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IMPACT OF VARIED WALKING TRAINING ON PHYSICAL, PHYSIOLOGICAL, AND PSYCHOLOGICAL VARIABLES AMONG REGULAR WALKERS

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ABSTRACT
The present study aimed to examine the impact of varied walking training on physical, physiological, and psychological variables among regular walkers. Methodology: To achieve this purpose, forty (N = 40) men from Coimbatore District, Tamil Nadu, were selected as subjects for the study. The ages of the subjects ranged from 30 to 40 years. The forty subjects were divided into two groups, each consisting of twenty (n = 20) participants: Experimental Group I, which underwent Varied Walking Training (VWT), and the Control Group, whose members did not participate in any training other than their routine activities. The experimental group participated in the Varied Walking Training Program (VWTP) five days per week for a period of twelve weeks. Results: The data collected from the two groups before and after the training period were statistically analyzed using a dependent t-test. The mean gains recorded by the groups in the pre-test and post-test were tested for significance using a paired t-test to determine whether the training program produced significant improvements in the selected variables after twelve weeks. The level of significance was set at 0.05. The results indicated that the experimental group showed significant improvement in all measured variables at the end of the twelve-week training period. Conclusion: The experimental group demonstrated a highly significant difference compared with the control group. It was concluded that the Varied Walking Training Program (VWTP) effectively enhances physical, physiological, and psychological variables among regular walkers.

KEYWORDS: *Varied Walking Training, physical, physiological, Psychology, Muscular Strength and Endurance, leg explosive power, Resting Pulse Rate, Stress.*

INTRODUCTION

Walking is one of the most common and accessible forms of physical activity practiced by people of all ages. It requires no special equipment and can be performed almost anywhere, making it an effective exercise for maintaining general health and fitness. Regular walking has been widely recognized as an important activity for improving physical fitness, physiological functioning, and psychological well-being. According to the World Health Organization, engaging in regular physical activity such as walking helps reduce the risk of cardiovascular diseases, improves muscular endurance, and enhances overall quality of life. Walking training programs that include variations in speed, intensity, and distance are often referred to as varied walking training. Such training methods can produce greater physiological and psychological benefits compared to normal walking because they stimulate different body systems and improve overall physical conditioning. Research conducted by Morris J. N. (1994) indicated that regular walking significantly reduces the risk of heart disease and promotes cardiovascular health. Similarly, Bouchard Claude and Shephard Roy J. (1994) reported that systematic physical activity improves aerobic capacity, body composition, and metabolic efficiency. In addition to physical and physiological benefits, walking also plays an important role in improving psychological health. Studies have shown that regular walking exercise helps reduce stress, anxiety, and depression while improving mood and mental well-being. Fox Kenneth R. (1999) highlighted that moderate physical activities such as walking can enhance self-esteem and psychological wellness. Furthermore, Dishman Rod K. (2006) emphasized that consistent aerobic exercise contributes positively to mental health and emotional stability. Despite the recognized benefits of walking, there is limited research focusing on varied walking training and its combined effects on physical, physiological, and psychological variables among regular walkers, particularly among middle-aged adults. Therefore, the present study aims to investigate the impact of varied walking training on selected physical, physiological, and psychological variables among regular walkers.

METHODOLOGY

To achieve the purpose of the study, thirty (N=40) regular walkers were selected as subjects from Coimbatore, Tamil Nadu. The subjects ages ranged from 30 to 40 years. The forty subjects were divided into two equal groups, each consisting of twenty (N = 20) walkers an Experimental Group, which underwent varied walking training, and a Control Group, whose members did not participate in any specific training beyond their routine activities. The Experimental Group participated in varied walking training six days per week (Monday, Tuesday, Wednesday, Thursday, and Friday) for a period of twelve weeks. Data collected from both groups before and after the training period were statistically analyzed for significance using a dependent t-test at the 0.05 level of significance.

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Criterion Measures

It is evaluated that Physical, Physiological and Psychological variables were chosen as the criterion measures for this study for testing.

Table 1: Criterion Measures

S. No	Criterion measures	Test items	Unit of Measurements
Physical Variables			
1.	Muscular strength and Endurance	Sit ups	In count
2.	Leg explosive power	Standing broad jump	In Meters
Physiological Variables			
3.	Resting Pulse Rate	Pulse Oximeter	Mm/ hg
Psychological Variables			
4.	Stress	Lovibond P.F. (1995)	Questionnaire

Table 2: Computation of the 't' ratio on physical, physiological, and psychological variables of regular walkers in the experimental group

Experiment Group						
		N	**Mean**	**Std. Deviation**	**Std Error Mean**	**'t' ratio**
Muscular Strength and Endurance	Pre test	20	16.95	0.68	0.15	61.00*
	Post test	20	20.00	0.72	0.16	
Leg explosive power	Pre test	20	169.90	1.65	0.37	61.00*
	Post test	20	172.95	1.61	0.36	
Resting Pulse Rate	Pre test	20	73.35	0.81	0.18	21.00*
	Post test	20	72.30	0.80	0.18	
Stress	Pre test	20	18.85	0.99	0.22	61.00*
	Post test	20	15.80	0.95	0.21	

*Significant level 0.05 level (degree of freedom 2.09,1 and 19)

Table 3: Computation of the 't' ratio on physical, physiological, and psychological variables of regular walkers in the control group

Control group						
		N	**Mean**	**Std. Deviation**	**Std Error Mean**	**'T' Ratio**
Muscular Strength and Endurance	Pre test	20	16.95	0.68	0.15	1.00
	Post test	20	17.00	0.72	0.16	
Leg explosive power	Pre test	20	169.90	1.66	0.37	1.45
	Post test	20	170.00	1.66	0.38	
Resting Pulse Rate	Pre test	20	73.25	0.85	0.19	1.00
	Post test	20	73.30	0.80	0.18	
Stress	Pre test	20	18.80	1.00	0.22	1.45
	Post test	20	18.90	0.97	0.21	

*Significant level 0.05 level (degree of freedom 2.09,1 and 19)

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Fig 1: Bar diagram showing the mean value on physical, physiological, and psychological variables of Muscular strength and Endurance among regular walkers in the experimental and control groups

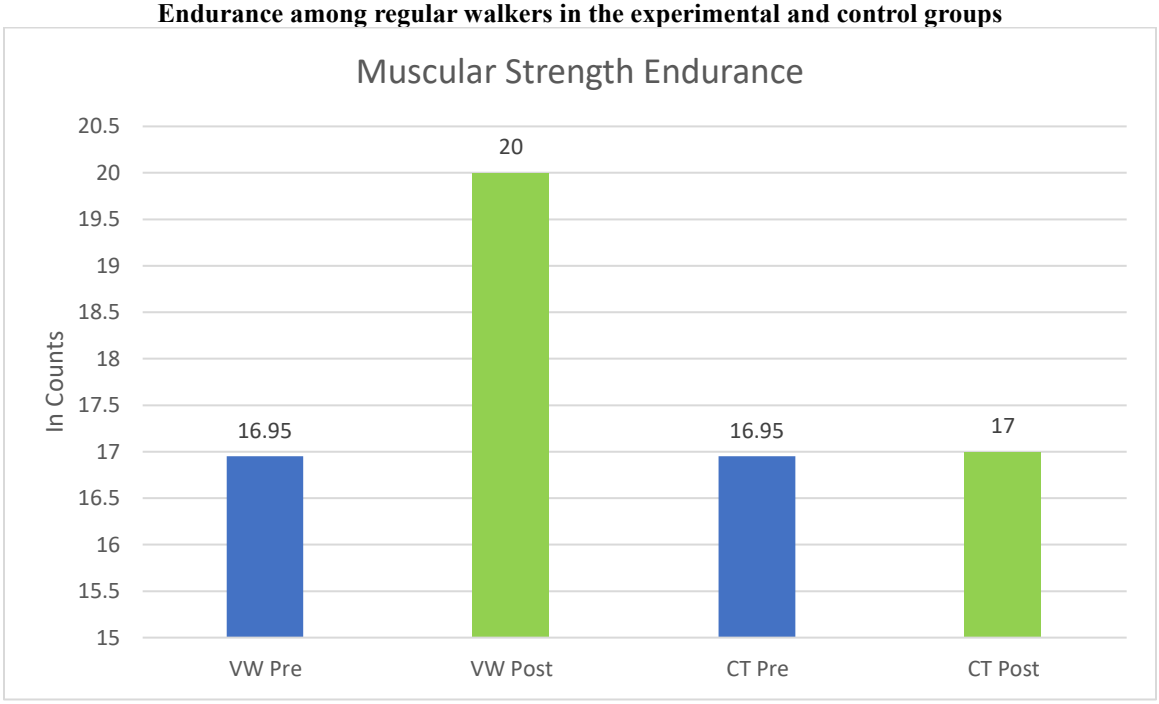
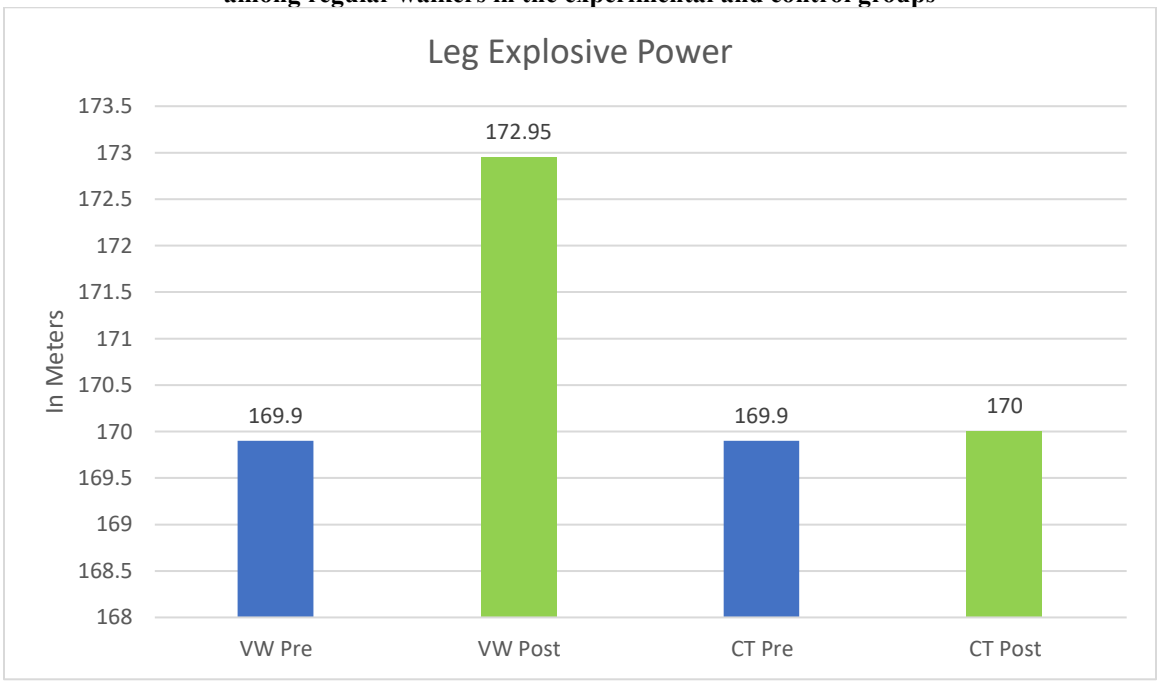


Fig 2: Bar diagram showing the mean value on physical, physiological, and psychological variables of Leg Explosive Power among regular walkers in the experimental and control groups



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Fig 3: Bar diagram showing the mean value on physical, physiological, and psychological variables of Resting Pulse Rate among regular walkers in the experimental and control groups

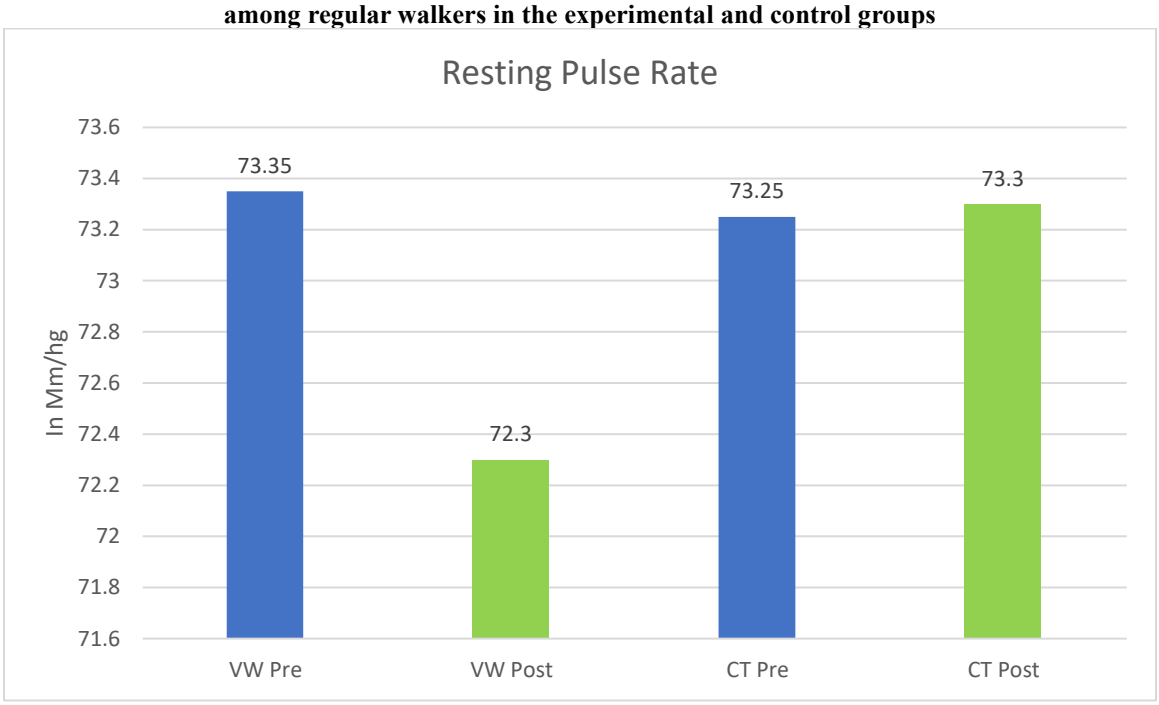
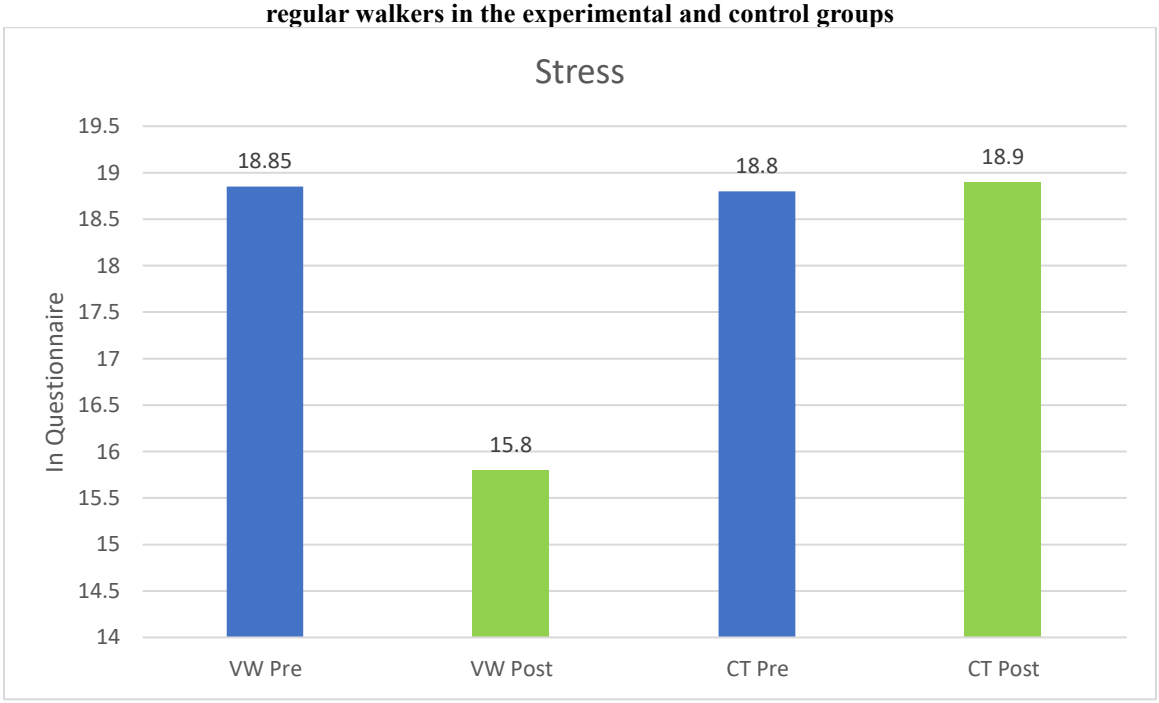


Fig 4: Bar diagram showing the mean value on physical, physiological, and psychological variables of Muscular Stress among regular walkers in the experimental and control groups



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RESULTS

The findings observed on the Impact of Varied Walking Training on Physical, Physiological, and Psychological Variables among Regular Walkers.

1. In the Varied Walking training group, the mean differences observed between pre-test and post-test for Muscular strength and Endurance, Leg Explosive Power, Resting Pulse Rate, and Stress. Were statistically significant.
2. In the control group, the mean differences observed between pre-test and post-test for Muscular strength and Endurance, Leg Explosive Power, Resting Pulse Rate, and Stress were not statistically significant.

DISCUSSION ON FINDINGS

The purpose of the present study was to examine the impact of varied walking training on selected physical, physiological, and psychological variables among regular walkers. The findings of the study indicated that the experimental group, which underwent a varied walking training program for 12 weeks, showed significant improvements in muscular strength and endurance, leg explosive power, resting pulse rate, and stress levels compared to the control group. These results suggest that varied walking training is effective in enhancing both physical and psychological health among regular walkers. Regarding muscular strength and endurance, the experimental group showed significant improvement following the training period. This improvement may be attributed to the repeated muscular contractions involved in walking at different speeds and intensities, which enhance muscle efficiency and endurance capacity. The findings of the present study are supported by the work of Bouchard Claude and Shephard Roy J. (1994), who reported that regular physical activity improves muscular endurance and overall physical fitness. Similarly, Wilmore, Jack H. and Costill, David L. (2004) stated that continuous aerobic activities such as walking can significantly enhance muscular endurance and functional strength. In terms of leg explosive power, the results showed a significant improvement in the experimental group after the twelve-week training program. Varied walking training that includes brisk walking, fast walking, and changes in pace can stimulate the lower limb muscles and improve neuromuscular coordination. These adaptations help increase the force production of the leg muscles. The findings are consistent with the observations of Bompa Tudor O. (1999), who emphasized that progressive and varied training programs enhance muscle power and neuromuscular efficiency. Regular walking with varied intensity contributes to improved leg strength and explosive movements. Regarding the physiological variable of resting pulse rate, the study revealed a significant reduction in the experimental group after the training program. This reduction indicates improved cardiovascular efficiency and better functioning of the circulatory system. Regular aerobic exercise, such as walking, strengthens the heart muscle and allows the heart to pump more blood with each beat, thereby reducing the resting pulse rate. These findings are supported by the research of Astrand Per-Olof and Rodahl Kaare (1986), who reported that regular aerobic exercise leads to improved cardiovascular efficiency and lower resting heart rate. With respect to the psychological variable of stress, the results showed that the varied walking training program significantly reduced stress levels among the participants in the experimental group. Physical activity stimulates the release of endorphins and other neurochemicals that help improve mood and reduce stress and anxiety. These findings are in agreement with the research conducted by Fox Kenneth R. (1999), who reported that regular physical activity plays an important role in reducing stress and improving psychological well-being. Furthermore, Dishman Rod K. (2006) emphasized that aerobic exercises such as walking contribute significantly to mental health by reducing psychological stress and improving emotional stability. Overall, the results of the study clearly indicate that the varied walking training program is effective in improving physical performance, cardiovascular efficiency, and psychological well-being among regular walkers. The findings are consistent with previous research studies, which highlight the importance of structured physical activity programs in enhancing overall health and fitness.

CONCLUSION

It was concluded that twelve weeks of varied walking training significantly improved muscular strength and endurance, leg explosive power, resting pulse rate, and stress levels among walkers. Based on these findings, it is suggested that varied walking training is an effective method for achieving desirable improvements in the physical, physiological, and psychological variables of walkers.

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