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Research Paper

Effectiveness of Intervention Program on Focus Factor of 8 Year Old Students in Private Schools of Chandigarh and Punjab

Dr. Shruti Marwaha[1]*, Prof. A.K. Sinha[2], Dr. Ramesh Sahani[3]

ABSTRACT

Focus is the ability of a person to attend to desired stimulus and concentrate on a particular task. There are nine different intelligences which are identified. Multiple intelligence level gives us an important insight about our natural strengths. The study was conducted to compare and analyze the focus factor of respondents. The sample consisted of 481 respondents selected from Private Schools of Chandigarh and Punjab. The students of 8 years in age were purposefully selected. Further, these students were divided into two groups: Experimental Group and the Control group. Further, the intervention programme was implemented among the respondents in the experimental group. They were assessed for their primary natural learning style, it was noticed that majority of them were kinesthetic. Results indicated that the focus factor of the respondents belonging to experimental group surged significantly over the period of intervention, while in case of their control group counterparts, there had been merely an insignificant change in the focus factor. A persistent rise was witnessed in the focus factor of experimental group during the span of research. Therefore, it becomes quite apparent that if the customized education is provided to the students, it would increase their focus factor.

Keywords: *Focus Factor, Primary Natural Learning Style, Intervention Programme*

Focus refers to the focused attention which is a major cognitive ability aiding in the mental functions and mental processes. Amelioration in the cognitive abilities would inevitably beget success in life, specifically in the field of education and learning. In turn, the highly superior intellectuals can make considerable and significant contribution to the culture, for which they must be educated to a relatively high degree in order to maximize their productivity and possibly to ensure their own personal happiness and welfare. Certainly, the aim of education globally is to enhance student's cognitive skills. Piaget (1971) has explained cognition as the utmost vital parameter which can lead every child towards success. It refers to any mental activity that leads to the development of meaning. As mentioned by Piaget (1952), cognitive processes use existing knowledge and generate new knowledge. There has

[1] Ph.D., M.Sc., M.A., B.Ed., Deptt of Anthropology, Panjab University, Chandigarh, India
[2] Professor, Ph.D., M.Sc., Deptt of Anthropology, Panjab University, Chandigarh, India
[3] Asstt Professor, Ph.D., M.Sc., Deptt of Anthropology, Panjab University, Chandigarh, India
*Responding Author

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been a surge for understanding ways to improve student's cognitive abilities. To be a successful learner, students should be able to acquire knowledge, transfer and make use of the acquired knowledge. To achieve these goals, learners ought to be able to think and understand their own thinking. Education has moved away from preparing pupils to fit in to a particular society but it seeks to make them feel that they belong to the larger world family. Education is a fundamental means to bring any desired change in society. This can be attained only if schools become real centers of learning. Education not only helps in the development of personality of the child but also determines his future. Recent psychological research has shown that favorable attitude towards life helps development in the earliest stages of child's growth. The prosperity and progress of a country depends upon the quality of its citizens. The quality of education provided to its citizen is the index of the measure of the quality of its citizens. Thus, education is the right key to economic development of the nation. Education is the most important component, which produces greater returns on human resources. Therefore, Education plays a vital role in the development of human potentialities. Every country develops its system of education to meet the challenges of changing times. The developing educational system must build upon the gains of the past and the present for better future of the people and indeed of humankind. Cognitive Ability is the capacity of the human brain to perform higher mental processes like thinking, remembering, understanding and problem solving. Cognitive abilities help a human brain to acquire knowledge and process that knowledge so that it can be employed effectively in a practical world. It is the ability to think and understand. It includes things like sensing, remembering, deducing, intuiting, etc. Cognitive processes use existing knowledge and generate new knowledge. Cognitive processes lead to intelligence. If the body perceives, reacts, evaluates, understands things properly it means that the person is intelligent. Cognitive ability plays an important role in predicting academic achievement. Cognition, a wide term to refer to cognitive and academic performance, is a mental function involved in gaining knowledge and comprehension. A high cognition has been identified as a positive marker of health. Likewise variables associated with cognition have been used to assess psychological health of school aged individuals. Specifically, adolescence is a critical stage for cognition, and cognition in adolescents may be an important predictor of adult health. For example, poor cognition during adolescence has been associated with higher morbidity and mortality, anxiety disorders, depression, psychological distress, coronary heart disease and some cancers later in life. High cognition is linked to positive psychological-related variables such as self-esteem and self-concept. A healthy lifestyle during adolescence may be crucial for better cognition. There are nine types of intelligences. Naturalistic intelligence refers to a human being's sensitivity to the natural world. This is the ability to distinguish among nature's different features such as animals, plants, rock configurations, cloud formations, and other such things. In the past, the naturalist intelligence was undoubtedly of great value in a person's survival. Farming and hunting were clearly among the activities that relied on this type of intelligence. Today, naturalistic intelligence remains a vital component of roles like being a chef or botanist. This type of intelligence is also seen in the way consumers discriminate among products. The intelligence involved in this ability to recognize tone, rhythm, timbre, and pitch is musical intelligence. Logical intelligence equips a person with the ability to calculate and carry out mathematical operations as well as mull over hypotheses and propositions. Existential intelligence includes deep thoughts. These thoughts may include the why's and how's of life and death. Individuals with the use of their interpersonal intelligence, interact with others in such a way that they are able to understand and communicate well. Interpersonal intelligence makes it possible for a person to effectively communicate through verbal and nonverbal means, to distinguish among others, to sense the

temperament and moods of people, and to consider various points of view. People with bodily-kinesthetic intelligence have an almost perfect sense of timing, and their mind-body coordination is nearly faultless. Linguistic intelligence involves the human capacity to think in words and use these to make oneself understood. It is this type of intelligence that allows a person to appoint complex meanings and express these through the use of language. People who have the remarkable ability to understand themselves, their thoughts, and their emotions and are capable of using this knowledge to plan their lives possess intra-personal intelligence. Spatial intelligence involves a dynamic imagination, image manipulation, mental imagery, artistic and graphic skills, and spatial reasoning. There are numerous studies that suggest positive associations between cognition and academic achievement. The study conducted by Donnelly et.al. (2016) has laid down sufficient evidence to imply that and there is a positive influence of cognition as well as brain structure and function on academic achievement. Ample research work has portrayed that the children with High IQ and cognitive abilities have better academic achievement than the children with Average IQ and lower cognition. Similarly, Kenth (2009) made an investigation of cognitive style, learning style and study skills as predictors of academic achievement of prospective teachers and found that examination mastery along with cognitive style and imaginative style was found to be a good predictor of academic achievement. Similar studies had been carried on by Ayres (2008), Fuchs et.al. (2006) and Parikh (2004) who traced the relationship between cognitive style, gender, intelligent quotient and academic achievement of high school students and recorded a significant correlation between cognitive style and academic achievement. In another significant study, Dhall et al. (2005) found cognition and intelligence as related to self-confidence and academic achievement of school students with the objective to trace the relationship between intelligence and academic achievement among school students by taking a sample of 1000 students and found that there was a significant relationship between academic achievement and intelligence of students; there existed a significant difference between boys and girls in terms of intelligence; proportionally, there existed significant difference between them in terms of academic achievement. Stevens etal. (2012) traced that selective attention skills are relevant for academic foundations and amenable to training, they represent an important focus for the field of education. It is argued that developmental differences in selective attention are related to the neural systems important for deploying selective attention and managing response conflict. In contrast, once effectively deployed, selective attention acts through very similar neural mechanisms across ages. Doyle (1973) found that in an educational era concerned with letters and numbers and the easy evaluation of skill sets, it is important to consider how domain-specific skills may critically harness domain-general selective attention skills. To the extent that training and support for selective attention is valued, it may be leveraged as a force-multiplier across domains. In an age of accountability, this also puts pressure on the research community to develop valid and reliable measures of specific aspects of attention that will be sensitive to educational and intervention evaluation. Binet (1911) stated that indeed, the history of such "mental orthopedics exercises," or teaching children how to learn through training attention, self-discipline, and memory. The attention-activities significantly influenced the learning outcomes. Multiple intelligences are the nine forms of intelligences which are present in everyone. However, at least of these nine, one is prominent which is termed as the dominant of these. According to Gardner (1983), an individual's learning style refers to the preferential way in which the student absorbs, processes, comprehends and retains information. There are 9 different intelligences which are identified. Multiple intelligence level gives us an important insight about our natural strengths. The multiple intelligences theory claims that all humans have nine intelligences, to a lesser or greater extent, and that we each have a different

intelligence profile as mentioned by Gardner (2008).In this context, Ahvan and Pour (2016) investigated the relationship between the multiple intelligences and the academic performance achievement levels of high school students based on Gardner's multiple intelligences theory. It was ascertained that multiple intelligences like visual-spatial, verbal-linguistic and interpersonal are statistically significant and are able to predict academic performance achievement, whereas musical intelligence was a less significant predicator for academic performance achievement of students.

METHODOLOGY

Sample

The study was conducted to compare and analyze the focus factor of respondents. The sample consisted of 481 respondents selected from Private Schools of Chandigarh and Punjab. The students of 8 years in age were purposefully selected. Further, these students were divided into two groups: Experimental Group and the Control group. Further, the intervention programme was implemented among the respondents in the experimental group.

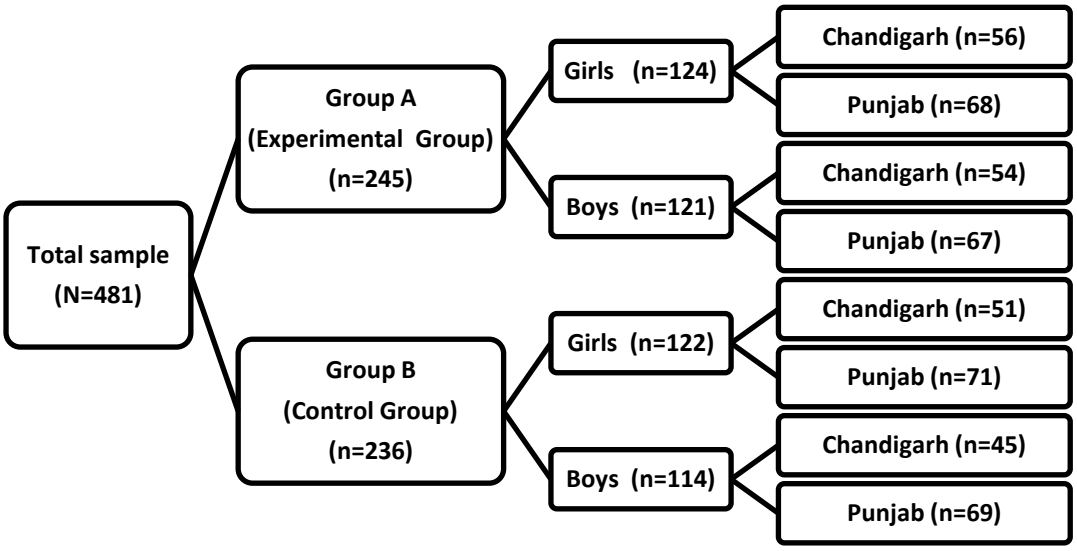

Fig.1 Sampling Procedure

Tools Used

1. Cognitive Ability Scale- to assess the Focus Factor.
2. Multiple Intelligence Scale- to assess the primary Learning Style.

Procedure and Intervention Programme

At the initial stage, rapport was built and the Test and Assessment was conducted to find the focus factor and primary natural learning style of the respondents. In the first quarter after the first test and assessment TA-1, one hundred and eighty tasksheets were given to the respondents in experimental group for 3 months. Customized tasksheets pertaining to the dominant intelligence of each student were given. Proper instructions were given about attempting the tasksheets. They had to attempt 2 tasksheets daily. They were to attempt the tasksheets in school under the supervision of their teacher. Although there is no time limit but the average time required for completing each tasksheet is generally 5-10 minutes. They were asked to fill in the start and stop time mentioned at the bottom of each tasksheet.

Taksheets were customized according to the primary learning style of the students. The programme coordinator from school, was to make sure that the worksheets are done regularly under the supervision of their teachers. The students were given proper instructions regarding the programme. There was a tracker test after every 3 months to monitor the progress. The next quarter solutions (tasksheets) were prepared keeping individual progress in mind. The intervention program was implemented only on experimental group whereas the Control group received no intervention. After 3 months, TA-2 was conducted on both the groups. In the second quarter, another set of one hundred and eighty tasksheets was given to the respondents in experimental group for next 3 months. After these 3 months, TA-3 was conducted on both the groups. In the third quarter, another set of one hundred and eighty tasksheets was given to the respondents in experimental group for next 3 months. After next 3 months, TA-4 was conducted on both the groups. In the fourth quarter, another set of one hundred and eighty tasksheets was given to the respondents in experimental group for next 3 months. So, in total for one year, each student in experimental group had completed 720 tasksheets. At the final stage, TA-5 was conducted on both the groups. Finally, the academic scores were collected through school and the whole data was analyzed.

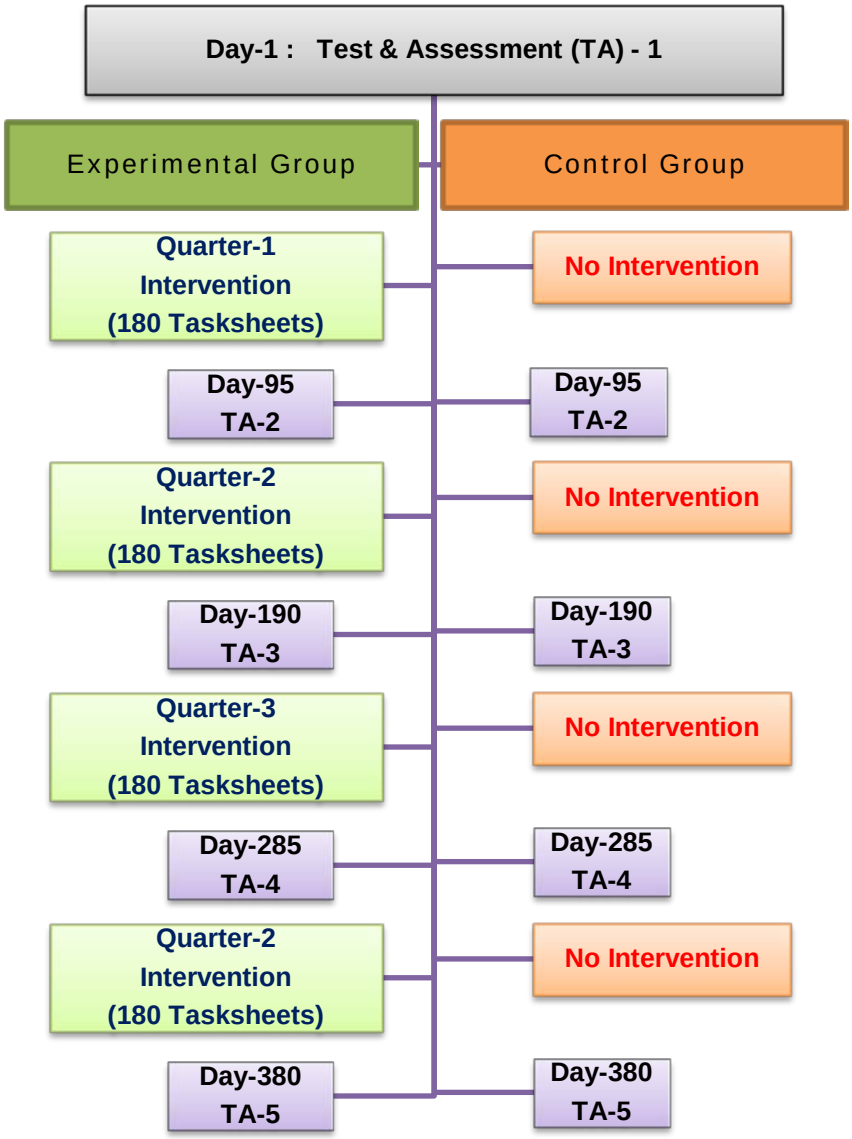

Fig.2 Procedure

RESULT AND DISCUSSION

After the data collection, it were analysed using the descriptive and analytical statistical tools.

Table 1: Primary Natural Intelligence of respondents (n=481)

Parameters	N (sample)	% (percentage)
i-Musical	47	9.77
i-Kinesthetic	72	14.97
i-Intrapersonal	68	14.14
i-Interpersonal	59	12.27
i-Linguistic	23	4.78
i-Logical	67	13.93
i-Spatial	41	8.52
i-Cosmic	53	11.02
i-Naturalist	51	10.60

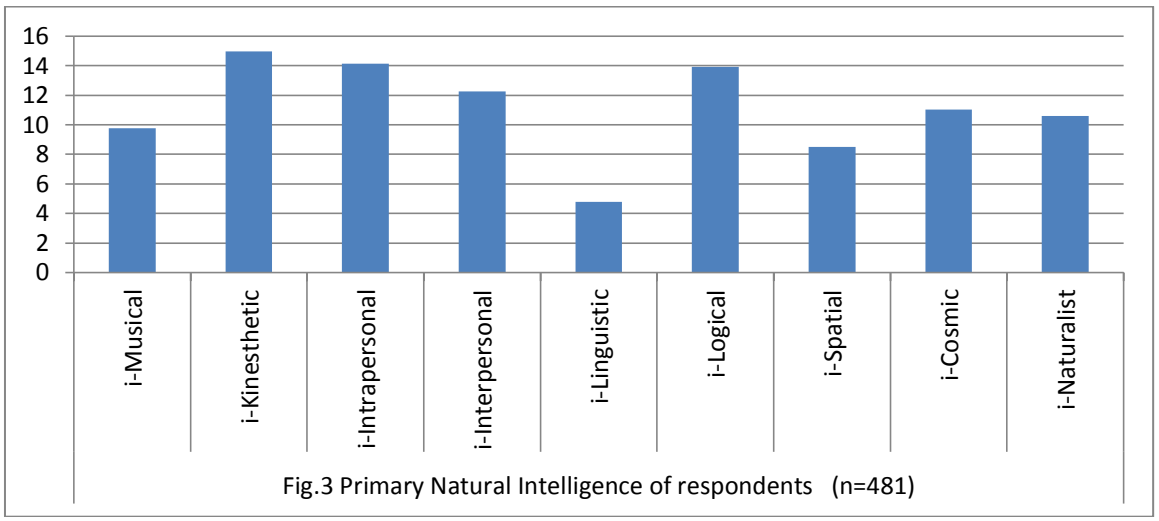

Fig.3 Primary Natural Intelligence of respondents (n=481)

As recorded in table 1, the study was conducted on a sample of 481 students. When they were assessed for their primary natural learning style, it was noticed that majority of them ie. 14.97% were kinesthetic followed by those who were intrapersonal, logical and interpersonal learner. As few as 4.78% among them were linguistic learners.

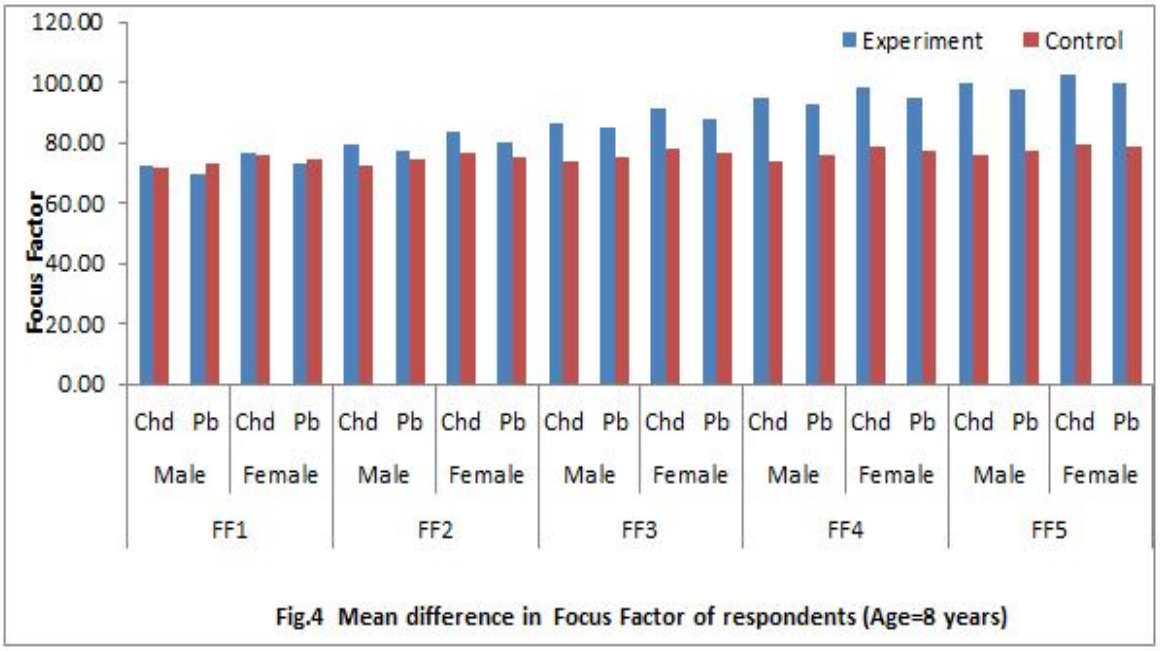

Fig.4 Mean difference in Focus Factor of respondents (Age=8 years)

It is lucid from after data analysis that there were 54 male subjects in experimental group of 8 years old hailing from Chandigarh. The mean of their focus factor in the pre-test taken was 72.09 whereas the mean of the focus factor in the pre-test taken was 71.56 among their control group counterparts, whose count was 46. The difference was however not significant with t value of 0.2. In case of male subjects, 67 in number, in experimental group of same age in Punjab, the mean came out to be 69.66 and in case of their control peers with a count of 69, the mean was notified as 73.24, the difference being statistically non significant with t value at 1.641. Further, when the results of focus factor of Test 2 were compared, the mean value for Experimental Group in Chandigarh was calculated to be 79.37 while that of respondents in control group was found to be 72.56. It was witnessed that there was a significant difference in the mean value of focus factor among experimental and control group of Chandigarh claiming t value of 2.596, but an insignificant difference was notified in case of respondents in Punjab where the mean value among respondents of experimental group was 77.19 and that of control group came out to be 74.37 whose t value was traced as 1.301. As the third test was taken, the mean difference came through significantly high between Experimental and Control groups in Chandigarh as well as Punjab. This significant difference persisted in the later two tests including the post test. Precisely, in Test 3, the mean of focus factor of respondents in experimental group was 86.65 as compared to 73.56 in control group in Chandigarh and the t value was 4.983. Likewise the mean value for focus factor among respondents of Experimental Group in Punjab was 84.71 in contrast to their control group counterparts which was recorded at 75.5.In this case, the t value came out to be 4.242. It was clearly observed that the mean value of focus factor in Test 4 of respondents in experimental group was 94.89 as compared to 74.12 in control group in Chandigarh, the t value was calculated at 7.542. Similarly, the mean value for focus factor among respondents of Experimental Group in Punjab was 92.95 in contrast to their control group counterparts which was recorded at 75.93 at t value 7.431. On the contrary, the mean value of focus factor in Test 5 of respondents in case of experimental group was 99.70 as compared to 75.65 in control group in Chandigarh, and the t value recorded at 8.439. However, the mean value for focus factor among respondents of Experimental Group in Punjab was 97.79 in contrast to their control group counterparts which was recorded at 77.50 where the t value was found to

be 8.494 thereby making the difference statistically highly significant. When the focus factor of pre test among males and females of experiment group in Chandigarh as well as Punjab were compared, it was found that the difference was insignificant. After 3 months when the test2 was conducted, it was found that the difference between the mean of focus factor was again insignificant in Chandigarh as well as Punjab. In case of focus factor 3, 4 and 5, the difference between males and females of Chandigarh as well as Punjab came out to be non-significant. When the males hailing from Chandigarh and Punjab within the experimental group were compared in terms of all the five tests, it was found that there existed a non significant between the two. Same trend was notified in case of females. Likewise when the male and female respondents of Chandigarh within the control group were compared in terms of focus factor in all the tests it was notified that an insignificant difference existed between the two. The same trend was recorded in Punjab.

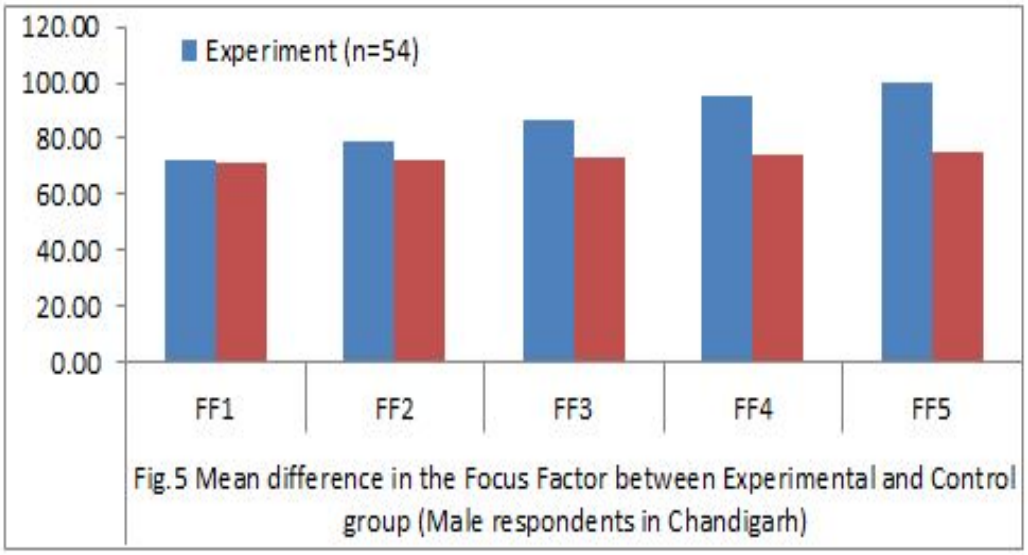

Fig.5 Mean difference in the Focus Factor between Experimental and Control group (Male respondents in Chandigarh)

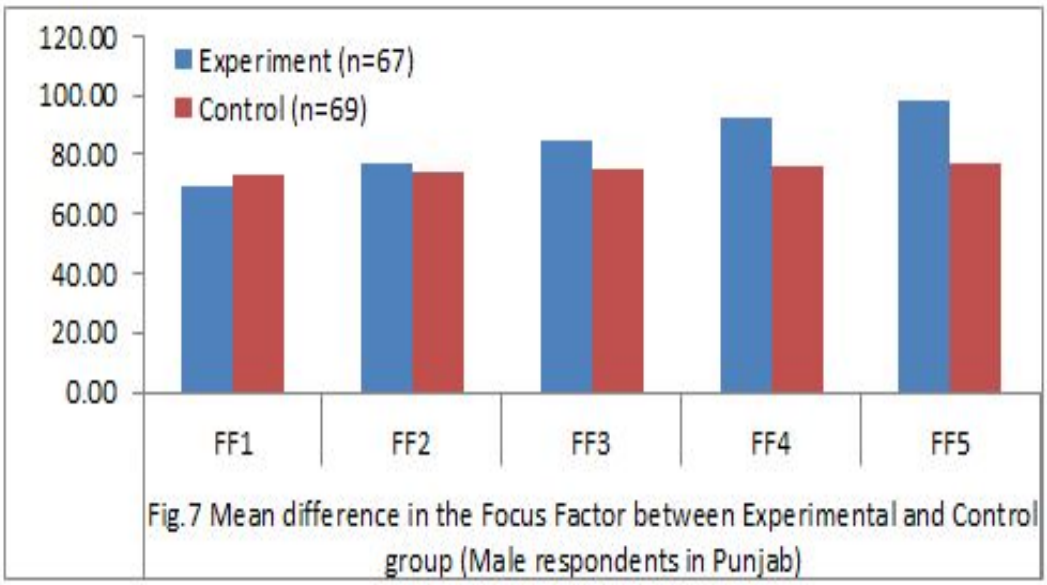

Fig.7 Mean difference in the Focus Factor between Experimental and Control group (Male respondents in Punjab)

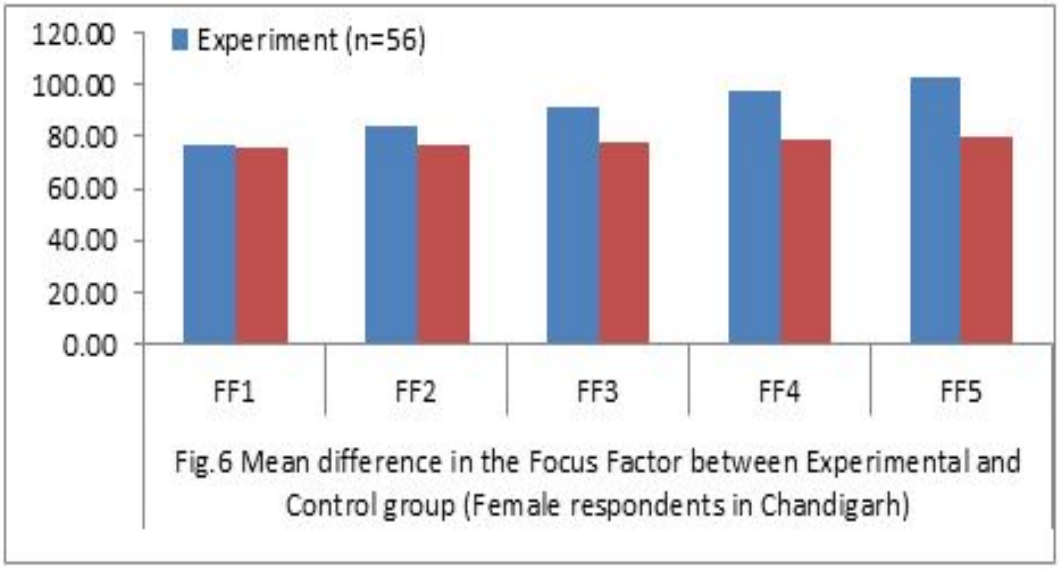

Fig.6 Mean difference in the Focus Factor between Experimental and Control group (Female respondents in Chandigarh)

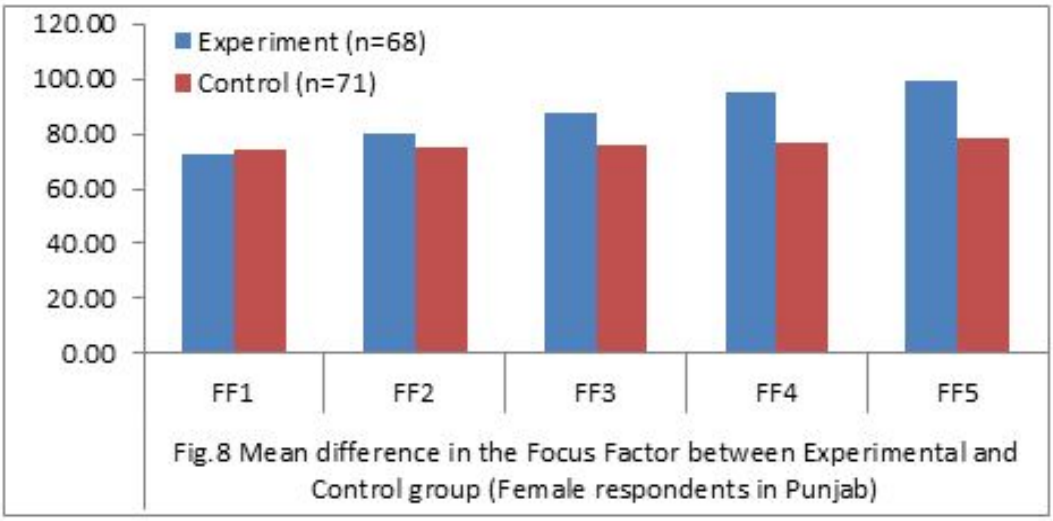

Fig.8 Mean difference in the Focus Factor between Experimental and Control group (Female respondents in Punjab)

When the experimental groups were compared for the change in their focus factor, it could be clearly witnessed that in case of each experimental group that there was a highly significant difference in the focus factor of pre test and that assessed after 3 months. Similarly, highly significant difference was observed in their FF1 and FF3. The same trend was followed for their FF1 and FF4 & FF1 and FF5 difference. Later, FF2 was compared with their FF3, FF4 and FF5, significantly high difference was witnessed in each case. Thereafter, their FF3 was compared with FF4 and FF5, eventually FF4 was compared with their FF5. In every case significantly high difference was depicted in experimental groups. On the contrary in every corresponding counterpart control group, insignificant difference was observed.

INFERENCE

In a nutshell, it became evident that the focus factor of the respondents belonging to experimental group surged significantly over the period of intervention, while in case of their control group counterparts, there had been merely an insignificant change in the focus factor. A persistent rise was witnessed in the FF of experimental group during the span of research.

Therefore, it becomes quite apparent that if the customized education is provided to the students, it would increase their focus factor. It is portrayed through the results that the focus factor t of students can be enhanced in a systematic manner if they get education utilizing their natural learning style. In the results, it was witnessed that the customized intervention had a significantly high impact on the focus factor of the respondents in experimental group.

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Conflict of Interest

The author declared no conflict of interests.

Ethical Justification: The study involved no such content to be passed through ethical issues. The respondents were interviewed through questionnaires with their prior consent.

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