
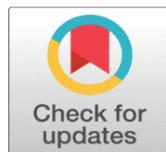


# TADVIDYASAMBHASHA BUDDHIVARDHANANAM

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## ABSTRACT

In the sequential line of human evolution, development and civilization, the human beings are always followed a specific pattern of meet to each other for the proper understandings and hence, learning and functioning, which ultimately made them educated and wiser formerly. These meetings, specific to get more educated or learning skills are called as Tadvidyasambhasha to which Acharya Charak explained as foremost among all which indulges in enhancement in human thinking or so, called understanding about the life things. This study represents analytical of extents of enhancement in intelligence through interactive or intellectual means of Tadvidyasambhasha against the most indicated mind governing drug, called as Medhya Rasayana Shankhapushpi. Individuals involved are grouped in two groups group-I and group-II having a strength of 30 in each group, are nominated for their grouped analysis by making grouped data charts for a minimum of 60 days study.

**Keywords:** Tadvidyasambhasha, Medhya Rasayana, Shankhapushpi

## 1. INTRODUCTION

Since various stages of human civilization, human being followed a specific pattern of meet for better understanding about the thing that are normally enhance the life patterns. In their different constituents of lively hood like social, political, industrial, economical or in different areas of sciences as well as other necessary areas related to their progressive evolution in psycho somatic aspects the human society simultaneously developed a specific patter of meet, called as Tadvidyasambhasha1.

This learning and understanding sequence have been going on along with the rise of human evolution or development since time immemorial. Ever since man gave voice to his thoughts, tried to express his feelings, fantasies and concern streams in language, the art of writing also emerged from the same dawn, but the means of writing in that primitive age, were different everywhere and totally strange from today. Simultaneously with the passes of time this were also got elaborated to Shruti, Smriti and Purana etc. This tradition of contemplation of knowledge originated from

the holy Aashrams of sages and sages established in the Aranyas. Along with strength and age, as there was a decline in the intellectual capacity and the memory power of humans, there was a change in his old means of preserving the rich tradition of knowledge and passing it on to the future generations. The process expanded widely.

To conserve the knowledge, this ultimately resulted in to adoption of various means of intellectual patterns like writing, reading, studding and teaching also. Just as a clean sun, which is full of all virtues, removes the darkness and illuminates the subjects, in the same way, shastra removes the form of ignorance or intellect darkness by illuminating the classical subjects. Hence the practices of reading or practicing a text book itself measures great account in human intellect. Similarly, a virtuous teacher quickly equips qualified disciples with the qualities of intellect, so along with studding, teaching aid additional benefits in enhancement in intellect. While teaching a student worthy of study, the Acharya is endowed with all the qualities of teaching (such as confirmation of scriptures, growth of intelligence, fame etc.). He has been able to equip himself and his disciple with such best qualities.

Occult, sensual and subjective are the three coverings of these knowledges. Envelopment of knowledge due to obstinacy, envy, vanity etc. is an occult cover. Due to diseases of the eyes or any defect in the senses, the covering of knowledge is sensed. Being subtle or being hidden in the darkness, one cannot see the object. Due to the senses covered by these veils, it appears that there is a distinction between the receiver and the consumers consciousness, that is knowledge, which remains expressed in the form of doubt. Therefore, a man who seeks his welfare goes to legitimate groups with the desire of impartial knowledge in order to grow and develop his intelligence. Because, like the intellect nourished by direct philosophy, that is the intelligent group (scholarly class) also has the best reason for clearing the doubtful knowledge. That is why since ancient times formally social, political, cultural, literary etc. there has been a special concept of seminars for discussions for public welfare purposes. Therefore, in the Yajjah Purushiyam Addhyaya of Charaka Samhita, Sutrasthan, it is said that Tadvidyasambhasha<sup>2</sup> is the foremost among all the way that comprises in increasing intelligence or intellectual capacity of the humans. In the other hance a drug called as Shankhapushpi explained in the group of Medhya Rasayana<sup>3</sup> having highest growing intelligence factor so called Shreshtha Medhya Dravya comprises as dietary supplement for boosting the human intellect. On the basis of these, a comparative study has made. This study represents analytical analysis of extents of enhancement in intelligence through interactive or intellectual means of Tadvidyasambhasha against the most indicated mind governing drug, called as Medhya Rasayana Shankhapushpi.

## 2. MATERIALS AND METHODS

### Sources of study materials

#### 1) Literary sources

- Charak Samhita, here importance of Tadvidyasambhasha as a most forward factor to enhance the mind power or intelligence human being is indicated. Here also the drug named Shankhapushapi (Convolvulus pluricaulis) explained as shreshtha medhya rashayana, which is taken to do comparative analysis.
- Bhavaprakasa Nighantu and Dravyaguna Vijnana, where the original information and identification features of the selected drug is described.
- Statistics which explain about how to calculate the mean values and its comparing by applying “t-test” specifically “paired t-test” for its analytical study. A t-test is used as a hypothesis testing tool, which allows testing of an assumption.

#### 2) Pharmaceutical source:

The drugs selected for the research work as mentioned will be collected in raw from the Department of Rasashastra, Government Ayurvedic College & Hospital, Patna and then further prepared in their pharmaceutical form in the guidance of the expert of same department.

#### 3) Analytical sources:

Peoples registered in the OPD of Government Ayurvedic College & Hospital, Patna, OPD No. 10 and other non-registered peoples are selected from nearby location are selected as analytical groups, from whom the data for analysis are collected.

### 3. SOURCE OF DATA

There are total 60 peoples divided in to two groups are involved to prepare the analytical data. Out of these three groups, one group is registered and studied under the use of Shankhapushpi called as Group I, second group is registered and studied under the use of intellectual aspects of Tadvidyasambhasha, the group is named as Group II. They tend to go their respective fallow up and observed through the similar assessment criteria. Their intelligence or mental is examined at sequential interval of time, the examination is based on memory and learning intelligence and carried out at a interval of 15 days. Hence there are five staged examinations are registered for 60 days of analysis. The first examination is denoted as E0 and is carried out at initials of the experimentation. Their data obtained is noted out for analysis. Then the individuals are advised to take their respective fallow up and same should be done at sequential stages, called as STAGE15, STAGE30, STAGE45 and STAGE60 meant for 15th, 30th, 45th and 60th days of experimentation. Their data obtained is noted out for sequential analysis.

#### 3.1. INCLUSION CRITERIA

For better coordination and communication young group of individuals is included. As this is a comparative study of a person and hence a group in pre and post manners coordinating the group analysis so there is no longer need of specification of age or gender of individuals participating.

#### 3.2. EXCLUSION CRITERIA

Due to possibility of lack or abrupt coordination and communication children and old group of individuals are excluded Individuals having any mental anomalies or physical distress.

#### 3.3. PHARMACEUTICAL PREPARATION

The drug Shankhapushapi is identified and their useful part Panchang is collected for formulation. The raw drug is then collected and purified by simple observations, dried up in indirect sun light. The dried drug is then converted in to fine powder which is packaged and go for their pharmaceutical use. Advised to take 3-6 gm powdered dosed form by mixing in Ghrita or honey as a pest, with warm milk. Fallow up 15 at every 15th day for 60 days.

### 4. ASSESSMENT CRITERIA:

**(a). Intelligent Quotient (I.Q) Testing (Wechsler's Intelligence Scale)**<sup>53</sup>: Information, general comprehension and many other abilities are checked in assessing an IQ. Inattentive and hyperactive person may be compromised in these areas and it will be reflected in the IQ scores. Having brought the attentiveness and having settled the hyperactive child may lead us to his/her 'original' IQ, which is higher than the previously hyperactive and inattentive person. Before initiation of the study the IQ assessment was done to exclude the retarded person. Constructed after the general model of the popular American test of Dr. David Wechsler's Intelligence Scale for Children, better known by the acronym WISC. The Indian scale by Dr. Arthur J. Malin of Nagpur embraces all the advantages of the Original along with what is hoped are several improvements. Two main reasons for the preference for the WISC are the simplicity of its administration and its analytical breakdown into factorial functions for educational guidance. The original WISC as well as its Indian adaptation works on the Point Scale and all items of a given type are grouped together and arranged in increasing order of difficulty.

- 1) The headings under which the test is performed are:
- 2) Information test
- 3) General comprehension test
- 4) Arithmetic test
- 5) Analogies and Similarities
- 6) Vocabulary test

- 7) Digit span test
- 8) Picture completion
- 9) Block design
- 10) Object assembly
- 11) Coding and
- 12) Mazes

### Mini Mental Status Examination:

The Mini Mental Status Examination (MMSE) also called as Folstein test is an appropriate tool to assess Medha (grasping, retention & recall).

- 1) It involves assessment of following parameters:
- 2) Orientation of time
- 3) Orientation to place
- 4) Immediate recall
- 5) Attention
- 6) Delayed verbal call
- 7) Naming
- 8) Repetation
- 9) 3-stage command
- 10) Writing
- 11) Copying

### Mental Examination by Ayurveda55:

The gradation was given as per guidelines given by Proforma for mental status examination on Ayurvedic guidelines by NIMHANS, Banglor. The characters assed are objects of mind i.e. Chintya (to be thought about), Vicharya (questions to be discussed), Oohya (Speculation), Dhyeya (Objectives), Sankalp (to determine).

On the basis of above governing and assessment criteria the base of examination of this experimentation is made, in which the intelligence or mental status should be measured by a simplified test. It is called as General intelligence cum mental ability test and has a sum of twenty questions, each question carries 5 marks and the time limit for solving all the questions is 60 minutes, so one correct answer achieves 5 marks for you but exceeding time from 60 minutes of limit deduces 2 marks for each extra minute, similarly each saved minute in 60 minutes enhances 2 marks for each saved minute.

## 5. OBSERVATION

Intelligence or mental ability of all the individuals are examined at initiation this work. The obtained marks or yield are categorized in their respective tables. Separate mean value is calculated for assessment.

$$\text{Mean} = \frac{\text{Sum of observations}}{\text{Total numbers of observations}}$$

$$\text{Mean of yield } (\bar{Y}) = \frac{\sum Y}{N}$$

Where  $\bar{Y}$  = Mean or average of yield at E0 =  $\bar{Y}_0$

Y = yield or gain of individual person at E0 =  $Y_0$

N = Total number of individuals appearing in the examination = 30

$$\text{So, } \bar{Y}_0 = \frac{\sum Y_0}{N}$$

$$\text{So, } \bar{Y}_0 = 41.27$$

$Y_0$  represent the average or mean value of marks yield in E0 examination of all the 30 individuals which are going through the same stream towards comparative analysis of mental ability cum intelligence enhancement (Buddhivardhna) in Group I.

$$\text{So, } SN\bar{Y}_0 = 41.27$$

$$\text{Mean} = \frac{\text{Sum of observations}}{\text{Total numbers of observations}}$$

$$\text{Mean of yield } (\bar{Y}) = \frac{\sum Y}{N}$$

Where  $\bar{Y}$  = Mean or average of yield at E0 =  $Y_0$

$Y$  = yield or gain of individual person at E0 =  $Y_0$

$N$  = Total number of individuals appearing in the examination = 30

$$\text{So, } \bar{Y}_0 = \frac{\sum Y_0}{N}$$

$$\text{So, } \bar{Y}_0 = 40.03$$

$Y_0$  represent the average or mean value of marks yield in E0 examination of all the 30 individuals which are going through the same stream towards comparative analysis of mental ability cum intelligence enhancement (Buddhivardhna).

These two values of mean noted at the starting of the experimentation assumed to be prior intelligence or mental ability of respective group, after it both groups are allowed to go through their respective fallow up. It is important for the comparative analysis at the end of experimentation or on completion of their fallow up.

SAMPLE-I	<b><math>SN\bar{Y}_0 = 41.27</math></b>
SAMPLE-II	<b><math>TS\bar{Y}_0 = 40.03</math></b>

In this way on their foregoing sequential examination carried out at 15th, 30th, 45th days of experimentation done properly. Their successive yield or marks obtained are observed and noted out their mean values as fallow:

<b><math>SN\bar{Y}_{15} = 54.00</math></b>
<b><math>SN\bar{Y}_{30} = 61.63</math></b>
<b><math>SN\bar{Y}_{45} = 66.30</math></b>

Persons involved through Tadvidyasambhasha towards comparative analysis of mental ability cum intelligence enhancement (Buddhivardhna) and their percentage yield in E15, E30 and E45.

<b><math>TS\bar{Y}_{15} = 63.67</math></b>
<b><math>TS\bar{Y}_{30} = 72.56</math></b>
<b><math>TS\bar{Y}_{45} = 78.80</math></b>

At the end of experimentation, the final yield notate out as:

Persons involved through drug use towards comparative analysis of mental ability cum intelligence enhancement (Buddhivardhna) and their percentage yield in E60.

$$SN\bar{Y}_{60} = 70.66$$

Persons involved through Tadvidyasambhasha towards comparative analysis of mental ability cum intelligence enhancement (Buddhivardhna) and their percentage yield in E0.

$$TSY_{60} = 86.10$$

These two values of mean noted at the end of the experimentation assumed to be post intelligence or mental ability of respective group after their respective follow up. It is important for the comparative analysis against prior value.

SAMPLE-I	$SN\bar{Y}_{60} = 70.66$
SAMPLE-II	$TS\bar{Y}_{60} = 86.10$

The comparative analysis done by applying “paired t-test”, which is applicable when there is a significant change in mean value is noted and is used as a hypothesis testing tool, which allows testing of an assumption. The non zero or value other than zero by this test represent alternative hypothesis, where as zero value means null hypothesis. This research work is based on alternative hypothesis in which a positive value (  $t_{60-0}$  ) should represent my assumption correct.

Standard deviation for SAMPLE-I at stage E0 is calculated as:

$$s = \sqrt{\frac{\sum(x - \bar{x})^2}{(n-1)}} \quad \text{where } \sum(x - \bar{x})^2 = \sum(Y_0 - \bar{Y}_0)^2$$

$$s_0 = 11.24$$

Standard deviation for SAMPLE-I at stage E60 is calculated as:

$$s = \sqrt{\frac{\sum(x - \bar{x})^2}{(n-1)}} \quad \text{where } \sum(x - \bar{x})^2 = \sum(Y_{60} - \bar{Y}_{60})^2$$

$$S_{60} = 4.67$$

Paired “t” value for SAMPLE-I ( $t_I$ ) before and after the experimentation:

$$t = \frac{\text{mean1} - \text{mean2}}{s(\text{diff})/\sqrt{n}} \quad \text{where } (\text{mean1} - \text{mean2}) = SN\bar{Y}_0 - SN\bar{Y}_{60}$$

$$t_I = 14.4385$$

Similarly Standard deviation for SAMPLE-II at stage E0 is calculated as:

$$s = \sqrt{\frac{\sum(x - \bar{x})^2}{(n-1)}} \quad \text{where } \sum(x - \bar{x})^2 = \sum(Y_0 - \bar{Y}_0)^2$$

$$s_0 = 13.72$$

Standard deviation for SAMPLE-II at stage E60 is calculated as:

$$s = \sqrt{\frac{\sum(x - \bar{x})^2}{(n-1)}} \quad \text{where } \sum(x - \bar{x})^2 = \sum(Y_{60} - \bar{Y}_{60})^2$$

$$s_{60} = 5.78$$

Paired “t” value for SAMPLE-II ( $t_{II}$ ) before and after the experimentation:

$$t = \frac{\text{mean1} - \text{mean2}}{s(\text{diff})/\sqrt{n}} \quad \text{where } (\text{mean1} - \text{mean2}) = TSY_0 - TSY_{60}$$

$$t_{II} = 21.3146$$

### Successive increment or reduction or relative yield of SAMPLE-I:

TABLE XII: Successive increment or reduction or relative yield of SAMPLE-I:

Stage of examination	Mean yield (SN $\bar{Y}$ )	Relative yield
E <sub>0</sub>	41.27	-
E <sub>15</sub>	54.00	SN $\bar{Y}_{15}$ -SN $\bar{Y}_0$ = +12.73
E <sub>30</sub>	61.63	SN $\bar{Y}_{30}$ -SN $\bar{Y}_{15}$ = +7.63
E <sub>45</sub>	66.30	SN $\bar{Y}_{45}$ -SN $\bar{Y}_{30}$ = +4.67
E <sub>60</sub>	70.66	SN $\bar{Y}_{60}$ -SN $\bar{Y}_{45}$ = +4.36

$$\text{SN}\bar{Y}_{60}-\text{SN}\bar{Y}_0 = 29.39$$

Successive increment or reduction or relative yield of SAMPLE-II:

TABLE XIII: Successive increment/reduction or relative yield of SAMPLE-II

Stage of examination	Mean yield (TN $\bar{Y}$ )	Relative yield
E <sub>0</sub>	40.03	-
E <sub>15</sub>	63.67	TS $\bar{Y}_{15}$ -TS $\bar{Y}_0$ = +23.64
E <sub>30</sub>	72.56	TS $\bar{Y}_{30}$ -TS $\bar{Y}_{15}$ = +8.89
E <sub>45</sub>	78.80	TS $\bar{Y}_{45}$ -TS $\bar{Y}_{30}$ = +6.24
E <sub>60</sub>	86.10	TS $\bar{Y}_{60}$ -TS $\bar{Y}_{45}$ = +7.30

$$\text{TS}\bar{Y}_{60}-\text{TS}\bar{Y}_0 = 46.07$$

## 6. DISCUSSION

Since various stages of human civilization, human being followed a specific pattern of meet. In their different constituents of lively hood like social, political, industrial, economical or in different areas of sciences as well as other necessary areas related to their progressive evolution in psycho somatic aspects the human society simultaneously developed a specific patter of meet. It is called as Tadvidyasambhasha.

This sequence has been going on along with the rise of human evolution or development since time immemorial. Ever since man gave voice to his thoughts, tried to express his feelings, fantasies and concern streams in language, the art of writing also emerged from the same dawn, but the means of writing in that primitive age, were different everywhere and totally strange from today point of view. Simultaneously with the passes of time the it also got elaborate to Shruti, Smriti and Purana etc. This tradition of contemplation of knowledge originated from the holy ashrams of sages and sages established in the Aranyas. Along with strength and age, as there was a decline in the intellect and memory of humans, there was a change in his old means of preserving the rich tradition of knowledge and passing it on to the future generations. The process expanded widely.

## 7. CONCLUSIONS

The importance of Tadvidyasambhasha or called to be intellectual meet of human being along the understanding of life factors, to which Acharya Charak explained as foremost among all which indulges in enhancement in human mental or brain power. This experimentation study represents analytical analysis of extents of enhancement in intelligence, mental ability or mind power through interactive or intellectual means of Tadvidyasambhasha against the most indicated mind governing drug, Medhya Rasayana Shankhapushpi. Individuals involved are grouped in two groups group-I and group-II, each having a strength of 30 are nominated for their grouped analysis by making grouped data charts.

In this study the grouped data analysis chart scoring of all the individuals of respective group are arranged at each stage for their pre and post comparison, by calculating their mean values and their comparative study has done. After which it has to be found that the individuals of both the groups have shown their enhancement in mind power at all the successive stages of experimentation, but those which are carried out through the interactive or intellectual mean of fallow up or Tadvidyasambhasha attain higher values. It represents that among all the possible ways to enhance the human mind or brain power the Tadvidyasambhasha is most efficient so called foremost.



## CONFLICT OF INTERESTS

None.

## ACKNOWLEDGMENTS

None.

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