

# Lifestyle Modification Therapy For Optimism And Health-Related Behaviour In COVID-19 Positive Middle-Aged Adults: An Experimental Study

**Pooja Sonkar\***

\*Research Scholar, Govt. D.B. Girls P.G. College, Kalibadi, Raipur (C.G.),  
Email- [pooja123sonkar@gmail.com](mailto:pooja123sonkar@gmail.com)

**Dr. Smt. Nanda Gurwara\*\***

\*\*Professor, Department of Home Science, Food and Nutrition, Govt. D.B. Girls P.G. College,  
Kalibadi, Raipur (C.G.), Email- [nandagurwara@gmail.com](mailto:nandagurwara@gmail.com)

## Abstract

The challenging social situation arising due to the coronavirus outbreak leads to so many mental health issues. In this scenario, it was essential to boost the optimism in people because optimism denotes the positive side of mental health. Lifestyle has been known to bring about positive changes in psychological well-being. In this context, the present study was planned to assess the impact of lifestyle modification counselling on the optimism and health-related behaviour of COVID-19 positive middle aged adults. To conduct the study 192 COVID-19-positive subjects from the Raipur District of Chhattisgarh were selected as a sample which includes both males and females. The age range of the sample was 40-60 years. The selected subjects were divided into two groups i.e. experimental and control groups with an equal number of subjects randomly assigned. Lifestyle counselling was given for three months to the subjects of the experimental group. The health-related behaviour of the subjects was assessed with the help of the FANTASTIC Lifestyle Checklist while optimism was assessed through a scale prepared by Ajwani (2002). The data on both measures were collected before the start of the counselling process, after 1 month, after 2 months and after 03 months (post-test). Results revealed that the optimism level in middle-aged COVID-19 positive adults increased significantly after three months of lifestyle modification counselling while the optimism level in middle-aged COVID-19 positive adults from the control group was found to be significantly decreased after three months of the study period. After three months of lifestyle modification counselling, a significant enhancement was observed in the health-related behaviour of middle-aged adults who tested positive for the COVID-19 virus during the Pandemic. It was concluded that the lifestyle modification counselling of three months proved effective in enhancing the optimism and health-related behaviour of middle-aged COVID-19 positive subjects during the pandemic.

**Keywords:** COVID-19, Optimism, Lifestyle counselling, health-related behaviour

## INTRODUCTION:

The menace of the COVID-19 pandemic has subsided to a great extent but it is again resurfacing in some parts of the world and looking at the previous history the fourth wave of the deadly virus can not be ruled out. The pandemic is not only detrimental to overall growth and development but is also a major cause of mental health issues. A study conducted by Brooks et al. (2020) reported that Covid-19 comes with mental stress that causes depression and anxiety. So it is necessary to enhance optimism in an individual so that he can fight against negative life outcomes. To prevent the magnitude of mortality due to coronavirus, governments all around the globe have imposed strict lockdowns. Even after the ease of restrictions, there is fear among people regarding their future. In

this scenario, it was essential to boost the optimism in people because optimism denotes the positive side of mental health. Scheier and Carver (2015) defined optimism as a ray of hope towards favourable events in near future. It has been reported that the status of physical activity, use of tobacco and cigarettes and other significant health behaviour are important markers of a greater level of outcomes. These facts are justified by Boehm et al. (2013) and Van de Rest et al. (2010) in their studies. Hence this study was planned to assess the impact of three months of lifestyle modification counselling on optimism in COVID-19 positive middle aged adults.

## **REVIEW OF LITERATURE**

Martinez et al. (2006) in their study found that optimistic people do not complain about trivial matters.

Aikaterini et al. (2015) reported that good dietary habits embedded in lifestyle promote optimism.

Nes (2016) reported that optimism is strongly correlated with cognitive skills such as problem solving abilities.

Qiu et al. (2020) in their study reported that during COVID-19 pandemic mental health issues have increased manifold.

Jovancevic and Milicevic (2020) in a study found that preventive measures are key to controlling coronavirus but it needs an optimistic attitude to implement these measures.

Arslan et al. (2020) reported that coronavirus-related stress can harm optimism/pessimism and various psychological problems.

Sonkar and Gurwara (2021) evaluated the optimism of COVID-19 families and non-COVID-19 families during the pandemic. concluded that COVID-19 families have less optimism than non-COVID-19 families and should be treated with psychiatric counseling and lifestyle adjustments.

Parveen and Gurwara (2023) they found that Lifestyle counselling improves health-related behaviours like diet, exercise, and limiting alcohol and tobacco, which helps manage weight and maintain SGOT and SGPT enzyme levels in male cirrhosis patients.

## **OBJECTIVES OF THE STUDY**

1. To assess the impact of three months of lifestyle modification counselling on optimism in COVID-19 positive middle-aged adults.
2. To assess the impact of three months of lifestyle modification counselling on health-related behaviour in COVID-19 positive middle-aged adults.

## **HYPOTHESIS**

It was hypothesized that the three months of lifestyle modification counselling will significantly enhance optimism in COVID-19 positive middle-aged adults.

It was also hypothesized that the three months of lifestyle modification counselling will significantly enhance health-related behaviour in COVID-19 positive middle-aged adults.

**TOOLS****Sample:**

To conduct the study 192 COVID-19-positive subjects from the Raipur District of Chhattisgarh were selected as a sample which includes both males and females. The age range of the sample was 40-60 years. The sample consists of subjects from diverse socio-economic backgrounds.

**Tools:**

The optimism in selected COVID-19 positive subjects was assessed through a scale standardized by Ajwani (2002). This scale has 20 items and the responses are collected through a Likert scale. A score of 5, 4, 3, 2, 1 is given to Completely Agree, Somewhat Agree, Uncertain, Somewhat Disagree and Complete Disagree depending on positive/negative worded items. The test-retest reliability coefficient of this scale is 0.69 and the statistically significant product-moment correlation coefficient denotes sound reliability and validity.

The health-related behaviour was mapped through the FANTASTIC LIFESTYLE ASSESSMENT CHECKLIST developed by Wilson, D., Department of Family Medicine. Several factors such as family, physical activity, nutrition-related facts, tobacco and alcohol use, sleep pattern, personality/temperament, insight and career are included in this highly reliable and valid checklist.

**Procedure:**

192 middle-aged COVID-19 positive adults were selected from Raipur city. The selected subjects were divided into two groups namely the experimental and control group with an equal number of subjects in said groups. The optimism scale and Fantastic Lifestyle checklist were administered to each subject. Lifestyle modification counselling for three months was given to subjects of the experimental group. Data was collected after 1 month, 2 months and 3 months since the beginning of the study period. After scoring the data was tabulated and Repeated Measures ANOVA was used as a statistical tool for data analysis.

**ANALYSIS OF DATA:**

**Table 1** Descriptive Statistics of Scores on Optimism for Covid-19 Positive Subjects of Experimental Group in Different Stages of Study Period

Stages	N	Optimism	
		Mean	S.D.
Pre-test	96	51.76	5.38
After 1 month	96	58.22	5.94
After 2 months	96	64.68	6.48
After 3 months	96	71.09	6.82
F=1509.68, p<.01			

**Table 2** Pairwise Comparisons of Mean Scores on Optimism in Different Stages of Study Period for Covid-19 Subjects of Experimental Group Least Significant Difference Test with Significance Level .05

Mean (I)	Mean (J)	Mean Difference (I-J)
Pre-test	After 1 month	-6.46*
	After 2 months	-12.92*
	After 3 months	-19.33*
After 1 month	After 2 months	-6.46*
	After 3 months	-12.87*
After 2 months	After 3 months	-6.41*

\* Significant at .05 level

Table 1 reveals a significant difference in mean score for optimism in COVID-19 subjects during different stages of the study period. The repeated measures ANOVA gives a statistically significant F-ratio of 1509.68. Therefore it can be said that optimism in COVID-19 subjects placed in the experimental group differ in four stages of the study period namely pre-test (Mean=51.76), after 01 months (Mean=58.22), after 02 months (Mean = 64.68) and post-test i.e. after 03 months (Mean=71.09). The data analysis shown in table 2 is indicative of the scientific fact that three months of individual counselling for lifestyle changes saw a significant increase in the optimism level of middle-aged adults who tested positive for the COVID-19 virus during the Pandemic.

Table 3 shows Repeated Measure ANOVA statistics for scores on the optimism scale for middle-aged adults who tested positive for COVID-19 during the pandemic placed in the control group.

**Table 3** Descriptive Statistics of Scores on Optimism for Covid-19 Subjects of Control Group in Different Stages of Study Period

Stages	N	Optimism	
		Mean	S.D.
Pre-test	96	57.01	5.73
After 1 month	96	56.97	5.67
After 2 months	96	56.61	5.84
After 3 months	96	56.77	5.59
F=3.80, p<.01			

**Table 4** Pairwise Comparisons of Mean Scores on Optimism for Covid-19 Subjects of the Control Group in Different Stages of the Study Least Significant Difference Test with Significance Level .05

Mean (I)	Mean (J)	Mean Difference (I-J)
Pre-test	After 1 month	.04
	After 2 months	.40*
	After 3 months	.24
After 1 month	After 2 months	.36*
	After 3 months	.20*
After 2 months	After 3 months	-.16

\* Significant at .05 level

Table 3 reveals a significant difference in the mean score for optimism in COVID-19 subjects of the control group during different stages of the study period. The repeated measures ANOVA gives a statistically significant F-ratio of 3.80. Therefore it can be said that optimism in COVID-19 subjects placed in the control group differ in four stages of the study period namely pre-test (Mean=57.01), after 01 month (Mean=56.97), after 02 months (Mean = 56.61) and post-test i.e. after 03 months (Mean=56.77). An important thing about the mean score is that the mean score on optimism decreased after three months of the study period as compared to pre-test optimism scores of COVID-19 positive subjects of control group. The data analysis shown in table 4 is indicative of the scientific fact that during three months of the study period optimism level of middle-aged adults in the control group who tested positive for the COVID-19 virus during the Pandemic showed significant variation but it got decreased.

**Table 5** Comparison of Gain Score on Optimism Scale of Covid-19 subjects between Experimental and Control Group

Optimism	Experimental Group (N=96)		Control Group (N=96)		't'	Sig.
	Mean	S.D.	Mean	S.D.		
Gain Score	19.33	4.50	-0.24	1.10	41.37	p<.01

t(df=190) at 0.05 = 1.97, t(df=298) at 0.01 = 2.60

The pre-test mean score for COVID-19 positive subjects of the experimental group was 51.76 and the post-test mean score was 71.09. It means that the mean gain/increase was 19.33. The pre-test mean score for COVID-19 positive subjects of the control group was 57.01 and the post-test mean score was 56.77. It means that the mean decrease was -0.24. The t=41.37 statistically shows significance at .01 level and confirms that after receiving three months of individual counselling the optimism in COVID-19 positive subjects of the experimental group was enhanced significantly as compared to COVID-19 positive subjects of the control group.

Tables 6, 7, 8, 9 and 10 analyse lifestyle changes in COVID-19 positive subjects during three months of the study period are given.

**Table 6** Descriptive Statistics of Scores on Fantastic Lifestyle Checklist for Covid-19 Subjects of Experimental Group in Different Stages of Study Period

Stages	N	Lifestyle	
		Mean	S.D.
Pre-test	96	49.10	4.14
After 1 month	96	54.79	3.93
After 2 months	96	60.42	4.31
After 3 months	96	66.70	4.70
F=1729.32, p<.01			

**Table 7** Pairwise Comparisons of Mean Scores on Fantastic Lifestyle Checklist in Different Stages of Study for Covid-19 Subjects of Experimental Group Least Significant Difference Test with Significance Level .05

Mean (I)	Mean (J)	Mean Difference (I-J)
Pre-test	After 1 month	-5.69*
	After 2 months	-11.32*
	After 3 months	-17.60*
After 1 month	After 2 months	-5.63*
	After 3 months	-11.91*
After 2 months	After 3 months	-6.28*

\* Significant at .05 level

Table 6 and 7 reveals a significant difference in mean score for lifestyle in COVID-19 subjects of the experimental group during four different stages of the study period. The repeated measures ANOVA gives a statistically significant F-ratio of 1729.32. Therefore it can be said that health-related lifestyle behaviour in COVID-19 subjects placed in the experimental group differ in four stages of the study period namely pre-test (Mean=49.10), after 01 month (Mean=54.79), after 02 months (Mean = 60.42) and post-test i.e. after 03 months (Mean=66.70). The data analysis shown in table 7 is indicative of the scientific fact that three months of individual counselling changes saw a

significant change towards a healthy lifestyle among subjects with COVID-19 virus history during the Pandemic.

**Table 8** Descriptive Statistics of Scores on Fantastic Lifestyle Checklist for Covid-19 Subjects of Control Group in Different Stages of Study Period

Stages	N	Lifestyle	
		Mean	S.D.
Pre-test	96	52.51	4.41
After 1 month	96	52.07	4.54
After 2 months	96	51.57	4.83
After 3 months	96	52.26	4.89
F=4.43, p<.01			

**Table 9** Pairwise Comparisons of Mean Scores on Lifestyle Checklist in Different Stages of Study for Covid-19 Subjects of Control Group Least Significant Difference Test with Significance Level .05

Mean (I)	Mean (J)	Mean Difference (I-J)
Pre-test	After 1 month	.44*
	After 2 months	.94*
	After 3 months	.25*
After 1 month	After 2 months	.50*
	After 3 months	-.19
After 2 months	After 3 months	-.69*

\* Significant at .05 level

Table 8 reveals a significant difference in mean score for lifestyle in COVID-19 subjects of the control group during different stages of the study period. The repeated measures ANOVA gives a statistically significant F-ratio of 4.43. Therefore it can be said that lifestyle measures in COVID-19 subjects placed in the control group differ in four stages of the study period namely pre-test (Mean=52.51), after 01 month (Mean=52.07), after 02 months (Mean = 51.57) and post-test i.e. after 03 months (Mean=52.26). An important thing about the mean score on lifestyle is that it decreased after three months of the study period as compared to pre-test scores.

**Table 10** Comparison of Gain Score on Lifestyle of COVID-19 subjects between Experimental and Control Group

Lifestyle	Experimental Group (N=96)		Control Group (N=96)		't'	Sig.
	Mean	S.D.	Mean	S.D.		
Gain Score	17.60	3.88	-0.25	3.17	2.77	p<.01

t(df=190) at 0.05 = 1.97, t(df=298) at 0.01 = 2.60

The pre-test mean score for COVID-19 positive subjects of the experimental group on the lifestyle checklist was 49.10 and the post-test mean score was 66.70. It means that the mean increase in score was 17.60. The pre-test mean score on the lifestyle checklist for COVID-19 positive subjects of the control group was 52.51 and the post-test mean score was 52.26. It means that the mean decrease was -0.25. The t=2.77 statistically shows significance at .01 level and confirms that after receiving three months of individual counselling the lifestyle-linked positive health behaviour in COVID-19 subjects of the experimental group was improved significantly. On the other hand, after three

months after the beginning of the study, the lifestyle of COVID-19 positive subjects of the control group get worse.

### **RESULT AND DISCUSSION :**

1. The optimism level in middle-aged COVID-19 positive adults was found to be significantly increased after three months of lifestyle modification counselling.
2. The optimism level in middle-aged COVID-19 positive adults from the control group was found to be significantly decreased after three months of the study period.
3. A significant enhancement was observed in the health related behaviour of middle-aged adults who tested positive for the COVID-19 virus during the Pandemic after three months of lifestyle modification counselling.
4. A significant decrease was observed in the health-related behaviour of middle-aged adults in the control group who tested positive for the COVID-19 virus after three months of the study period.

Numerous studies have been conducted in the past to explore the relationship between lifestyle and optimism. It has been reported that the status of physical activity, use of tobacco and cigarettes and other significant health behaviour are important markers of a greater level of outcomes. These facts are justified by Boehm et al. (2013) and Van de Rest et al. (2010) in their studies. Researchers have also documented the beneficial effect of optimism on mental health. A study conducted by Vickers and Vogeltanz (2010) reported that optimism is one of the processes to rehab mental health. Since mental health also includes stress tolerance, it can be assumed that optimism leads to better stress tolerance. Optimism is said to be associated with a positive image of oneself through which a person evaluates life events (Carver and Scheier, 2001). Hence the result reiterates the previous findings about the association between lifestyle and optimism even during difficult times such as pandemic.

### **CONCLUSION:**

1. The lifestyle modification counselling of three months was proved effective in enhancing the optimism in middle-aged COVID-19 positive subjects during the pandemic.
2. The lifestyle modification counselling of three months was proved effective in enhancing health-related behaviour in middle-aged COVID-19 positive subjects during the pandemic.

Summarily it can be concluded that three months of lifestyle modification counselling promoted optimism in COVID-19 positive middle-aged subjects. It can also be concluded that three months of lifestyle modification counselling promoted health related behaviour in COVID-19 positive middle-aged subjects.

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