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# Short-Term Memory of Higher Secondary Students.

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**ABSTRACT**

*In the present study short-term memory of higher secondary school students was investigated, Agra Psychological research cell (1978) short-term memory inventory have been administered to a random sample of 600 higher secondary school students. It is found that there is a significant difference between government and private school students on their short-term memory. There is no significant difference between male and female students and joint and nuclear family students on their short-term memory.*

**KEYWORDS: Principal, Muna College of Education, Parangipettai, Cuddalore**

## Introduction

Short term memory is that part of memory corresponding to your active consciousness or awareness. (Mayer 2003) Your short term memory is a system for temporarily storing and managing information required to carry out complex cognitive tasks such as learning, reasoning, and comprehension. A portion of short-term memory can be used for performing mental manipulations such as mental arithmetic this portion is referred to as working memory. The storage of information in short-term memory is limited and only last a short amount of time.

## Review of related literature

**Berman** et al., (2009) studied on "In search of Decay in verbal short term memory, is forgetting in the short-term memory due to decay with the mere passage of time, interference from other memoranda, or both? Past research on short term memory has revealed some evidence for decay and a plethora of evidence showing that short term memory is worsened by interference in short term memory in a task that rules out the use of rehearsal process. In this article the authors present a serious of studies using a novel paradigm to address this problem directly, by interrogating the operation of decay and interference in short term memory without rehearsal confounds. The results of these studies indicates that short-term memories are subject to very small decay effects with the mere passage of time but that interference plays or much large role in their degradation. The authors discuss the implications of these results for existing models of memory decay and interference.

**Rispens,** et al (2012) Studied on "The Relative Contributions of Phonological Short-Term Memory and Phonological Representations in Children with Language and Reading Impairmen. Purpose: This study investigates the relative contributions of phonological short-term memory and phonological representations to nonword repetition (NWR). This was evaluated in children with specific language impairment (SLI) and/or reading impairment (RI); it was also studied from a developmental perspective by comparing 2 groups of typically developing (TD) children who differed in age. Method: NWR, digit span, vocabulary, and word and nonword discrimination were tested in 2 groups of TD children: one group matched on chronological age (CA TD group: n = 41, mean age = 7; 8 [months; years]), and one language age-matched control group (LA TD group: n = 16, mean age = 5;8). Also, 10 children with SLI, 14 children with RI, and 23 children with SLI and RI (hereafter, SLI + RI) participated and were matched to the age of the CA TD group. Results: For the TD children, NWR was predicted by discrimination, digit span, and age. The interaction between discrimination ability and age was also significant. Children with SLI + RI were significantly impaired on NWR compared with all other groups. A regression analysis, including the CA TD group and the children with SLI and/or RI, showed that digit span, discrimination ability, and group (SLI + RI) contributed significantly to NWR. Conclusions: Phonological short-term memory and phonological representations both significantly contribute to NWR. The predictive strength of the quality of phonological representations changes during development.

## Objectives of the study

The following were the objectives.

1. To find out the levels of the short term memory of the following Higher secondary school students.

a) Total higher secondary school students
b) Male students
c) Female Students
d) Government school students
e) Private school students
f) Students from Joint family
g) Students from Nuclear family

2. To find out the significant difference between the following groups of higher secondary school students on their short term memory.

a) Gender (Male/Female)
b) Management (Government/Private)
c) Family type (Joint/Nuclear)

## Hypotheses

Following hypotheses were tested

1. Short term memory of following higher secondary school students is high.

a) Total higher secondary school students
b) Male students
c) Female Students
d) Government school students
e) Private school students
f) Students from Joint family
g) Students from Nuclear family

2. There is significant difference between the following groups of students on the short term memory.

a) Gender (Male/Female)
b) Management (Government/Private)
c) Family type (Joint/Nuclear)

## Method of study

The present study aims at finding out the short term memory of higher secondary school students. Therefore, the normative survey method has been used in the study.

## Tools used

Short term memory tool standardized by Agra psychological research cell (1978) was used in the present study.

## Sample of the study

The random sampling technique was used by the investigators for the selection of 600 higher secondary school students in Salem District of Tamil Nadu, India.

## Statistical Techniques

Descriptive analysis and Differential analysis were used in the present study to test the hypotheses and interpret the data.

## Statistical analysis and interpretation of data

(1) Descriptive analysis – Short term memory

**Table -1**
**Short-term Memory of Higher Secondary School Students on the basis of Gender Management and Family Type**

| S. No | Sub sample | | N | Mean max. 28 | S.D | Average Level | Level of leadership style |
|---|---|---|---|---|---|---|---|
| | Entire sample | | 600 | 19.45 | 2.48 | 16.97 to 21.93 | Average |
| 1. | Gender | Male | 300 | 19.22 | 2.31 | 16.97 to 21.93 | Average |
| | | Female | 300 | 19.61 | 2.63 | 16.97 to 21.93 | Average |
| 2. | Management | Government | 300 | 20.04 | 2.27 | 16.97 to 21.93 | Average |
| | | Private | 300 | 18.79 | 2.53 | 16.97 to 21.93 | Average |
| 3. | Family Type | Joint | 113 | 19.66 | 2.57 | 16.97 to 21.93 | Average |
| | | Nuclear | 487 | 19.36 | 2.46 | 16.97 to 21.93 | Average |

The investigators divided the student into three group's namely high, average and low based on short-term memory by applying normal curve technique. In this study based normal curve students secured scores in between 16.97 to 21.93 (-1σ to 1σ) is classified as student with average short term memory. Table 1 reveals the mean and standard deviations values, Te calculated mean values are less than 21.93 and more than 16.97. Therefore, it is found that higher secondary school students in irrespective of their gender, management and family type have average short term memory.

**(2) Differential analysis – Short term memory**
**Table -2**
**Short-term Memory of Higher Secondary School Students on the basis of Gender, Management and Family Type**

| S. No | Sub sample | | N | Mean | S.D | 't' value | Level of Significant |
|---|---|---|---|---|---|---|---|
| | Entire sample | | 600 | 19.45 | 2.48 | | |
| 1. | Gender | Male | 300 | 19.22 | 2.31 | 1.91 | Not significant at 0.05 level |
| | | Female | 300 | 19.61 | 2.63 | | |
| 2. | Management | Government | 300 | 20.04 | 2.27 | 6.39 | Significant at 0.01 level |
| | | Private | 300 | 18.79 | 2.53 | | |
| 3. | Family Type | Joint | 113 | 19.66 | 2.57 | 1.18 | Not significant at 0.05 level |
| | | Nuclear | 487 | 19.36 | 2.46 | | |

Table 2 shows the mean, standard deviation and't' values for the short term memory scores of the higher secondary school students based on their gender, management and family type. The't' value calculated for the male and female students is 1.91 which is lower than the table value of 196 to significant at 0.05 level of significance. Therefore, it is found that the male and female higher secondary school students do not differ significantly in short term memory although their short-term memory is at average level.

Table 2 further reveals that 't' value calculated for the students from Government and Private is 6.39 which is higher than the table value of 2.58 to be significant at 0.01 level of significance. Therefore, it is found that the government and private higher secondary school students differ significantly in the short term memory, although their short term memory is at average level. T' value calculated for the students in the joint and nuclear family is 1.18 table 2 which is lower than the table value of 1.96 to be significant at 0.05 level of significance. Therefore, it is found that the higher secondary school students in joint and nuclear family differ significantly in their short-term memory. Although their short term memory is at average level. The short term memory mean scores of joint family students are slightly higher than that of nuclear family students.

**Findings**
The following are the main findings of the study

1. Short-term of higher secondary schools students is average irrespective of their gender, management and family type.
2. The male and female students on short-term memory do not differ significantly in their short-term memory.
3. The Government and Private school students on short term memory differ significantly on their short-term memory.
4. The students belonging to joint and nuclear family do not differ significantly in their short-term memory.

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