

Research Paper

Preliminary effectiveness of project unlock: a parent mediated intervention for children

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ABSTRACT

Application of education in its true form includes aspects of situational intelligence, mental abilities and cognitive capacities along with literacy. It has been well appreciated in the educational industry to provide an extra intervention to the students in the form of an ecosystem exclusively personalized to them. In addition, digital mode has been widely accepted as the safest option amid situation prevailing because of Covid-19. Educational processes however cannot be at halt for the want of progress. Research studies imply that every situation can be adapted to, through the essence of zeal and passion that caters to the ingredients of success. In regard to the same, the present research study aimed to probe into the preliminary effectiveness of a digital parent mediated intervention project for children. The in-hand research study was conducted on 1096 male and female students of 5th and 6th grade studying in the rural and urban areas. Intelligence quotient, focus factor, decision making ability and creative quotient were studied. The respondents were divided into two groups intervention was given to the respondents in the experimental to whereas respondents and control group for not given any intervention. It was found that the respondents in the experimental group excelled in cognitive development.

Keywords: *Application, Control, Education, Experimental, Digital, Intervention*

It is very important to understand the importance of individual differences while dealing with students in educational sector. Technology has advanced in every sector with education as no exception. However, in the field of education traditional methods of teaching and learning are being practised even today. With the intention to create a great curriculum enriched with modern education and communication, sometimes the impact of individual differences among children seems ignored. Education has become the most significant game changer in the life of an individual. It is well accepted that education

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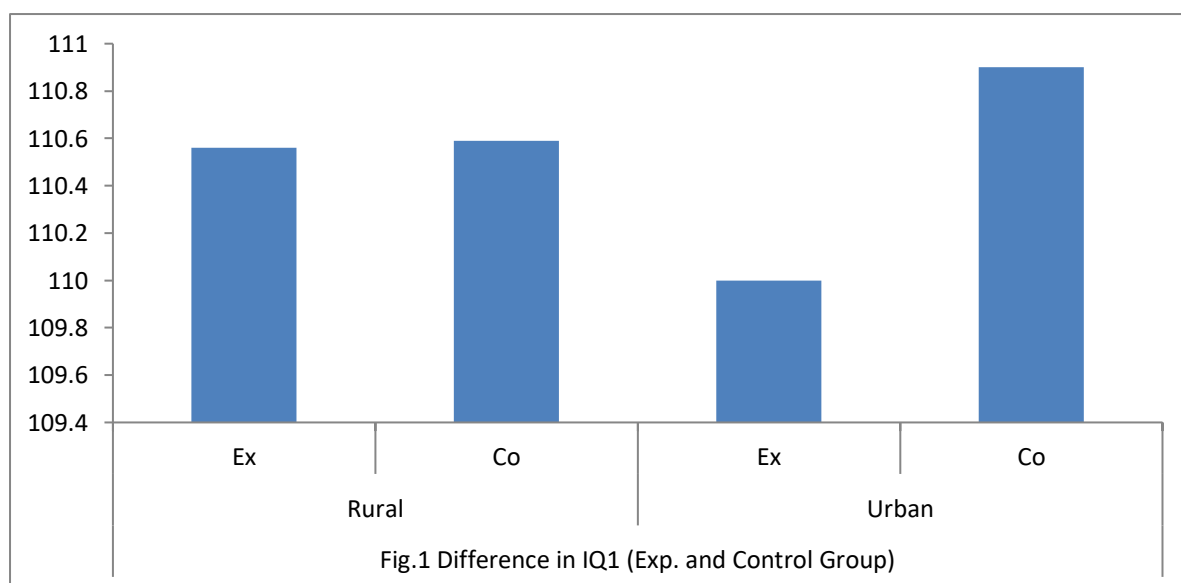
shapes the future of children and your families. Life without education seems impractical these days. Education leads to the overall development of an individual including physical emotional social intellectual mental and cognitive domains. Education is no longer restricted to literacy rather it is intended to measure human capacities. It is even more important to provide the right type of education to the individual at the right time with the right methods and technology. Scientific technology and methods when combined with education and integrated in the curriculum can leads to great result. The reasons in the form of marks and grades are no longer the only requirements of industry. Even in the ancient times, the importance of intervention has been highlighted. The intervention used to be in the form of guide, teacher and mentor. Although the role of individual difference is was not identified much. However, with the integration of psychology and pedagogy in education sector, the individual differences are now given due importance in the field of education. In this respect the intervention has now been in the form of personalized and customised educational aspects. Thus, it becomes very important for the educators to understand the importance of right intervention at the right time at the right age and stages of human life. In this regard, Dackermann et.al (2017) carried a research study while applying embodied cognition from useful interventions and their theoretical underpinnings to practical applications. Maynard et.al (2017) conducted a research study on the mindfulness-based interventions for improving cognition, academic achievement, behavior, and socio-emotional functioning of primary and secondary school students. Piper et.al (2018) identified the essential ingredients to literacy and numeracy improvement, teacher professional development and coaching, student textbooks, and structured teachers' guides and the impact on overall development. Singh et.al. (2019) studied the impact of physical activity interventions on cognitive and academic performance in children and adolescents as a novel combination in a systematic review. Dunning et.al (2019) carried a research review on the impacts of mindfulness based interventions on cognition and mental health in children and adolescents. Lackenbauer et.al (2020) conducted a research study on the evaluation of an educational intervention that aimed to improve the decision-making abilities of students. Benavides-Varela et.al (2020) studied the impact and effectiveness of digital based interventions for children with mathematical learning difficulties. Norris et.al (2020) studied the impact of physically active lessons in schools and their impact on physical activity, educational, health and cognition outcomes. Cartiff et.al (2020) studied the impacts of the epistemic cognition interventions on academic achievement. Lombardi and Bailey (2020) conducted research study on the science strategy interventions. Kozyreva et.al (2020) studied and emphasized the digital challenges with cognitive tools. García-Hermoso et.al (2020) evaluated a before-school physical activity intervention to improve cognitive parameters among children. Reschly et.al (2020) studied and prioritized the student engagement through effective academic, behavioural, affective and cognitive interventions at school. Jones et.al (2021) studied the preserving prospective memory in daily life emphasizing the importance of memory, cognitive training, external memory aid, and combination interventions. Laverdure and Beisbier (2021) studied occupation and activity based interventions to improve performance of activities of daily living, play, and leisure for children and youth. Sharma (2021) worked on the understanding processes and strategies for integrating sustainable development in curriculum. Knight and Parker (2021) studied the ways how interventions affect performance: Garcia-Melgar et.al (2021) carried a comparison of mentors and mentees experiences of a drop in programme. Waters et.al (2021) studied the pathways from socioeconomic status to early academic achievement in terms of the role of specific executive functions. In view of the above studies referred to understand the importance of intervention, the present study endorses the personalization of the education to make it more impactful and purposeful.

METHODOLOGY

Methodology is the key aspect to ensure that the data presented has been well collected and analysed throughout the research process. The entire research project depends upon the materials and methods sample and population. The research study in hand was conducted on a sample of 1096 male and female students studying in 5th and 6th grade in the rural and urban sectors. The parameters in the study consisted of intelligence quotient, focus factor, decision making ability and creative quotient among the respondents. The respondents were divided into two groups intervention was given to the respondents in the experimental to whereas respondents and control group for not given any intervention. The intervention was given in the form of personalized digital platforms to the respondents in the experimental group to develop and ecosystem of customised and personalized education based on their learning styles and strengths. Prior to the intervention, a pre assessment was conducted for all respondents. Another assessment was conducted in the mid-way and eventually, a post assessment was administered on all respondents, although the intervention was solely facilitated for experimental group. The data were collected and analysed to find the desired facts, if the case be. The study was purely an unbiased one with an initial taken up null hypothesis to refrain from subjective bias. The assessments and the intervention programme was pre-designed through an expert educational indulgence. Cluster sampling was followed to ensure reliable representation of population. Digital mode was taken-up for the entire programme.

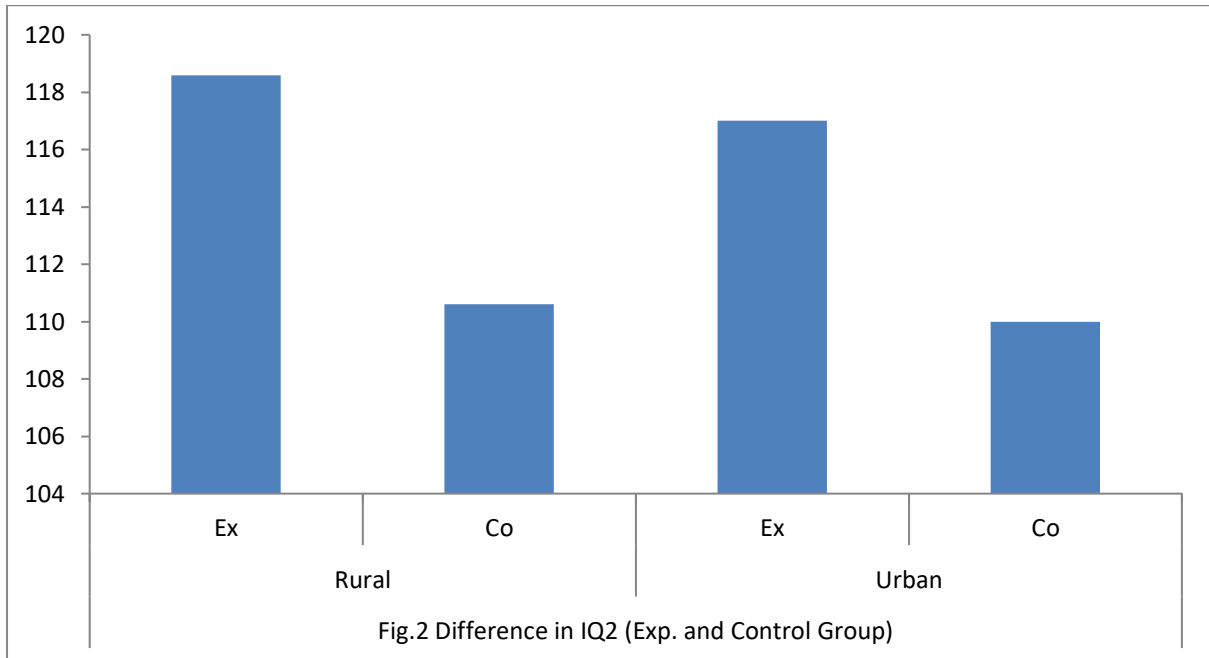
RESULT AND DISCUSSION

After collecting the relevant data it becomes very important to analyse it present it in the form of legible tables, charts, graphs and text. Presentation of data should be comprehensive but lucid. An attempt has been made to clearly differentiate between the analysis of experimental and control groups in the present study.

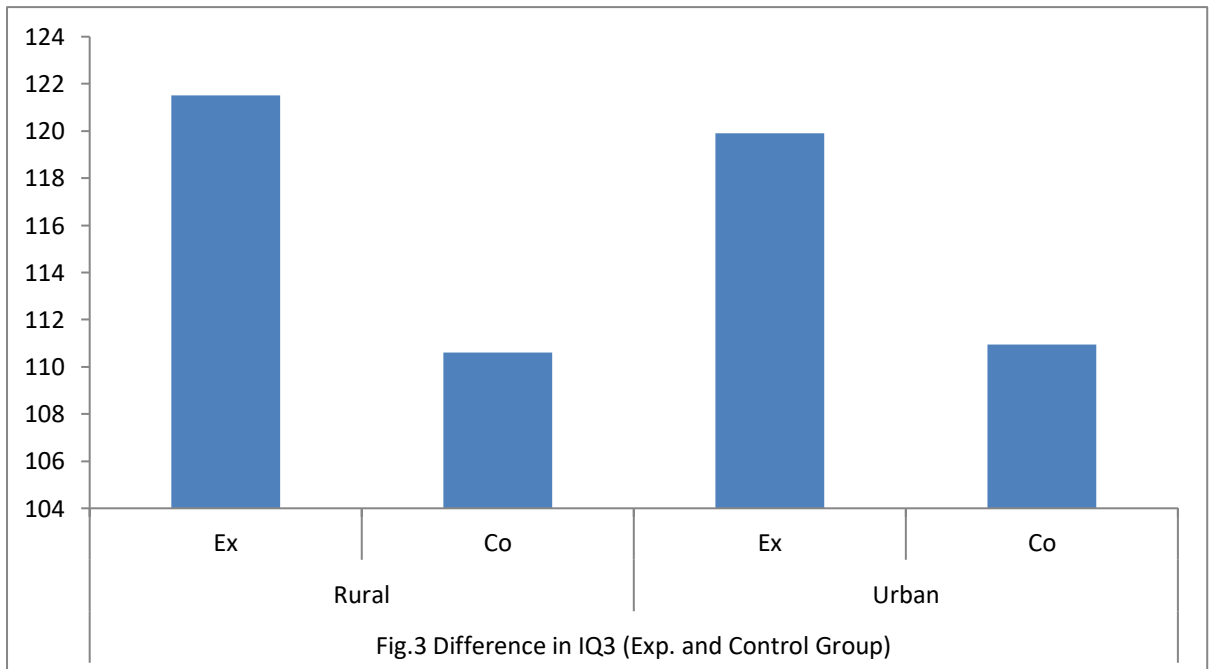


It can be observed clearly from figure 1 that in the rural sector, the average intelligence quotient of the respondents in experimental group was 110.56 at the initial phase. In contrast, in case of respondents in control group, this figure was 110.59. In the same figure, it is visible that the intelligence quotient of the respondents in experimental group was 110 at this stage. In contrast, in case of respondents in control group, this figure was 110.9.

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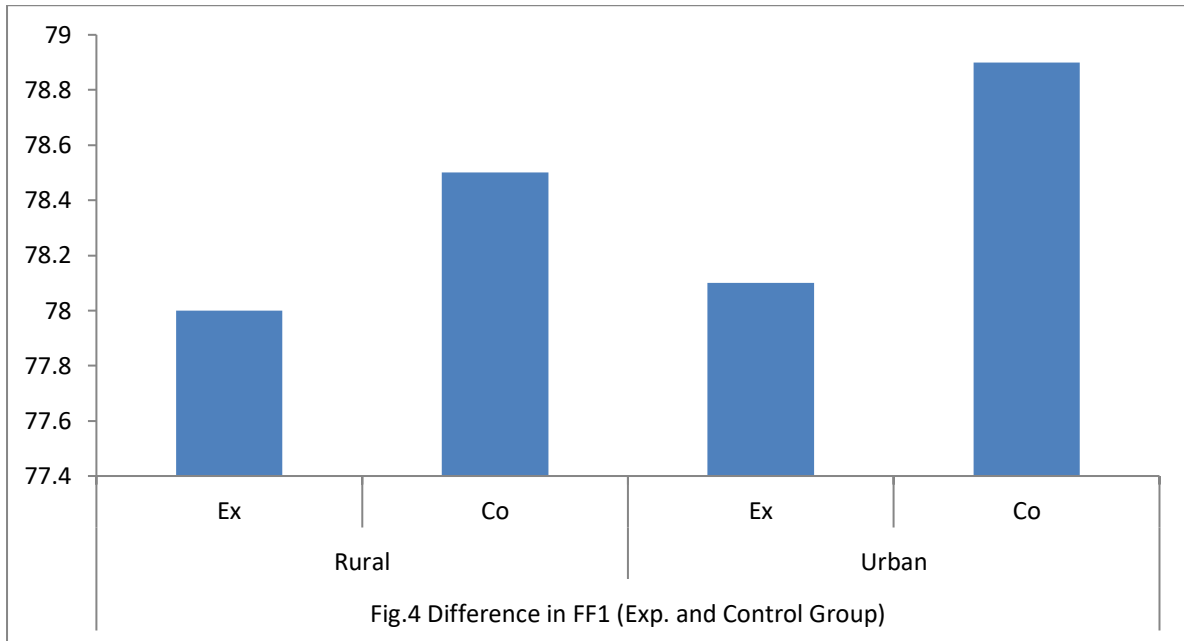


It can be observed clearly from figure 2 that in the rural sector, the average intelligence quotient of the respondents in experimental group was 118.59 at the mid phase. In contrast, in case of respondents in control group, this figure was 110.61. In the same figure, it is visible that the intelligence quotient of the respondents in experimental group was 117 at this stage. In contrast, in case of respondents in control group, this figure was 110.

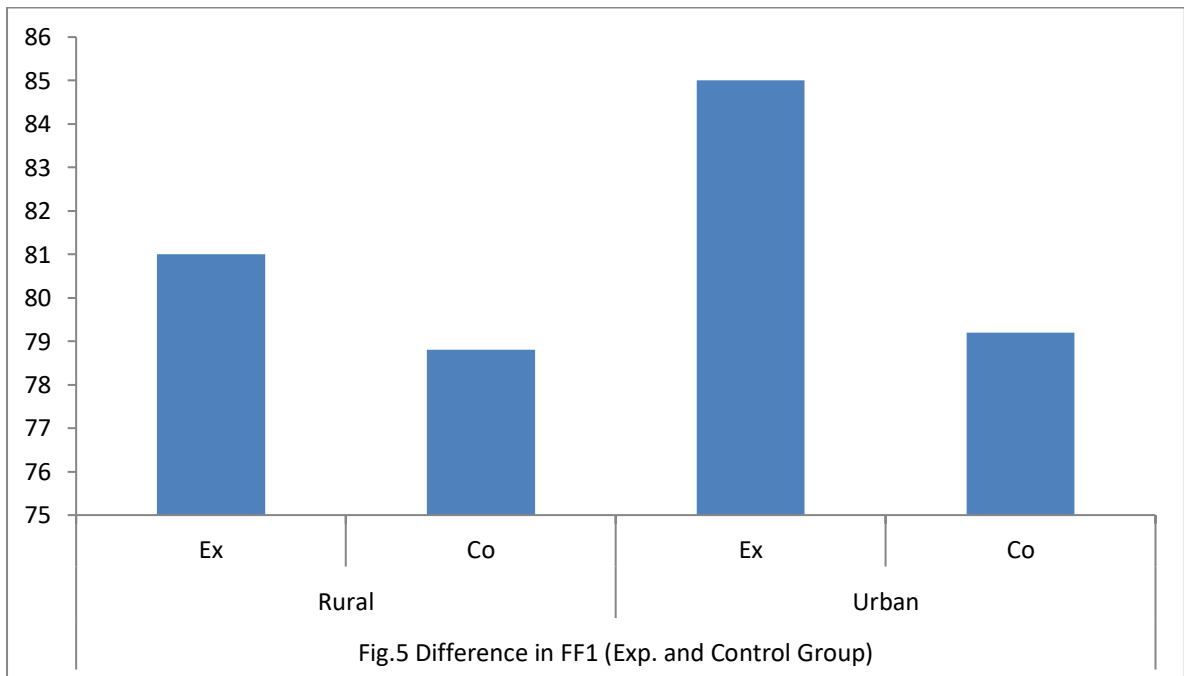


It can be observed clearly from figure 3 that in the rural sector, the average intelligence quotient of the respondents in experimental group was 121.5 at the final phase. In contrast, in case of respondents in control group, this figure was 110.6. In the same figure, it is visible that the intelligence quotient of the respondents in experimental group was 119.9 at this stage. In contrast, in case of respondents in control group, this figure was 110.95.

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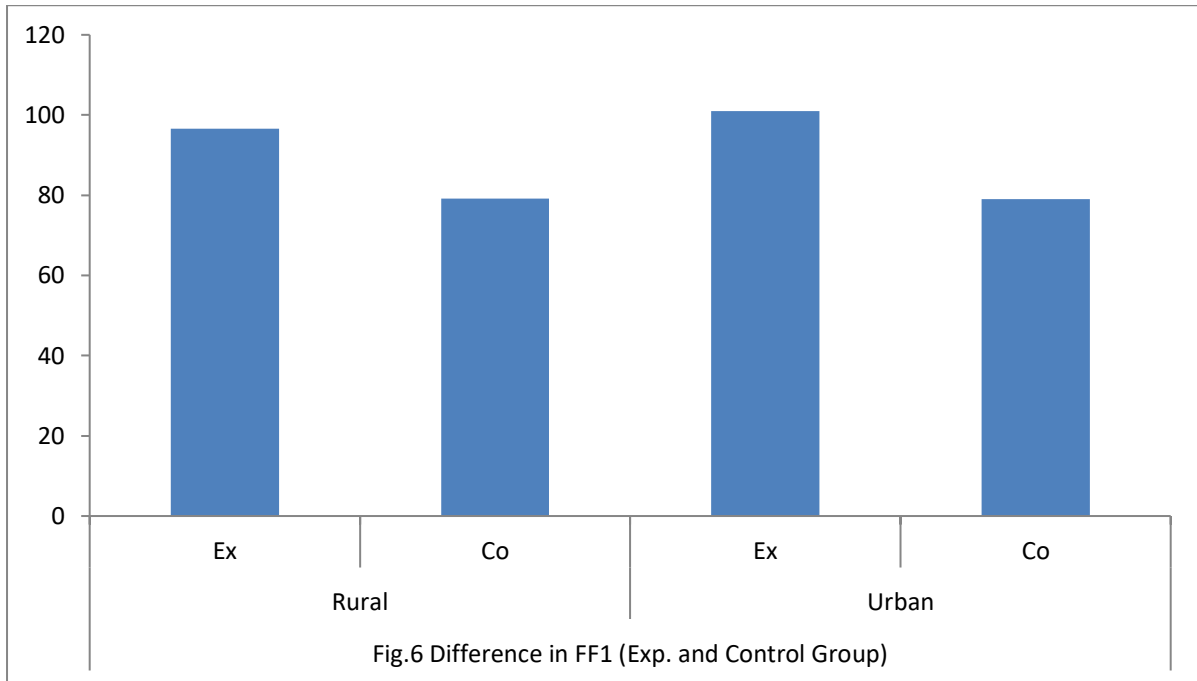


It can be observed clearly from figure 4 that in the rural sector, the average focus factor of the respondents in experimental group was 78 at the initial phase. In contrast, in case of respondents in control group, this figure was 78.5. In the same figure, it is visible that the focus factor of the respondents in experimental group was 78.1 at this stage. In contrast, in case of respondents in control group, this figure was 78.9.

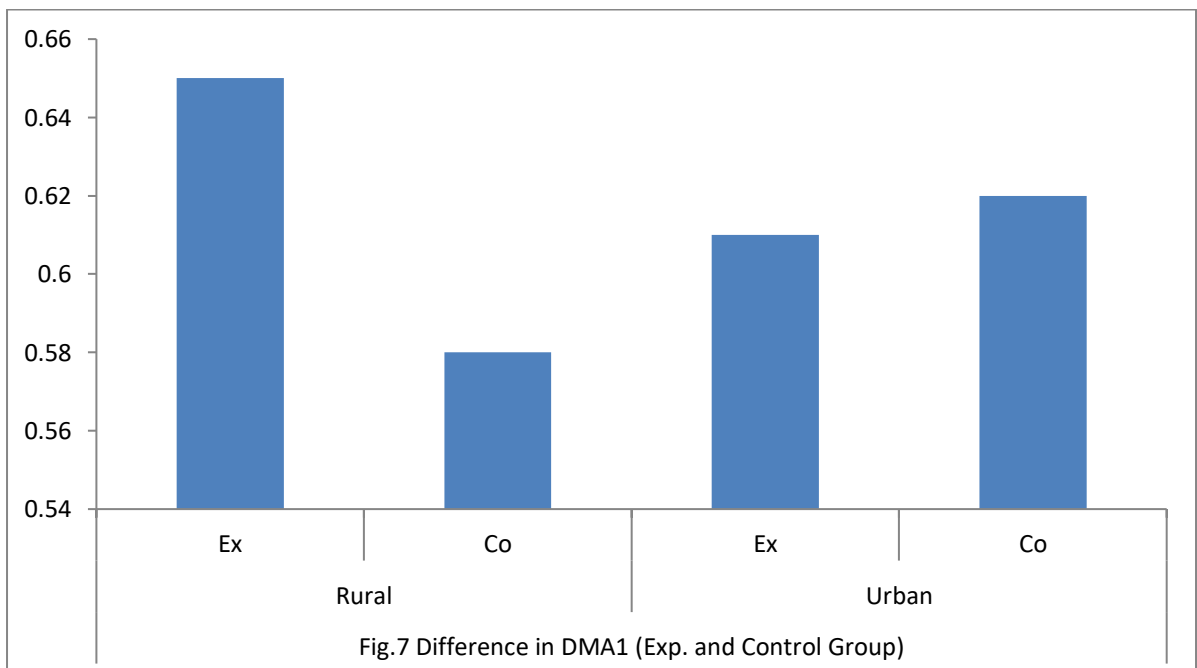


It can be observed clearly from figure 5 that in the rural sector, the average focus factor of the respondents in experimental group was 81 at the mid phase. In contrast, in case of respondents in control group, this figure was 78.8. In the same figure, it is visible that the focus factor of the respondents in experimental group was 85 at this stage. In contrast, in case of respondents in control group, this figure was 79.2.

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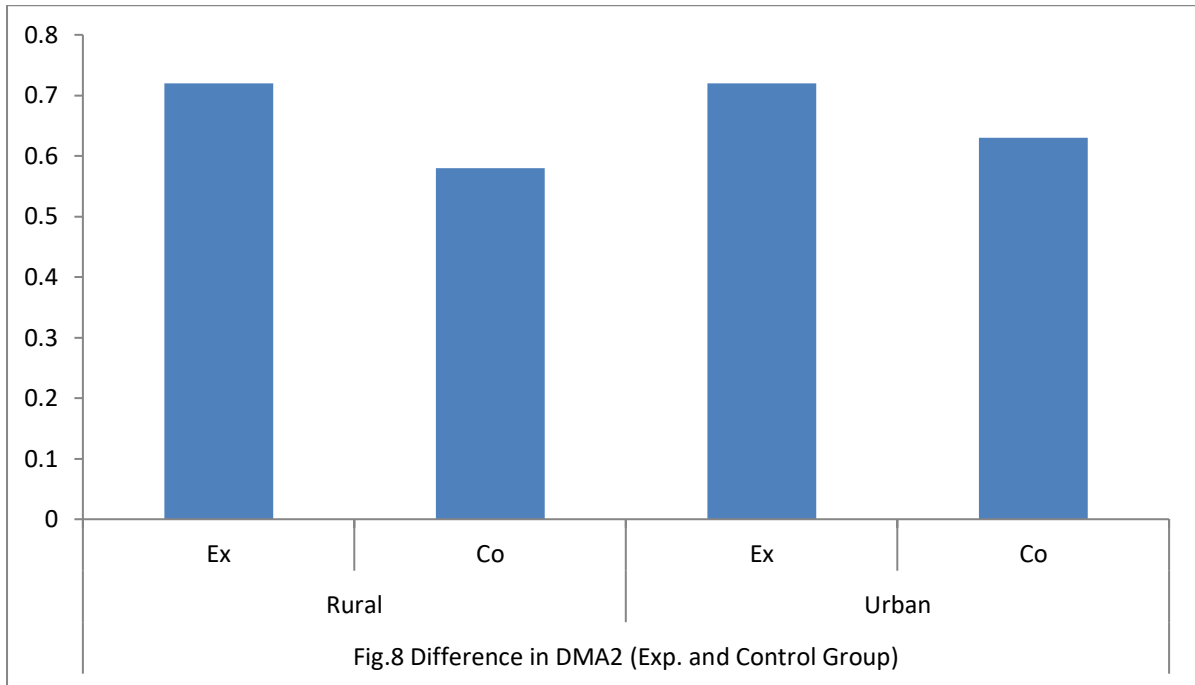


It can be observed clearly from figure 6 that in the rural sector, the average focus factor of the respondents in experimental group was 96.55 at the final phase. In contrast, in case of respondents in control group, this figure was 79.1. In the same figure, it is visible that the focus factor of the respondents in experimental group was 101 at this stage. In contrast, in case of respondents in control group, this figure was 79.

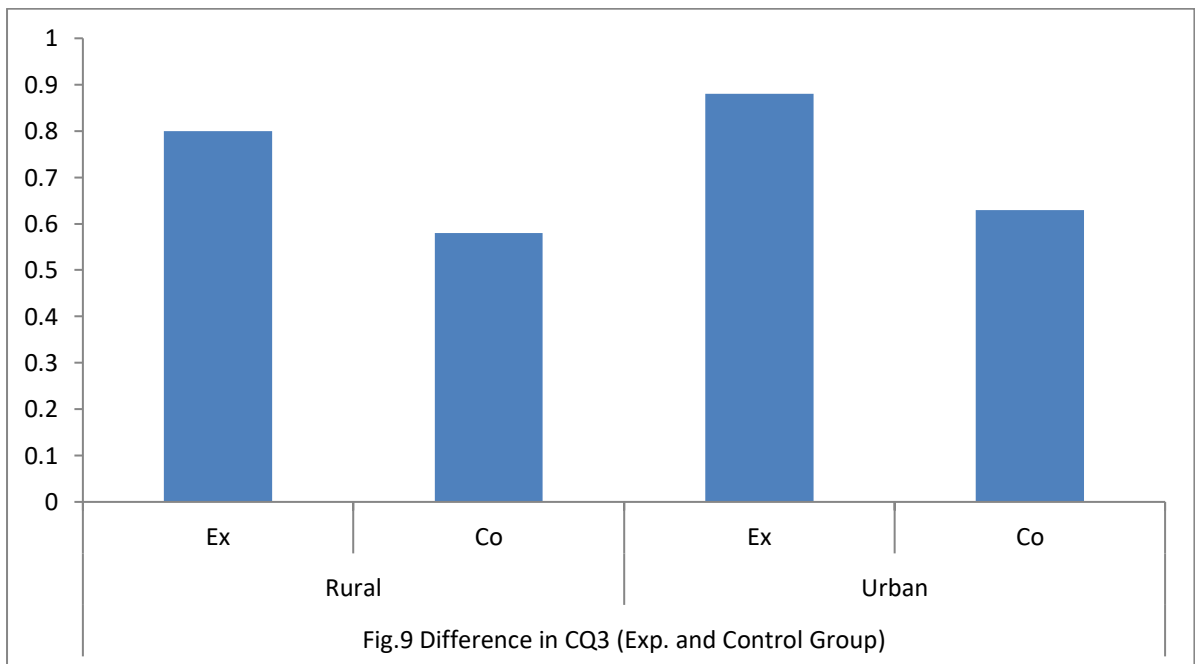


It can be observed clearly from figure 7 that in the rural sector, the average decision making ability of the respondents in experimental group was 0.65 at the initial phase. In contrast, in case of respondents in control group, this figure was 0.58. In the same figure, it is visible that the decision-making ability of the respondents in experimental group was 0.61 at this stage. In contrast, in case of respondents in control group, this figure was 0.62.

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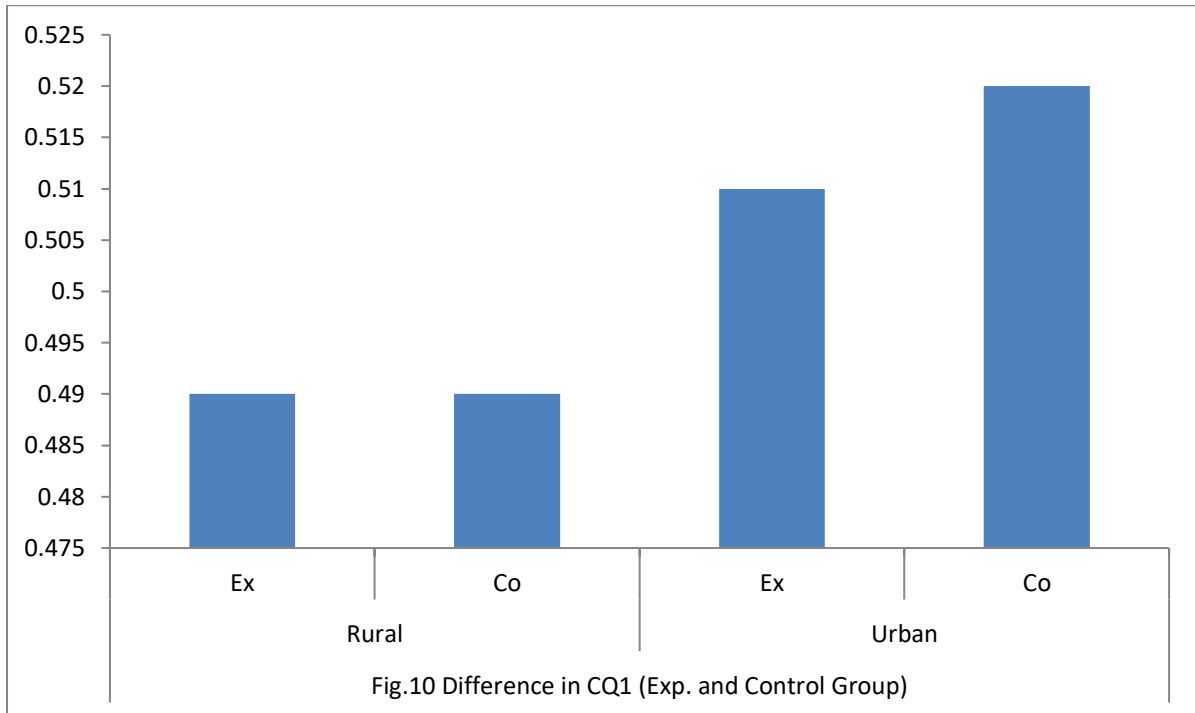


It can be observed clearly from figure 8 that in the rural sector, the average decision making ability of the respondents in experimental group was 0.72 at the mid phase. In contrast, in case of respondents in control group, this figure was 0.58. In the same figure, it is visible that the decision making ability of the respondents in experimental group was 0.72 at this stage. In contrast, in case of respondents in control group, this figure was 0.63.

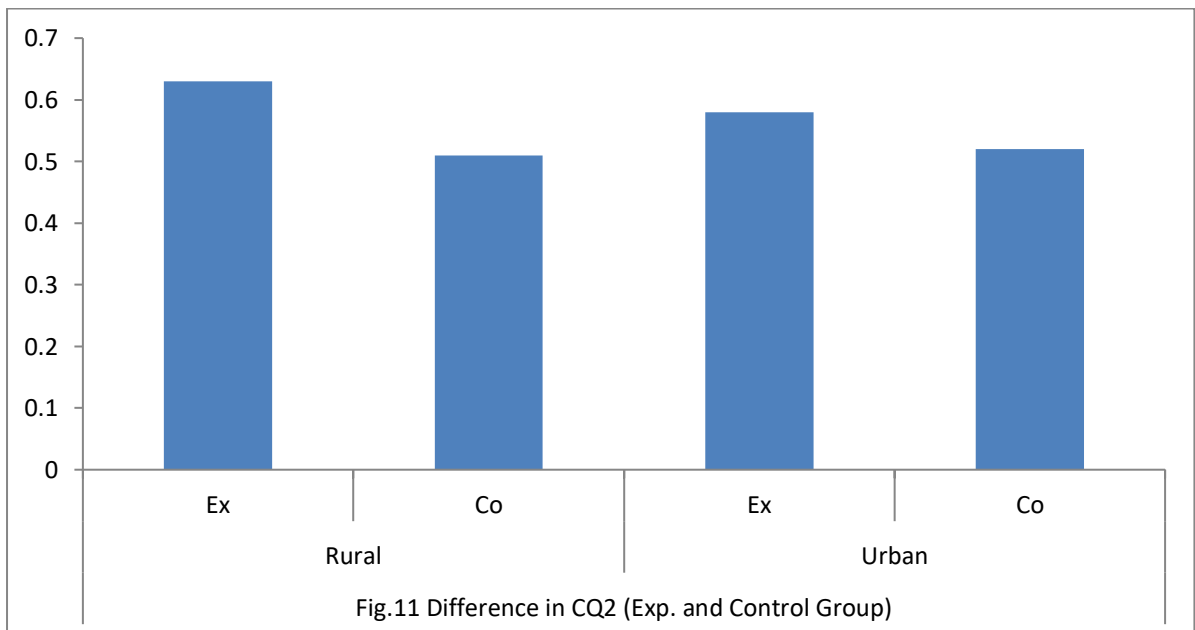


It can be observed clearly from figure 9 that in the rural sector, the average decision making ability of the respondents in experimental group was 0.80 at the final phase. In contrast, in case of respondents in control group, this figure was 0.58. In the same figure, it is visible that the decision making ability of the respondents in experimental group was 0.88 at this stage. In contrast, in case of respondents in control group, this figure was 0.63.

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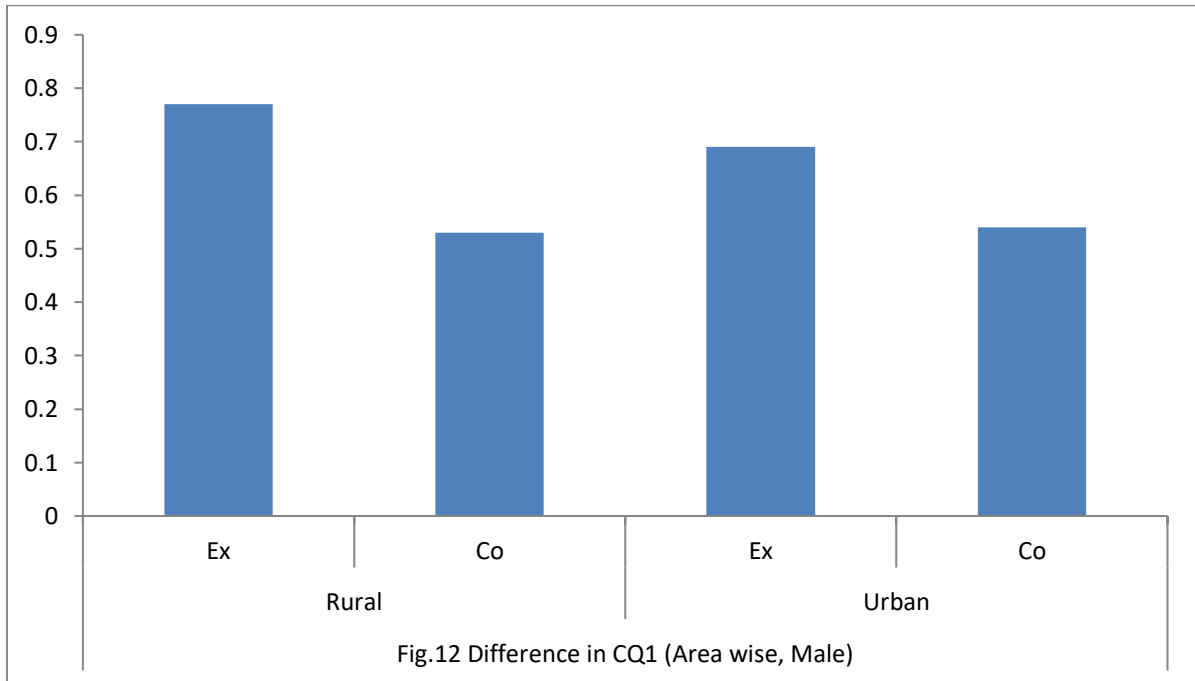


It can be observed clearly from figure 10 that in the rural sector, the average creative quotient of the respondents in experimental group was 0.49 at the initial phase. In contrast, in case of respondents in control group, this figure was 0.49. In the same figure, it is visible that the creative quotient of the respondents in experimental group was 0.51 at this stage. In contrast, in case of respondents in control group, this figure was 0.52.

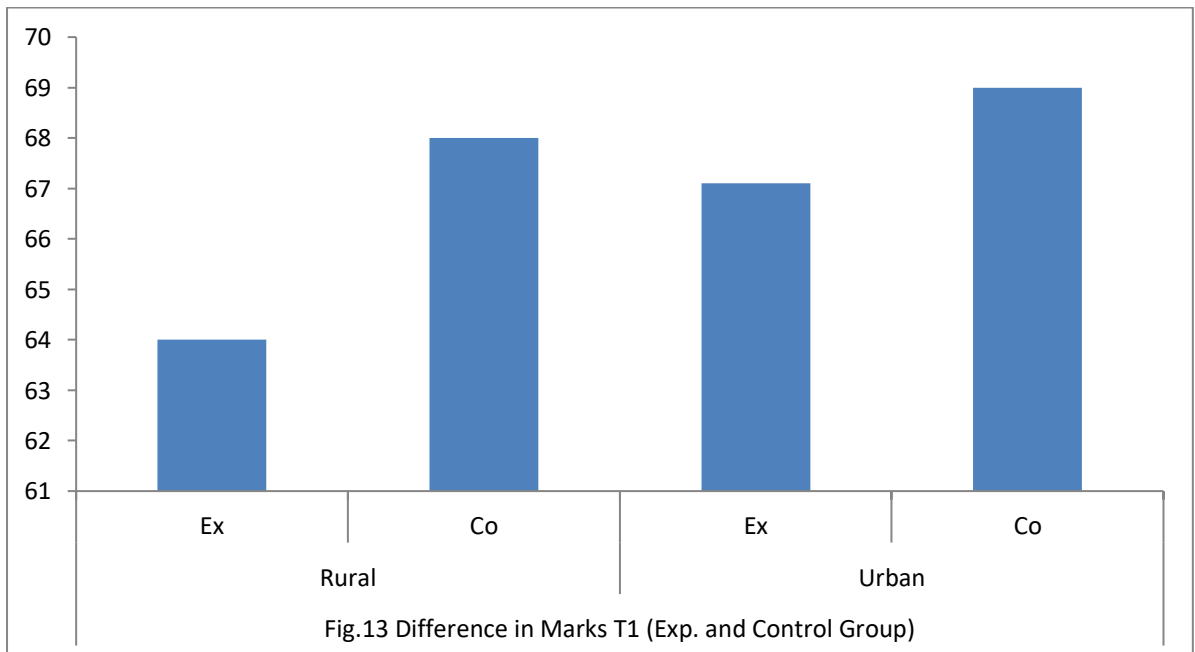


It can be observed clearly from figure 11 that in the rural sector, the average creative quotient of the respondents in experimental group was 0.63 at the mid phase. In contrast, in case of respondents in control group, this figure was 0.51. In the same figure, it is visible that the creative quotient of the respondents in experimental group was 0.58 at this stage. In contrast, in case of respondents in control group, this figure was 0.52.

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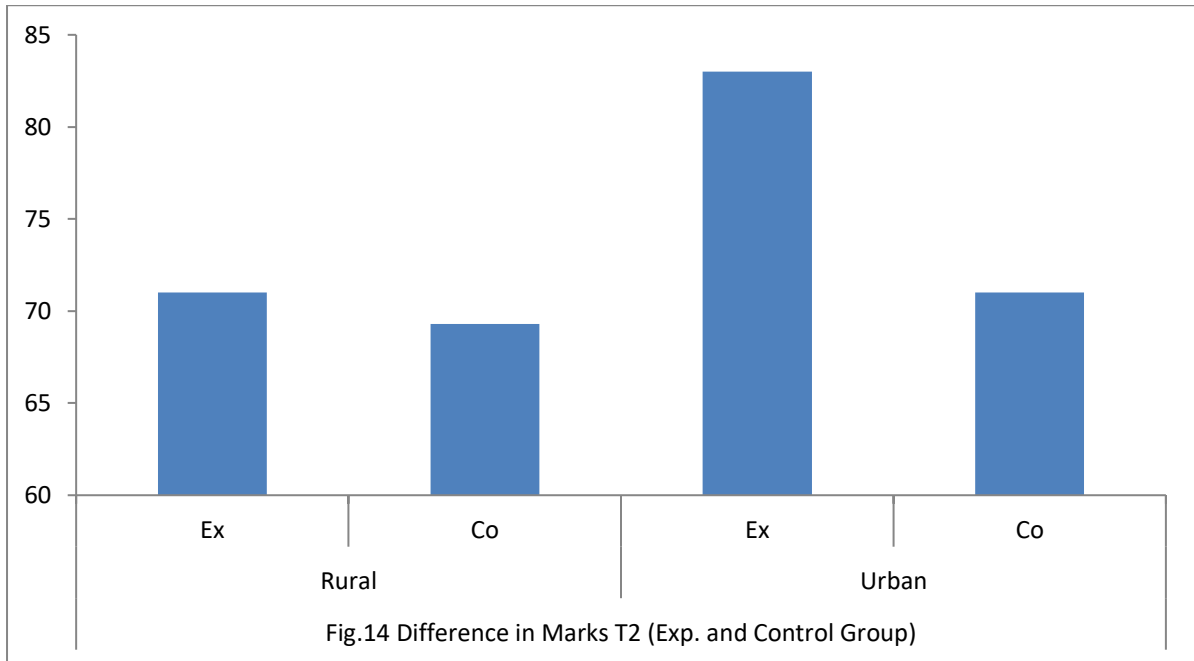


It can be observed clearly from figure 12 that in the rural sector, the average creative quotient of the respondents in experimental group was 0.77 at the final phase. In contrast, in case of respondents in control group, this figure was 0.53. In the same figure, it is visible that the creative quotient of the respondents in experimental group was 0.69 at this stage. In contrast, in case of respondents in control group, this figure was 0.54.

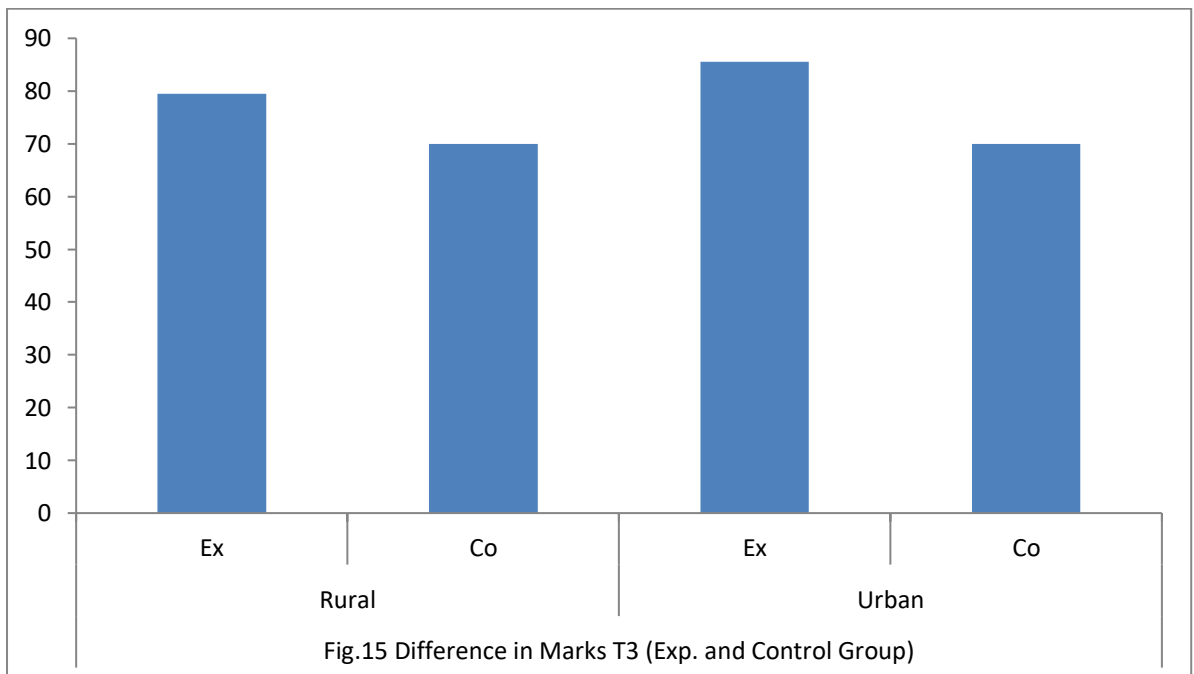


It can be observed clearly from figure 13 that in the rural sector, the average marks in test of the respondents in experimental group were 64 at the initial phase. In contrast, in case of respondents in control group, this figure was 68. In the same figure, it is visible that the marks in test of the respondents in experimental group were 67.1 at this stage. In contrast, in case of respondents in control group, this figure was 69.

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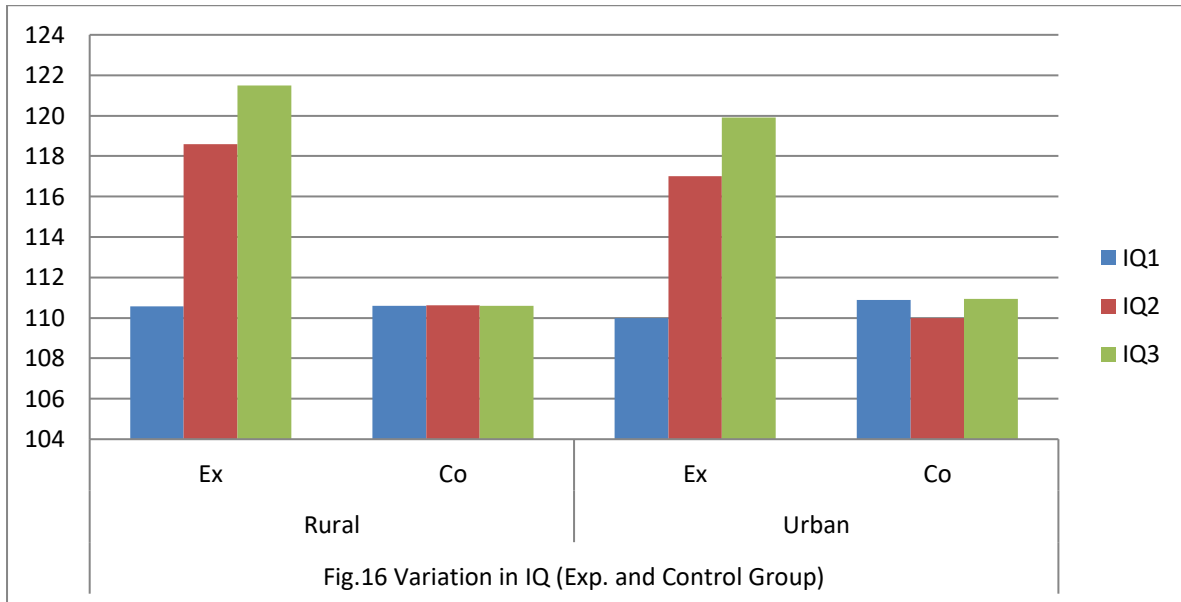


It can be observed clearly from figure 14 that in the rural sector, the average marks in test of the respondents in experimental group were 71 at the mid phase. In contrast, in case of respondents in control group, this figure was 69.3. In the same figure, it is visible that the marks in test of the respondents in experimental group were 83 at this stage. In contrast, in case of respondents in control group, this figure was 71.

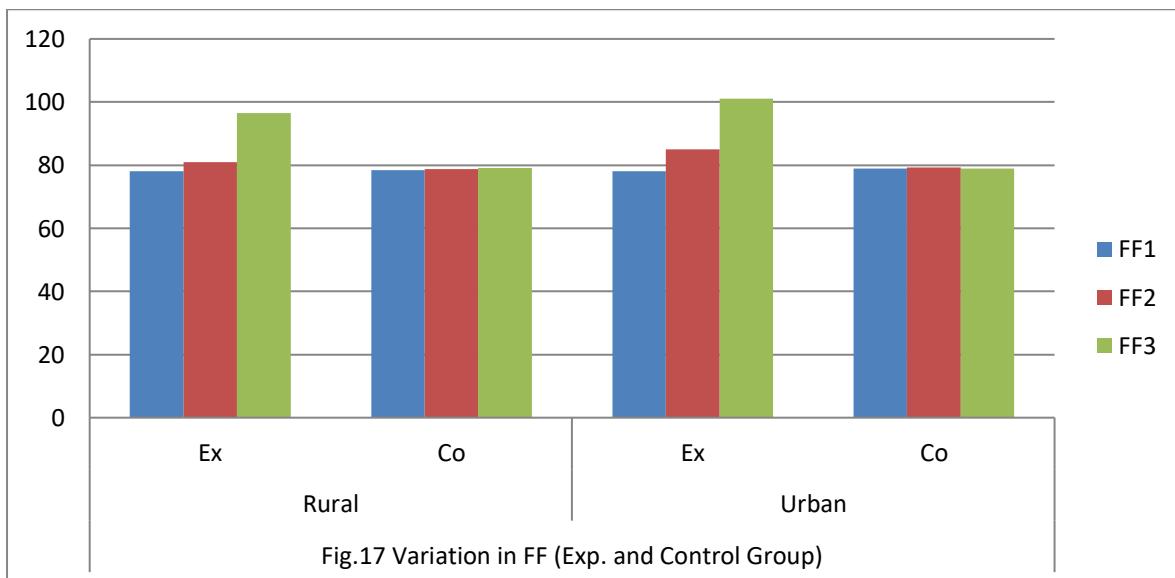


It can be observed clearly from figure 15 that in the rural sector, the average marks in test of the respondents in experimental group were 79.5 at the final phase. In contrast, in case of respondents in control group, this figure was 70. In the same figure, it is visible that the marks in test of the respondents in experimental group were 85.5 at this stage. In contrast, in case of respondents in control group, this figure was 70.

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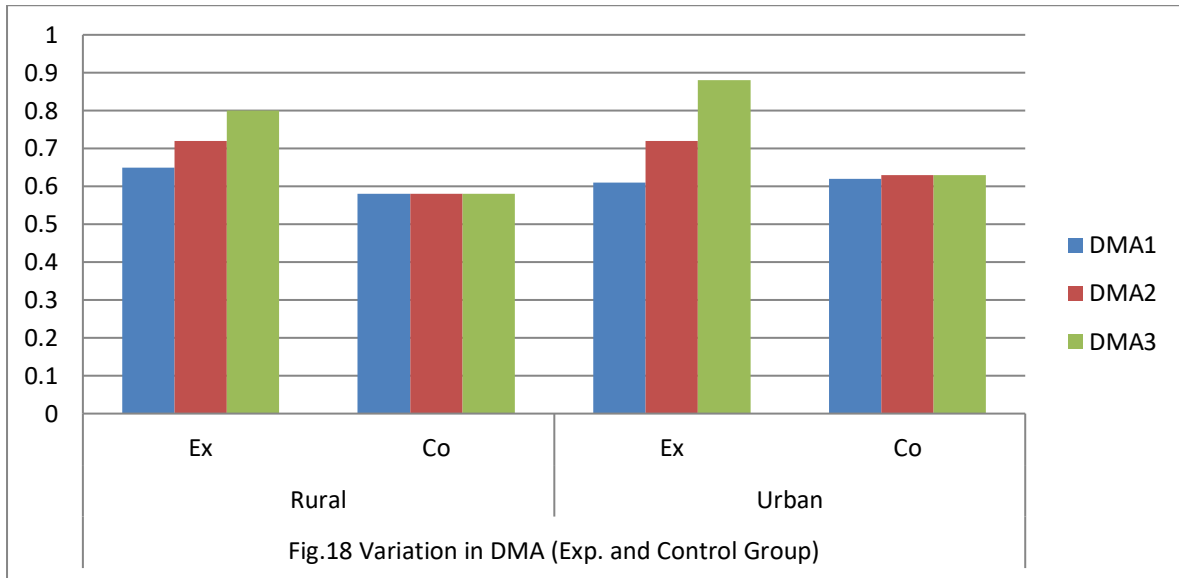


Cumulatively, it can be understood that the intelligence quotient of respondents in experimental group of rural areas rose from 110.56 to 121.5 in a period of 12 months. In case of their control group counterparts, this figure was initially 110.59 which later came out to be 110.6 after a period of 12 months. It can be understood that the intelligence quotient of respondents in experimental group of urban areas rose from 110 to 119.9 in a period of 12 months. In case of their control group counterparts, this figure was initially 110.9 which later came out to be 110.95 after a period of 12 months.

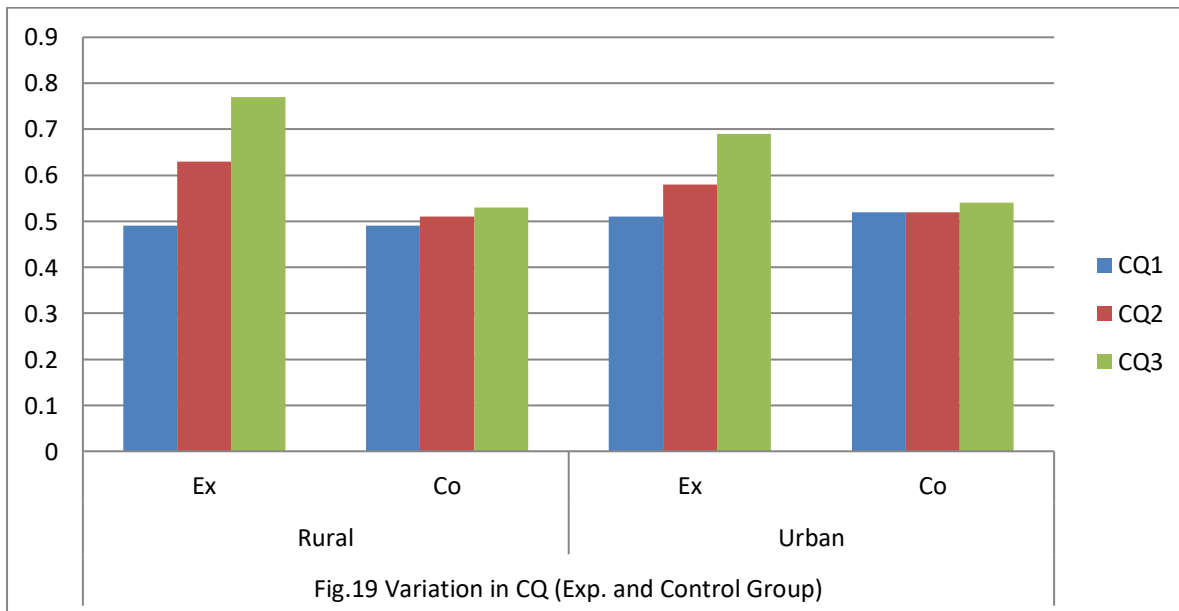


Further, it can be understood that the focus factor of respondents in experimental group of rural areas rose from 78 to 96.55 in a period of 12 months. In case of their control group counterparts, this figure was initially 78.5 which later came out to be 79.1 after a period of 12 months. It can be understood that the focus factor of respondents in experimental group of urban areas rose from 78.1 to 101 in a period of 12 months. In case of their control group counterparts, this figure was initially 78.9 which later came out to be 79 after a period of 12 months.

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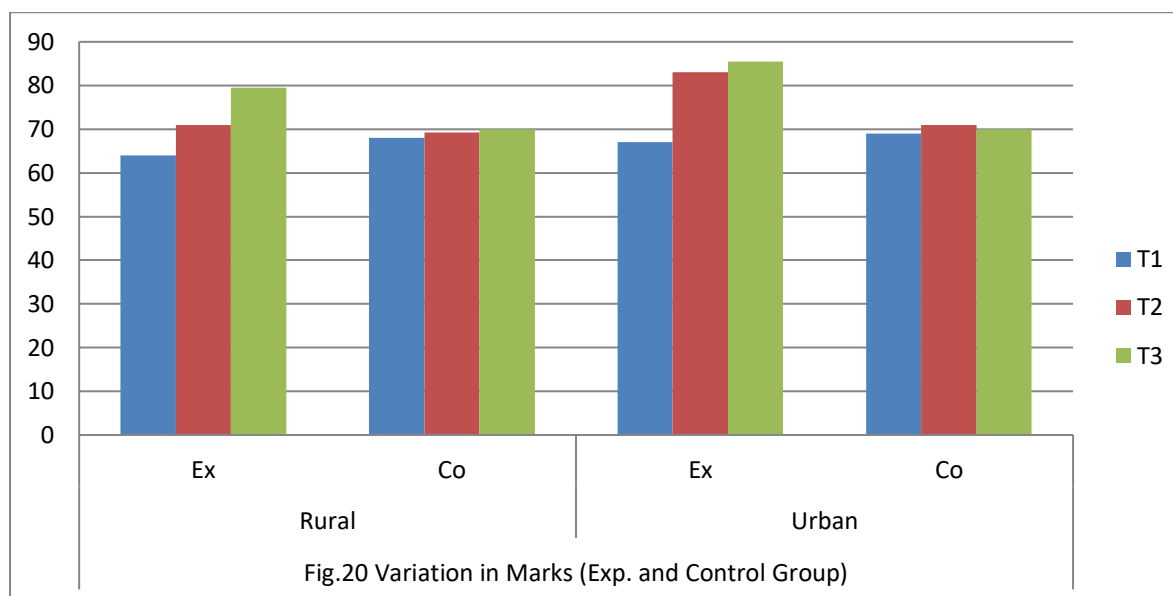


Moreover, it can be understood that the decision making ability of respondents in experimental group of rural areas rose from 0.65 to 0.8 in a period of 12 months. In case of their control group counterparts, this figure was initially 0.58 which later came out to be 0.58 after a period of 12 months. It can be understood that the decision making ability of respondents in experimental group of urban areas rose from 0.61 to 0.88 in a period of 12 months. In case of their control group counterparts, this figure was initially 0.62 which later came out to be 0.63 after a period of 12 months.



Moreover, it can be understood that the creative quotient of respondents in experimental group of rural areas rose from 0.49 to 0.77 in a period of 12 months. In case of their control group counterparts, this figure was initially 0.49 which later came out to be 0.53 after a period of 12 months. It can be understood that the creative quotient of respondents in experimental group of urban areas rose from 0.51 to 0.69 in a period of 12 months. In case of their control group counterparts, this figure was initially 0.52 which later came out to be 0.54 after a period of 12 months.

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Furthermore, it can be understood that the marks in test of respondents in experimental group of rural areas rose from 64 to 79.5 in a period of 12 months. In case of their control group counterparts, this figure was initially 68 which later came out to be 70 after a period of 12 months. It can be understood that the marks in test of respondents in experimental group of urban areas rose from 67.1 to 85.5 in a period of 12 months. In case of their control group counterparts, this figure was initially 69 which later came out to be 70 after a period of 12 months.

CONCLUSION

It is clear that the respondents in the experimental group excelled in cognitive development defining advancement in the same, whereas those their counterparts lagged behind.

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Conflict of Interest

The author declared no conflict of interest.

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