



Effectiveness of critical thinking and discussion method in developing mental health among secondary school students

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Abstract: *This study looks into how well critical thinking and discussion techniques, especially using a storytelling approach, might improve secondary school students' mental health. 120 students were split into control and experimental groups using a quasi-experimental design, and they were evaluated using pre-test and post-test measures. At the pre-test level, the results showed no significant difference across the groups, suggesting similar baseline conditions. However, compared to students taught using conventional methods, post-test findings indicated a considerable improvement in the experimental group, particularly among students exposed to critical thinking and discussion-based teaching methods. Students' mental health was positively and significantly impacted by these novel approaches, according to statistical research, with the discussion method being somewhat less successful than critical thinking. The study advises incorporating storytelling into school curricula for the holistic development of students, concluding that it is a potent pedagogical tool for fostering mental well-being when combined with critical thinking and discussion techniques.*

Key words: *Critical Thinking, Discussion Method, Mental Health, Secondary School.*

1. INTRODUCTION:

Among God' Crenation, Man is Supposed to occupy the pride position at the top. The possession of mind and its manifold manifestation demarcate the "homo sapiens" from the sab human species However mastery of mind alone contributes to the wellbeing of human beings. Men and animals share common needs that are primarily physiological. These are vital for survival. Need for food, water warmth, sex, rest and security are vital physiological needs. Animals in the jungles naturally adept themselves to the environment They rest when basic need the survival is met. But this not happens in the case of human beings. Men are not satisfied merely with the fulfilment of basic needs. It is mind in which man prompts him to go beyond and generate a number of needs. We are not sure whether this is a blessing or curse. One's mental-health hinges on the gratification of needs. Greater the multiplicity of needs the larger the scope for misery. A needy person becomes greedy and he sacrifices his mental health (S. Dandapani, 2004). "Mental Health consists of two 'Mental' and 'Health, Health' generally means sound condition, or well beings or freedom from disease. 'Mental health' therefore may refer to a sound mental condition or a state of psychological well-being or freedom from mental disease. It is said that a sound hoody possesses a sound mind and a sound mind exist a in a sound body. So mental health is the full and harmonicas functioning of whole personality. A person is said to be physically fit when his body is functioning well and it is free from pains and troubles, similarly a paragon is said to be in good mental health when his mind or personality is functioning effectively and he is free emotional disturbances.

2.REVIEW OF RELATED LITERATURE:

Joshi, R, S. (1979) in study on the topic "mental health movement in education and its implications for secondary schools in Greste Bombay" reported that,

- i. The mental health in Greater Bombay hogan with the efforts made for Juvenile correction by the society for the protection of children in Westins India.



- ii. Contributions to the mental health movement in education various disciplines and sources such as psycho-analysis, psychotherapy. social psychology and the child study movement.

Sarkar, A.K. (1979) conducted a study on the topic "relationship between mental health and some family characteristics of middle-class school going adolescents". The findings of the study were;

- i. The mentally healthy group of children had lesser family tension than the healthy group of children.
- ii. Mental health of the children was not related to the family structures.

Gupta, A. (1980) conducted a study on the topic "personality and mental health concomitant of Religiousness in the Tibetan students in the adolescents age groups". The findings of the study were,

- i. Generally, Tibetan adolescents were found to be religious, mentally possessing positive attitude and possessing personality characteristics in being warm hearted, emotionally stable, average in intelligence, self-sufficient, imaginative and controlled.
- ii. Significant co-relation had been found in sub-dimensions of religiously and the Measures of mental health.

Magotra, H.P. (1982) conducted a study on the topic "mental heist intelligence, education, academic achievement and socio-economic status", The findings of the study were

- i. In the intelligence test and in the socio-economic questionnaire girls score higher than the boys.
- ii. It had been found that two factors, namely intelligence and physical health considerably influenced the mental health of boys and girls.

Agrawal, M. (1985) in a study on the topic "life stresses among University students" reported that:

- i. Stress score were higher in the case of boys as compared to girls.
- ii. The occurrence of day-to-day problem had higher pathogenetic significance than even major life events.

Padmasri, J.V. (1992) Conducted a study on the topic "Stressful life events in school system and educational development of the children" found that boys and girls differed significantly among stress score. Boys being higher on the mean score than girls.

Namita, Rangannathan (1988) conducted the study on the topic "stress among school children" reported that;

- i. Boys were found to have higher degree of stress than girls.
- ii. The factors in stress constituted psychomotor symptoms, mental symptoms, low self- esteem, withdrawn symptoms, hospitality and anger symptoms.

3.STATEMENT OF THE PROBLEM:

In view the above consideration the investigator is inclined to undertaken a study entitled.

“EFFECTIVENESS OF CRITICAL THINKING AND DISCUSSION METHOD IN DEVELOPING MENTAL HEALTH AMONG SECONDARY SCHOOL STUDENTS”.

4.OBJECTIVES OF THE STUDY:

1. To study the effect of critical thinking in developing mental health among the secondary school students.
2. To study the effect of discussion method in developing mental health among secondary school students.
3. To compare the effect of discussion method and critical thinking in developing mental health among the secondary school students.



5.HYPOTHESES OF THE STUDY:

Ho1. There is no significant difference in between critical thinking and discussion method on the development of mental health.

Ho2. There is no significant difference in between control group and experimental group relating to critical thinking for mental health.

Ho3. There is no significant difference in between control group and experimental group relating to discussion method for mental health

Ho4. There is no significant difference in between pre-test & post-test of critical thinking with respect to the development of mental health.

Ho5. There is no significant difference in between pre-test & post-test of discussion method with the respect to the development of mental health.

Ho6. There is no significant difference in between control group & experimental group with respect to the development of mental health.

6.METHODOLOGY:

Design of the Study:

Design of the study will be Quasi-experimental design. Intact class rooms will be taken into consideration for framing experimental and control group. Once the two groups will obtain, a random procedure will apply to determine which group is to be assigned as experimental group and which one is to be control group.

Non-Randomized Control Group Pre- Test Post-test

| Group | Pre-test | Independent Variables | Post-test |
|--------------------|----------|--|-----------|
| Experimental group | T1 | Critical Thinking Discussion Method | T2 |
| Control group | T1 | Traditional Approach | T2 |
| | | | |

Sample: The investigator selected 120 students for control and experimental Groups

i.e. for control group-40, for experimental group 40 for critical thinking and 40 for discussion method.

Tools Used:

For the present study the researcher has used two types of tools

- i. Instructional tool (Lesson plan)
- ii. Measuring tool (Situational test)

Instructional Tool: -

It is the preparation of unit wise lesson plan based on Storytelling approach. Learning materials/ teaching aids like picture, chart, map, and related to particular concept will used.

Conduct of the Study:

Experimental Phase:

The duration of data collection was spread over a period of 8 days. Lesson plan was prepared separately on traditional method and storytelling method. After the pre-test the two groups were instructed by two different methods of teaching separately. Experimental group was discussed



with various dimensions of mental health and appropriate environment was given for critical thinking. The experimenter was used instructional aids for teaching learning process. A situation was created by the researcher in which student will be stimulated towards learning. The whole process was monitored by the researcher who was worked as facilitator to ascertain students' progress. Similarly control group students were taught by traditional method of teaching. After teaching, a post achievement test was administered to both the groups. A comparison was made to find out the effect of critical thinking and discussion method.

Post-experimental Phase:

After the completion of the instructions, same achievement test was again administered as post-test by using same questions given in pre- achievement test. A comparison was made on the post achievement test of experimental group and control group to find out the effect on achievement.

Statistical Technique Used:

Keeping in view, the objectives, design and nature of data mean, median, mode, S.D., SEd, and 't' test for significant of difference was applied.

7.RESULT AND DISCUSSION:

Table No- 1

Mean, median, S.D, SEd and 't' on criterion variable for the Experimental and Control on Pre-Test

| Group | N | Mean | Median | Mode | S.D | Sed | 't' | df | Level of significance 0.05 0.01 |
|--------------|----|-------|--------|------|------|------|------|-----|------------------------------------|
| Control | 80 | 10.95 | 11 | 11 | 1.71 | 0.45 | 1.93 | 158 | Not significance at both levels |
| Experimental | 80 | 10.08 | 10 | 11 | 2.29 | | | | |

An analysis of table no. 1 indicates the mean, median, mode, S.D, SEd and 't' values of both the control and experimental group on Pre- Test. The distribution of mean, median, mode values in the case of both the group are almost similar in nature. So investigator can safely conclude that the proud are more or less equivalents in nature and construct value are approximately normally distributed in the sample. In this context, the application of 't' ratio is deemed fit as its assumption of normal distribution of data is fulfilled. Further the mean value on Pre- Test of both the control and experimental groups were subjected to the testing of their significance of difference. He results obtained there in depicts 't' ratio of 1.93 which is less than the table value of 't' that is 1.99 at 0.05 level of the significance with the value of 158. Hence, it may conclude that both the groups are equivalent and on search initial difference exit between the two groups on the variable value.

Table No-1.1

Significance of difference Mean scores, S.D and 't' value of control group at pre-test and post-test level (critical Thinking)

| Group | N | Mean | S.D | Sed | 't' | df | Level of significance 0.05 0.01 |
|-----------|----|-------|------|------|-----|----|------------------------------------|
| Pre-test | 40 | 10.95 | 1.71 | 0.36 | 2.5 | 39 | Not significance at both levels |
| Post-test | 40 | 10.03 | 1.49 | | | | |

The investigator tries to know about the impact of traditional method of teaching in mental health. To know the impact of traditional method of teaching in mental health inculcation the 6th grade students of control group were taught through traditional method. In this context students were tested both at the Pre-test and Post-test level. From the above table 't' value for the Pre and Post- test of the control group come out 2.5, which is less than the table value 't' = 2.71 for df = 39 confidence. Thus the obtain value of 't' is not significant at 0.01 level of significance. It indicated that teaching through traditional approach does not put any significant input on the students of control group.



Table No-1.2

Significance of difference Mean scores, S.D, and 't' value of control group at Pre-test and Post-test level (Critical Thinking)

| Group | N | Mean | S.D | SEd | 't' | df | Level of significance 0.05 0.01 |
|-----------|----|-------|------|------|-------|----|---|
| Pre-Test | 40 | 10.08 | 2.29 | 0.44 | 16.93 | 78 | Significant at both level or 0.01 level (P<0.01) |
| Post-Test | 40 | 17.53 | 1.60 | | | | |

It is found from the above table that 't' value from both Pre-test and Post- test of experimental group comes 16.93 which is more than table of for needed to be significant at 0.01 level of confidence. Thus the obtain value'tsignificant 0.01 level of confidence. Thus, it shows that teaching with the help of critical thinking and discussion method proves to be effective in value inculcation than the traditional approach. Scores of experimental group students at Post-test level scores is higher than the Pre-test.

Table No-1.3

Significance of difference Mean scores, S.D and 't' value of control group Pre-test for critical thinking and discussion method

| Group | N | Mean | S.D | SEd | Df | 't' | Level of significance 0.05 0.01 |
|-------------------|----|-------|------|------|----|------|---|
| Critical Thinking | 40 | 11.46 | 1.13 | 0.36 | 78 | 3.36 | Significance at both level or 0.01 level (P<0.01) |
| Discussion | 40 | 10.25 | | | | | |

It indicates from the above table that 't' value for both critical thinking and discussion method of control group in pre-test was found to be 3.36 which is higher than the table value of 't'=2.71 for df= 38 at 0.01 level of significance. Thus, the 't' Value is significant at 0.01 level of confidence. It indicates there were differences for both critical thinking and discussion method in mental health through traditional approach of teaching before the treatment.

Table No-1.4

Comparison between Boys and Girls with respect to mean, S.D, 't' value in control group for Post-test.

| Group | N | Mean | S.D | SEd | 't' | Df | Level of significant 0.05 0.01 |
|-------------------|----|-------|------|------|------|----|-----------------------------------|
| Critical Thinking | 40 | 11.96 | 0.92 | 0.26 | 0.65 | 78 | Not significant |
| Discussion Method | 40 | 11.13 | 0.83 | | | | |

It is found from the above table that 't' value for both critical thinking and discussion method of control group in post-test was found to be 0.65 which is less than the table value of 't' = 2.71 for df= 38 at 0.01 level of significant. It indicates that there is no difference for critical thinking and discussion method both for mental health of teaching after the treatment.

Table No-1.5

Comparison between Boys and Girls with respect to Mean scores, S.D and 't' value in Experimental Group for Pre-test

| Group | N | Mean | S.D | SEd | 't' | Df | Level of significance 0.05 0.01 |
|-------------------|----|-------|-----|-----|-----|----|------------------------------------|
| Critical Thinking | 18 | 10.22 | | | | | |



| | | | | | | | |
|-------------------|----|------|------|------|------|----|-----------------|
| Discussion Method | 22 | 9.96 | 1.34 | 0.43 | 0.63 | 38 | Not significant |
|-------------------|----|------|------|------|------|----|-----------------|

Above table shows that 't' value for critical thinking and discussion method of experimental group in pre-test found to be 0.63 which is less than the table value of 't' =2'02 for df=38 need level of confidence. It indicates that in experimental group pre-test there is no significant to be significant at 0.05 level of significance. Thus obtained value 't' is not significant at 0.05 difference regarding mental health among critical thinking and discussion method.

Table No- 1.6

Comparison of Critical Thinking and Discussion Method with respect to Mean scores, S.D and 't' value in Experimental Group for Post-test

| Group | N | Mean | S.D | SEd | 't' | df | Level of significance 0.05 0.01 |
|-------------------|----|-------|------|------|------|----|--|
| Critical Thinking | 18 | 17.44 | 0.43 | 0.46 | 2.89 | 38 | Significant at both level or 0.01 level (P<0.01) |
| Discussion Method | 22 | 16.11 | 2.17 | | | | |

Above table indicates that't' value for both critical thinking and discussion method of experimental group in post-test about 2.89 which is more that the table value't' 2.71 for df=38 need to be significant at 0.01 level of significance. Thus obtained value of't' is significant at 0.01 level of significance. It indicates that there is difference for both critical thinking and discussion method in mental health.

8.Suggestions for further study

- A similar type of study may be undertaken at elementary level.
- A study may be conducted to investigate the effectiveness of storytelling approach in tribal areas.
- A similar type of study may be undertaken in Urhan schools.
- A similar type of may be undertaken at higher secondary level.
- A similar type of study may be undertaken at college level.
- A study may be conducted to investigate the effectiveness of storytelling approach in residential schools.
- A comparative study may be undertaken to investigate the effectiveness of storytelling in development of mental health among rural, urban and tribal school students.

9.CONCLUSION:

It can be concluded that story telling approach has significant importance inculcating mental health among 6 grade learners. Story telling approach is more effective for the development of mental health than traditional approach. It also shows that there is differential impact of storytelling approach in inculcating the mental health among boys and girls. The story telling is one of the potent ways of imparting mental health and communicating positive message in an integrated and implicit manner. So, special attention should be given for inculcating stories in curriculum.

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