all economically backward children. It not only satisfies the hunger of children but also improves the health status as well as encourages child towards education which would result in increasing the literacy rate and decreases the dropout rate. It was clear from above representation Government has to continue this MDM Scheme for the upliftment of economically backward children. Also suggested to change the menu of food items provided under scheme in order to increase the nutritional status of children.

FINDINGS

- There is a significant difference in the Enrolment status of MDM receivers among Government and Private schools.
- There is no significant difference in Health Status of MDM receivers in both the Government and Private aided schools. Both the school students had good quality mid day meal.
- There is a significant difference existed in the implementation of MDM scheme between Government and Private aided schools. Hence the research hypothesis is accepted.

- It was found that positive and favourable opinion was found among Government and Private aided teachers regarding implementation of MDM scheme.

EDUCATIONAL IMPLICATIONS

- MDM scheme is the major initiatives for achieving the goals of Universalization of elementary education in India.
- MDM scheme is the best boost that supports on-going teaching-learning processes which helps the child to actively participate in all curricular and co-curricular areas.
- The school should encourage the community participation in MDM to avoid social barriers and to promote healthy atmosphere for a sound society.
- Students develop healthy food habits, togetherness, brotherhood and cooperation among themselves through common meal MDM.

CONCLUSION

There is a vast improvement in the enrolment of the students in the government schools due to this MDM scheme. The study also states that the health status of MDM receivers has been observed to be good and may improve in the both type of schools. Majority of the teachers felt that this MDM is the best scheme intended to eradicate hunger of millions of children around the nation and also supporting the increase the enrolment in schools.

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GOAL ORIENTATION OF SECONDARY STUDENTS HAILING WITH LOW, MODERATE AND HIGH SOCIAL STRATA

4

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INTRODUCTION

Education is an ever-widening concept. Ever since the dawn of civilization, man directly or indirectly has been trying to 'educate' himself in order to meet the changing demands of life. In fact, he has succeeded in distinguishing himself from other animals only by virtue of education. During the course of time, education became an essential virtue for man to live and lead a civilized life. True it is that man becomes man through the process of education. Education fashions and models man to become fit for society. Education is an important human activity. Socio-Economic Status (SES) is often measured as a combination of education, income and occupation. It is commonly conceptualized as the social standing or class of an individual or group. When viewed through a social class lens, privilege, power and control are emphasized. Research indicates that children from low SES households and communities develop academic

skills more slowly compared to children from high SES groups (Morgan, Farkas, Hillemeier & Maczuga, 2009).

GOAL ORIENTATION

Goals are essential parts of human motivation. They have been viewed within a motivational framework because goals are ends toward which individuals direct their effort (Pintrich, 2000). One of the most significant research tradition in the area of motivation has been the goal orientation (or achievement goal orientation) theory which claims that students' goals influenced by their socio-economic status. Achievement goal orientation theory views goal orientation as "reflecting individual differences in work-related behaviors and task performance outcomes. The goal orientation construct reflects internal motivational processes that affect an individual's task choice, self-set goals, and effort mechanisms in learning and performance contexts" (McKinney, 2003). Researchers

exploring goal orientation (Elliot, 1999) often distinguish between mastery and performance orientations. Some also refer to these two orientations as learning goal orientation and performance goal orientation respectively.

SIGNIFICANCE OF THE STUDY

In any educational system, the failure of students is common. One of the reasons for such failure is lack of goal setting. If the goals perceived by the students may found poor, they are not wholeheartedly involved in the learning process, which in turn, their wellness and skills may also be deteriorated. Academic success is dependent on certain factors like utility, hard work, emotions, motivation and socio-economic factors. If a student has to study a series of subjects and has to develop different levels of cognition, the goal orientation is an important component of the achievement. Physical and social constraints, which a student adopts for study, interaction with teacher and other students, referring to related books, language capacity etc., are very important components. Socio-economic status, sometimes shortened to SES, is a sociological classification indicating the close relationship between someone's relative wealth and that person's social status. Socio-economic status is one of the key indicators when looking at a number of issues, including school performance, crime and housing. It is most often determined by analyzing family income and assets. The current study finds out the goal orientation of

secondary students with low, moderate and high social strata.

OBJECTIVES

- To find out the levels of goal orientation among secondary students.
- To find out the significant difference in the goal orientation among secondary students hailing from low, moderate, high socio-economic status.

HYPOTHESES

- The levels of goal orientation in total and its dimensions of secondary students hailing from low socio-economic Status are not high.
- The levels of goal orientation in total and its dimensions of secondary students hailing from moderate socio-economic status are not high.
- The levels of goal orientation in total and its dimensions of secondary students hailing from high socio-economic status are not high.
- There is no significant difference among the boys hailing from low, moderate and high social strata in their goal orientation in total and its dimensions.
- There is no significant difference among government aided school students hailing from low, moderate and high social strata in their goal orientation in total and its dimensions.

METHODOLOGY

The study is carried out by survey method in which the population included all the students studying IX standard in secondary and higher secondary schools in Tirunelveli district. The investigator has selected 1020 secondary students studying in class IX in high and higher secondary schools in Tirunelveli District randomly. The researcher has adopted 'Goal Orientation Scale' standardized by Sreekala. E (2013) administered among the sample to collect data. In order

analyse the data statistical techniques like percentage analysis, descriptive analysis, ANOVA and Correlation analysis were applied.

ANALYSIS OF DATA AND FINDINGS

Hypothesis 1:

The levels of Goal Orientation in total and its dimensions of Secondary Students hailing from low Socio-Economic Status are not high.

Table 1: Levels of Goal Orientation in total and its dimensions of Secondary Students hailing from Low Socio-Economic Status

Goal Orientation	Low		Average		High	
	N	%	N	%	N	%
Mastery Goal Orientation	147	25.5	275	47.7	154	26.7
Performance Goal Orientation	156	27.1	245	42.5	175	30.4
Total	159	27.6	261	45.3	156	27.1

The Table 1 showed that 45.3% of secondary students have average level of goal orientation and its dimensions. Moreover, they have average level mastery goal orientation (47.7%), and performance goal orientation (42.5%). Hence, the formulated hypothesis, "the levels of goal orientation in total and its dimensions of secondary students hailing

from low socio-economic status are not high" is accepted.

Hypothesis 2:

The levels of Goal Orientation in total and its dimensions of Secondary Students hailing from moderate Socio-Economic Status are not high.

Table 2: Levels of Goal Orientation in total and its dimensions of Secondary Students hailing from Moderate Socio-Economic Status

Goal Orientation	Low		Average		High	
	N	%	N	%	N	%
Mastery Goal Orientation	90	26.2	163	47.4	91	26.5
Performance Goal Orientation	91	26.5	179	52	74	21.5
Total	90	26.2	171	49.7	83	24.1

The above Table 2 showed that 49.7% of secondary students have average level of goal orientation and its dimensions. Moreover, they have average level of mastery goal orientation (47.4%), and performance goal orientation (52%). Hence, the formulated hypothesis, “the levels of goal orientation in total and its dimensions of secondary students hailing

from moderate socio-economic status are not high” is accepted.

Hypothesis 3:

The levels of Goal Orientation in total and its dimensions of Secondary Students hailing from high Socio-Economic Status are not high.

Table 3: Levels of Goal Orientation in total and its dimensions of Secondary Students hailing from high Socio-Economic Status

Goal Orientation	Low		Average		High	
	N	%	N	%	N	%
Mastery Goal Orientation	19	19	46	46	35	35
Performance Goal Orientation	19	19	49	49	32	32
Total	17	17	45	45	38	38

The Table 3 revealed that that 45% of secondary students have average level of goal orientation and its dimensions. Moreover, they have average level mastery goal orientation (46%), and performance goal orientation (49%). Hence, the formulated hypothesis, “the levels of goal orientation in total and its dimensions of secondary students hailing

from high socio-economic status are not high” is accepted.

Hypothesis 4:

There is no significant difference among secondary school boy students hailing from low, moderate and high socio-economic strata in their goal orientation.

Table 4: Levels of Goal Orientation of Boys hailing from Low, Moderate and High Social Strata

Goal Orientation	Level of SES	Mean	SSb	SSw	Calculated 'F' Value	Level of Significance
Mastery Goal Orientation	Low	119.18	730.642	105456.2	2.103	NS
	Moderate	119.90				
	High	123.03				
Performance Goal Orientation	Low	54.59	447.664	36875.945	3.684	0.05
	Moderate	55.53				
	High	57.59				

Goal Orientation	Level of SES	Mean	SSb	SSw	Calculated 'F' Value	Level of Significance
Total	Low	173.77	2294.845	205439.4	3.390	0.05
	Moderate	175.43				
	High	180.63				

(SSb – Sum of Scores between Groups, SSw- Sum of Score within Groups)

It is evident from the above Table 4 that there is a significant difference among secondary school boy students hailing from low, moderate and high socio-economic strata in their goal orientation and its dimension performance goal orientation. It is also concluded that the students hailing from high socio-economic strata found to be higher than the students hailing from moderate and low socio-economic strata in goal orientation and its dimensions. Hence, the formulated hypothesis “there is no significant difference among the

secondary school boy students hailing from low, moderate and high social strata in their goal orientation and its dimension performance goal orientation” is rejected but it is accepted for the dimension mastery goal orientation.

Hypothesis 5:

There is no significant difference among government aided school students hailing from low, moderate and high socio-economic strata in their goal orientation.

Table 5: Levels of Goal Orientation of Students in Government Aided Schools hailing from Low, Moderate and High Social Strata

Goal Orientation	Level of SES	Mean	SSb	SSw	Calculated 'F' Value	Level of Significance
Mastery Goal Orientation	Low	120.97	1048.817	102700.7	2.400	NS
	Moderate	123.85				
	High	125.66				
Performance Goal Orientation	Low	54.39	347.260	32757.615	2.491	NS
	Moderate	55.95				
	High	57.34				
Total	Low	175.36	2228.694	154396.3	3.392	S
	Moderate	179.21				
	High	183.00				

(NS = Not Significant , S= Significant at 0.05 level)

It is evident from the above table that there is a significant difference

existed among government aided school students hailing from low, moderate and

high socio-economic strata in their goal orientation and there is no significant difference among government aided school students hailing from low, moderate and high socio-economic strata in the dimensions of mastery goal orientation and performance goal orientation. It is also concluded that the government aided school students hailing from high socio-economic strata found to be higher than students hailing from low and moderate socio-economic strata in their goal orientation.

Hence the formulated hypothesis, “there is no significant difference among the government aided school students hailing from low, moderate and high social strata in their goal orientation” is rejected but it is accepted for the dimensions mastery goal orientation and performance goal orientation.

CONCLUSION

Secondary school level is very important and has a profound effect on

students' future life. In order to make a strong foundation for future life, students need to be learning oriented. From this study it can be concluded that socio economic status is a most important factor which highly affects the goal orientation of the students at secondary level. So it can be said that goal orientation and socio- economic status are closely related to each other. Since students' needs are increased with mastery goals, they become more self-motivated; they try harder and work longer to accomplish their learning goals. They also seek challenges when a mastery goal focus is used. Mastery goals seem to be the better choice as a main focus for goal setting in the classroom. However, performance goals also have their place in the classroom when used as a supplement to mastery goals. Mastery goals should be the main focus, and performance goals could possibly be used as steps or check points along the way.

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TECHNOLOGY INTEGRATION IN EDUCATION: ICT ENABLED DIGITAL LEARNING CONTEXT

5

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INTRODUCTION

Learning with digital tools is common and integrated into formal learning environments in higher education, where students are seen as active participants in the pursuit of knowledge. With the use of technology-based tools and equipment, all academic subjects starting with mathematics, physics, languages, the arts, and other important fields can be taught and learned more successfully. Eickelmann and Vennemann (2017) stated that statistics on computer use in schools along with teacher typologies of attitudes and beliefs regarding ICT in teaching and learning. The use of technology in teaching and learning can help students become proficient in the English language while also improving the standard of their educational experience (Ryn & Sandaran, 2020). Online education cannot be implemented if both students and teachers lack access to computers and quick internet connections. Second, there are outside

variables that affect teachers, like the availability of tools, resources, training, and support. Second are elements that are unique to instructors, such as their expertise and abilities, attitudes and views regarding the use of technology.

Winter, Costello, O'Brien, and Hickey, (2021) demonstrated the technology prerequisites for effective online instruction. Internet and computer use as instructional tools in education have received more attention than other methods due to technological advancement and consumer demand. The use of computer-based communication that is included into the regular educational process in the classroom is referred to as information, communication, and technology (ICT) integration in education. Utilizing ICTs in the classroom and the internet as a substitute for traditional teaching and learning methods (Khanal, 2021). When teachers use ICT in the classroom, students will be more eager to study.

The use of technology in the classroom encourages student participation in learning activities (Ryn & Sandaran, 2020).

Technology-based teaching and learning processes that are directly related to the use of teaching and learning technologies in educational institutions are often referred to as technology integration in education. The goal of integrating technology into education is to raise the standard, make it more accessible, and reduce the cost of providing instruction to students. It also refers to the advantages of networking learning communities to meet the problems of present globalisation. The positive attitudes could be linked to the use of technology in teaching and learning, which deviated from the traditional classroom setting by include enjoyable and interactive features (Jerry & Yunus, 2021).

Today's teachers have access to a variety of fresh and unique domain-specific knowledge, pedagogical knowledge, and pedagogic content knowledge, all of which are becoming more evidence-based. New pedagogical methods and expertise in recently released technologies are now part of the teacher's toolkit (Kirschner, 2015). Both teachers and students can benefit from using technology tools and aids to facilitate successful and interactive learning using computers as learning aids. (Munyengabe, Yiyi, Haiyan, & Hitimana, 2017) identified the significance of many stakeholders, educators, suitable ICT

infrastructure, and the skills needed to integrate ICT into teaching and learning processes as suggested by the TPACK model. There are many ways that technology in education can be used to benefit instructors' and students' learning in their respective subject areas. A technology-based approach to teaching and learning provides a variety of engaging methods, such as educational movies, stimulation, data storage, database use, mind-mapping, guided discovery, brainstorming, music, and the World Wide Web (www), that will enhance and deepen the learning experience.

According to the conceptual framework, teachers can be expected to help students develop fusion skills, or the ability to work with smart machines, as these talents will become important in many different fields (Guggemos & Seufert, 2021). Students believed that having technology abilities would be essential in the future labour market and digital environment (Rodrigues, Cerdeira, Machado-Taylor, & Alves, 2021). According to the teachers' experiences, online instruction is more of a formality than actual instruction due to a number of issues, including access, connectivity, a lack of familiarity with online learning tools, ineffective interaction, a bad learning environment at home, and parental ICT ignorance (Khanal, 2021). It is also suggested that teachers integrate ICT to aid in their acquisition of various Technological Pedagogical Content Knowledge

(TPACK). All relevant stakeholders would need to take part by making a contribution to resolving any problems that arise in the course of daily life in the schools while using technology or wit technology tools (Munyengabe et al., 2017). To use digital technologies in the educational context in a meaningful and innovative way, it is possible to cultivate positive attitudes and make efforts to learn information and strategic technological skills (Iwona Kolodziejczyk, Philip Gibbs, Maria Rodina Sagrista, 2020).

TEACHERS AND INTEGRATION OF TECHNOLOGY IN EDUCATION

To adapt to the new norm of the Covid-19 pandemic digitalized era, school administration should give teachers additional training and ICT courses to increase their ICT literacy (Ryn & Sandaran, 2020). A large number of schools in North America are incorporating technology into their curricula as a result of efficient staff development. If teachers are to successfully integrate technology into their teaching methods, they must have the confidence, knowledge, and abilities to do so. Only by offering teachers proper training and development opportunities will this happen (Brand, 1997). The development of learning processes and the introduction of technologies as tools for education depend heavily on the digital literacy of teachers (Fernández & Díaz, 2016). If teachers are to learn technological abilities and then transfer those knowledge and skills to the classroom in order to successfully and

fully integrate technology into their curricula, they must devote a lot of time and receive training. The kind of training and practise time teachers require to learn how to successfully integrate technology into the curriculum should be planned and created by schools.

Emphasize the value of instructors' technology-related teaching skills in using the high potential of digital technologies to offer learning opportunities that go beyond merely providing information to pupils (Sailer et al., 2021). Positive attitudes toward technology-related teaching are linked to positive learning activities, and attitudes may increase the frequency of technology use, even though the initiation of student learning activities by teachers with positive attitudes may be less sophisticated and primarily consist of the teacher disseminating knowledge (Sailer et al., 2021).

IMPORTANCE OF TECHNOLOGY INTEGRATION IN EDUCATION

The global demand for instructors to replace traditional teaching techniques with technology-based teaching and learning tools and facilities will be helped by the integration of information, communication, and technology (ICT). Findings showed that one of the key elements in the success of technology-based teaching and learning is teachers who are well-prepared with ICT tools and resources (Ghavifekr, Ahmad Zabidi Abd Razak Muhammad Faizal A. Ghani, Ng Yan Ran, Yao Meixi, & Zhang Tengyue, 2014). ICT integration is very

useful and important for instructors and students alike (Ghavifekr et al., 2014). Implementing digitalization of teaching and learning at the organisational level inside HEIs starts to alter the economics of higher education.

To support effective learning and to satisfy the requirement for 21st century teaching skills, instructors must be technologically literate and have solid skills and knowledge in using ICT to improve their teaching techniques and approach. Technology-related professional development training programmes for instructors were crucial in improving students' quality of learning. Technology-based instruction and learning have the potential to revolutionise education, but they necessitate careful planning and policy development. Technology makes it possible to manage tasks more effectively and communicate more easily. The requirement to increase teachers' technical literacy and digital competence is related to the delivery of high-quality instruction and the encouragement of teachers' flexibility.

RECOMMENDATIONS OF TECHNOLOGY INTEGRATION IN EDUCATION

- To improve the quality of the nation's educational system, special attention should be paid to the integration of technology in the classroom.
- Teachers must be given time to learn about, explore, and be able to use technology for teaching and learning

because it is more about practise than it is about ideas in this area.

- As students are more compliant and focused thanks to technology in education, classroom management is improved.
- Teachers in higher education build and develop their technological skills to meet the various demands and applications in the various fields of competence, to encourage their balanced future development in each of the fields, and to consider new approaches to high-quality teaching and learning in higher education.
- The cornerstone of their professional development programmes should include training instructors in ICT.
- The most important necessity is that instructors and schools have access to sufficient ICT infrastructure and resources. The government must make a big investment in this.
- Each learning objective and its associated learning experiences should be elaborated in the curriculum so that teachers can choose the best activities for the students to engage in the virtual environment.
- There is a need for on-going opportunities for teachers to update and advance their skills, which ought to be a key element of in-service professional development programmes.
- For teachers to use these elements successfully and efficiently, they

must receive proper training. The students must also receive extensive hands-on training, which is the third prerequisite.

- ICT proficiency must be included into teachers' fundamental teaching skills as well as into the foundation of the educational system's approach to teaching and learning.
- A teaching strategy that incorporates technology can offer concurrent and real-world content and pedagogy, assisting instructors with interactive content, pedagogical, and technological skills.
- The teacher's willingness to investigate and comprehend how a modern method, strategy, or technique using technology fits best for the improvement of their teaching and learning could be a determining element in the teacher's embrace of technology in the classroom.
- By enabling teachers to use tools, resources, and devices that are technologically based throughout implementation, boosting students' ICT abilities and technological integration could help enhance teachers' digital skills.

CONCLUSION

Technology dependence, attention fragmentation, challenges with job and family obligations, a decline in social engagement, and issues on an emotional and physical level can all result from

overusing it. Teachers use technological resources, methods, and components in the educational context, just like other occupational experts do. Changes in student characteristics, availability to technology, and curricular emphasis may provide instructors' efforts to integrate technology into the classroom the crucial boost. The ability of teachers to alter the quality and quantity of the curriculum, as well as their level of technological proficiency, is crucial for success. The integration of conventional face-to-face communication with technologically assisted learning gave the impression that this was the best possible strategy for educating people in the present digitally ruled environment. The requirement to increase teachers' technical literacy and digital competence is related to the delivery of high-quality instruction and the encouragement of teachers' flexibility. Educational institutions should separate the teachers into groups depending on their ICT skill levels and give them the training they require. If the instructors take the proper training on using ICT in the classroom, they will gain a lot from it. In addition to fostering a respectful and encouraging environment, school administrators should take the initiative to develop an environment that would encourage open communication and collaboration in order to motivate teachers to have productive conversations about their concerns regarding the use of technology in the classroom.

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