|Research Article |

The Effects of Brisk Walk on the Patients of High Blood Pressure

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Abstract:
The brisk walk is a common and easily performed exercise with great role in the life of human beings. On the other side, blood pressure is a most speedy and vividly spreadable disease with most deplored outcomes. But the brisk walk has the potential to encompass the blood pressure. The under-case study was experimental in nature. it evaluated the effects of brisk walk upon the blood pressure disease. The study objectives were to assess the relationship and impact of brisk walk upon the blood pressure patients. The study hypothesized that there is no relationship and impacts of brisk walk in relation to the demographics of the participants. The subject of this research was consisted of 26 people (two equal groups in to experimental and control group) having the disease of blood pressure. After the treatment the study revealed that there is significant relationship of brisk walk with blood pressure as (r = -.879) *and significant impacts of brisk walk upon the blood pressure p*= 0.002 *as compared with (p* < .05*). The study concluded that brisk walk has positive effects on the blood pressure patients having age between 50-60 years.*

Key Words: Brisk walk, Blood Pressure

Introduction

Brisk walk is an exercise in which a person moves little bit faster than normal walking. But it is not like jogging (Bai, et al,. 2022). Brisk walk is the most reachable and available physical activities, needs no special terrain and time. It could be done at home, parks, trails and a treadmill also. Some people take brisk walk as a social activity. People participate in brisk walk as a team manner. People move with family members, friends and groups. At the same time they do brisk walk and as exercise and gives a motivational message to other of a group social activity also (Harun, Riyadi, Briawan & Khomsan, 2022).

The research study of Sallis et al., 2015 suggested that brisk walk is a physically activity that is very easier to done. It doesn't require very much energy. Brisk walk improves cardio vascular fitness. It is helpful to control the weight and the cholesterol level. it also refreshes a person mode and makes a person cheerful. Brisk walk controls heart diseases and diabetes.

A person moves about to 3 to 5 kilometers in brisk walk with the normal speed. The pace of the person should be varies from the walking. An individual can opt any style meeting his body's fitness in brisk walk. A person should maintain the body posture and wear any suitable foot wear during brisk walk (Harun, Riyadi, Briawan, & Khomsan, 2022).

Brisk walk and Blood Pressure

The way or a force with which a blood is thrown and received into plus from blood vessels is said the blood pressure. Brisk walk improves the health, well beings and controls the blood pressure also. The brisk walk enhances the quality sleep, muscles potential, bone solidarity and improves the energy level. These factors indirectly plays vital role in maintain the blood pressure of a person (D'Onofrio, Kirschner, Prather, Goldman, & Rozanski, 2023).

People, participate regularly in brisk walk have potent systolic and diastolic blood pressure. It inhibits them from diseases involving high risk factors such as heart strokes, hyper tension and heart attack. Brisk walk has the potential to keep the blood vessels elastic to move the blood supply needful. It reduces load on heart and heart feels well during brisk walk (Evaristo, et all., 2020). The brisk walk is aerobic exercise. It makes the heart stronger and enhances the pumping capacity of the heart. Brisk walk improves the cardio vascular fitness by keeping the blood circulation, oxygen transmission to body parts and heart rate in control (Chen, Ismail, & Al-Safi, 2016).

The regular participation in brisk waking improves the level of good cholesterol (High Density Lipo-Protein, HDL) and minimizes the level of bad cholesterol (Low density Lipo- Protein, LDL) which helps the arteries to work smoothly. This reduces the atherosclerosis and coronary artery diseases (Adane, 2019). The brisk walk contributes to control obesity by increasing metabolism rate and burning of calories as well. The brisk walk reduces the unnecessary fats around the vessels' and organs helping to

reduces the risk of bold pressure plus diabetes (Melam, Alhusaini, Buragadda, Kaur, & Khan, 2016).

Brisk walk reduces the chronic irritation in body. Which if not treated on time leads to cardio vascular diseases, especially the bold pressure fluctuation. The anti inflammatory effects could be minimized through brisk walk. It is done against dysfunctions like endothelial and arthrosclerosis (Goswami, Ranjan, Dutta, & Verma 2021). Brisk walk has the potential to relax a person mood. It reduces the level of cortisol hormones and activates the endorphins hormone that controls the blood pressure of a person. The stress and anxiety could be dealt by the brisk walk. Which if gets the severe conditions lead to high blood pressure (Omura, Ussery, Loustalot, Fulton, & Carlson, 2019).

Objectives of the Study

The study had following objectives.

1. To find out the relationship between brisk walk and blood pressure of the participants.
2. To know about the impact of brisk walk on blood pressure of participants.

Hypothesis of the Study

The study had following hypothesis after going to the related literature.

$H_0$1. There is no significant relationship between brisk walk and blood pressure of the participants.

$H_0$2. There is no significant impact of brisk walk on blood pressure of participants.

The study delimitations

The study was delimitated to the following areas.

1. The study was conducted in district Karak, KP province.
2. The population of the study was males, suffering with blood pressure.
3. The age of the participants was 50 to 60 years.
4. There were two groups in the study one was experimental and the other was control group.
5. The participants (experimental group) were involved in brisk walk about three (3) kilometers for the duration of eight (8) weeks, twice a day (Morning and Evening) for forty to fifty minutes.

Methods and Materials in the Study

The study was experimental in nature. The participants of the study were directly related to the study. The data was collected from the participants symbolically, by tests and by interview. The population of the study was the blood pressure patients. The participants were male and the age was from 50-60 years.

The Exclusion and Inclusion Criteria of the Study

The researcher tried to have the best participants for the study. In order to take a proper study the researcher used symptoms test method and interview of the patients before and after the study.

The below criteria was adopted and applied.

The Inclusion Criteria:

1. The male patients of blood pressure, Diastolic 110mmHg-130mmHg and Systolic 70mmHg-90mmHg
2. The age was in between 55- 65 years.
3. The patients were villagers or of rural areas.
4. Ability to take part in brisk walk of 4 kilometers was arranged, twice a day for 8 weeks.

The Exclusion Criteria:

1. Participants with chronic heart diseases, blood pressure and asthma.
2. The participants with neuro-skeletal and orthopedic problems.
3. The participants were not smokers and drunker.
4. The people with madness and enmities.

The criteria suited for the conduction of the study, titled as brisk walk a tonic of blood pressure.

The Participants' Selection for the Study

The disease of blood pressure is spreading with high ration in the district Karak. Approximately, every 15th person is suffering with blood pressure. The population of the study was very huge that was very difficult to study them all. Therefore the study was preceded with 26 patients with the diseases of blood pressure. Amongst the sample two groups were framed with equal distribution of the participants. Twenty participants were in experimental group (Treatment taken) and the rest of members were in the control group (No treatment) of the study.

Instrument Used in the Study

Practical treatment was given in the study. As the participants of the study were patients of the blood pressure disease. The subjects were involved in brisk walk with distance of 4 kilometers, twice a day for about 40-50 minutes. The populace physical and health conditions were checked with the suggested instruments.

Procedure and orientation of the study

The study was conducted on the voluntarily participated patients of blood pressure. The participants were lay man and don't aware of the utilities of the exercise and sports. The researcher took a guide session of them and understood them they utilities of the brisk walk with the general fitness and particularly the blood pressure. The subjects were well motivated during oral session.

As the researcher get satisfied then the practical involvement of the participants started in brisk walk. The participants were in involved in the brisk walk for the period of 8 weeks. There were two sessions of 40-50 minutes in a day. One was in the morning and the other was in the evening. They subjects were to take the brisk walk for 4 kilometers. As the used to walk then the populace blood pressure and asthma symptoms were to be checked after every session.

Pilot Testing of the Study

The researcher carried out a pilot test of the study for self satisfaction. This was carried out to check the interest of the participants. Five (5) men from the subjects were called for a preliminary four kilometer brisk walk for two days, two sessions and overall engagements of 40-50 minutes. After evaluating the subjects' spirit and valor, the study was preceded ahead.

Protocol and Ethical Considerations of the Study

The researcher administered the whole study and its proceedings itself. The study was continued with the help of specialists' doctors and health technicians. All the required equipments, gadgets and necessary materials were to be with the researcher's team. This all was done to maintain the research study decorum and utility. All the measures and developments were checked and recorded by the researcher itself with help of medical team. The study was completed with leaving no stone unturned to make sure safe and sound the human life.

Statistical Analysis of the Data

Descriptive statistics weights, heights and ages of participants.

Descriptive Statistics Weight, Height and Age					
	N	Minimum	Maximum	Mean	Std. Deviation
Weight in kg	26	80	90.0	81.4	3.06
Height in cm	26	165	175	167.6	3.57
Age year	26	50	60	57.4	4.11

The table provides an overview of the range, average, and variability for weight, height, and age among the 26 individuals in the study. Descriptive Statistics presents the age distribution of sample total respondents were 26 with no missing data. Here in the table we can see the most weighted participant is 90 kg while light weighted one is 80kg, The average weight is 81.4 kg. Standard deviation is 3.06, indicating that the weights are fairly close to the mean. Also we observed in table that lowest heighted participant in table 165cm while most heighted one participant in the sample is 175cm, average height is 167.6cm Standard deviation value is 3.57, showing moderate variation in heights. Additionally youngest participant in the sample is 50 years oldest participant in the sample is 60 years old the average age is 57.4 years. And standard deviation is 4.11, suggesting some variability in ages

ANOVA showing no mean differences among weight, height, and age among the participants.

Testing variable	Respondents	N	$\bar{X}$	std	Df	F	Sig.
There is no mean	Age	26	125/85	10.4/8.5		0.25	**.397**

difference among weight, height, and age of the participants	Height	26	150/85	10.4/8.5	24
	Weight	26	125/95	10.4/8.5	

Testing variable in the table is there is no mean difference among weight, height, and age among the participants. The table presents the results of an ANOVA (Analysis of Variance) test, which was conducted to examine whether there are significant mean differences in age, height, and weight of the blood pressure of the respondents due brick walking. The respondents were divided into three categories according to their age, height and weight. No significant differences were found at $p > 0.05$ of among the participant. So it is stated that no mean differences regarding their age, height and weight of the respondents.

$H_0$1: There is no significant relationship between brisk walk and blood pressure of the participants.

		Blood Pressure
Brick Walking	Pearson-Correlation	-.879
	(2-tailed)	0.000
	N	26

Pearson Correlation Coefficient was used to measure the relationship between brick walking and blood pressure among 26 participants. A negative strong relationship between brisk walk and blood pressure. Because it is proven from the data is a strong negative relationship between brick walking and blood pressure at ($r = -.879$). The value -.879 means that as the amount of brisk walk increases, the blood pressure tends to decrease (Normal) significantly. This result is very reliable, as indicated by the extremely low p-value at a standard significant level in the range ($P = .000 < .01$).

$H_0$2. There is no significant impact of brisk walk on blood pressure of participants.

Table 4.7: Regression model

Model	R	R^2	Adjusted R^2	F	Sig.
1	-.896[a]	.804	.787	45.10	**.000**

$\alpha = 0.05$

Table 4.7a: Coefficients table

Coefficients					
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	1.014	.080		12.675	.000
Brick Walking	0.065	.080	-0.750	0.813	.002

The regression model shows the negative effects of brisk walk on the blood pressure of participants. R^2 determines how much variation occurs in heart beat due to brisk walk. The researcher perceived from the data that 89.7% of negative change is taking blood pressure due to brisk walk. The table also portrays the F-value; of 45.10 which indicate that the model is an overall good fit. The data revealed that brick walking are negatively affecting blood pressure of participants because the Standardized Coefficients beta value is negative (β) = -0.750). The coefficient table also confirmed from the B-value that a one-unit increase in brick walking then 0.065, .080 variations will be an increase in blood pressure. At this point, the value of *t* is 12.675 which illustrates the significance impacts of brisk walk on blood pressure because the significant level is also in the range (P = .002< .01) respectively which is less than to the alpha level.

Discussion of the Study

The research study of Goswami, Ranjan, Dutta and Verma (2021) had suggested that demographics like age and weight of the subjects deals and have both positive and negative relationship with the blood pressure during any physical activity. The present study also dealt the age, height and weight of the participants in regard to the brisk walk role to the patients of the blood pressure.

The study of Evaristo, et all. (2020) has of the view that brisk walk is an exercise that controls the blood pressure of the human beings. The author further added that about three kilometers brisk walk a day decreases the chance of heart attack and heart failure. This study also witnessed the same results, but in this study a treatment of four kilometers was given to the participants twice a day.

The results of the Adane, (2019) pointed out that the brisk walk has positive impacts upon the blood make up, supply and elasticity of the blood vessels. The author further added that brisk walk is one of the easy exercises that bless a stronger heart. The results of this study have also favored the same output.

The Study Findings

The hypothesis of the study was that there is no significant relationship of brisk walk has no significant relationship with blood pressure and the brisk walk has no impacts upon the blood pressure of the participants.

As the results were calculated all of the hypotheses were accepted and found out the positive correlation and impacts of the brisk walk upon the blood pressure of the participants.

The Conclusion of the Study

The study concluded that the age, height and weight are the factors that deal widely the role of brisk walk in the disease of the blood pressure. Secondly it was assessed through the study that the brisk walk has also positive role in the blood pressure patients. Finally, the study also examined the brisk walk has long lasting effects upon the blood pressure patients.

The Recommendations of the Study

The researcher recommends the following points after having the research study findings and conclusions.

1. As it is revealed that brisk walk acted as an agent to control the blood pressure. The people of older age be advised and guided about the utility of the exercises rather than to treat the vascular diseases by medicines.
2. The Government and the statutory bodies should provide the opportunity to of sports and exercises to all.
3. People should consider that the exercise is key to success and fitness.

The Implications for Future Researchers

1. The study conducted brisk walk and blood pressure. Another study can be conducted with a slight change in variable.
2. The study participants were people with disease of blood pressure. The researchers may precede their studies with other diseases.
3. The study was conducted on older people and other researchers may launch their studies on middle age people.

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