

Importance Of Exercise For Life Longevity

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Introduction

In an individual's health, body weight or body mass index (BMI) is used as the major indicator. There are some ideal or desirable weight ranges that have been standardized according to the specific heights. When the BMI values exceed the desirable weight range, then it causes overweight, obesity, and several other chronic diseases, and if the BMI values become less than the desirable weight range, then it causes underweight or weakness in the individual (Ogden CL). In short, BMI is an estimate of an individual's body composition, which helps in the evaluation of the relation of an Individual's height and weight to the individual's lean body mass. High BMI simply means that there is excessive fat stored in the individual's body and if the BMI value is less, then it means there is not sufficient fat stored in the individual's body (K. B. Reid). However, the discussion about BMI becomes essential when concerned about health because BMI is a helpful indicator to evaluate whether the individual is healthy or not. Moreover, BMI also helps to estimate the mortality or longevity of the individual (Smith 80-93). A lower value of BMI means a longer life and a high value means the individual is at high risk of diseases, and there are more chances of a short life. However, BMI can be controlled with the help of exercise, which not only reduces the risks of chronic illness but also keeps a man fresh and active. This means, directly and indirectly, exercise affects the longevity.

Aim Of Study

Exercise is the most important thing and plays an essential role in life. Without exercise, the risk of chronic illness goes on the rise, and it makes life tasteless. It not only helps the person to remain physically active but also reduces the risk of coronary heart disease, obesity, high blood pressure, hip fracture, diabetes, overweight and heart attack. The researchers have worked to evaluate how exercise can be important for a person. The findings showed that an average 65-year-old person could expect a healthy life of 78 years if he does exercise on a regular basis. Exercise becomes even more critical when the person crosses 50 years (Franco, Laet and Peeters 2355-60). It is assumed that physical activity after 50 years adds one more year to a person's life. This simply means that regular exercise increases longevity. Thus, this study will now examine how exercise increases the longevity of human beings.

Research Question

Q: How does Exercise increase Longevity in human beings?

Significance Of Study

This study will provide an insight into the importance of exercise in life. Most people do not feel it necessary to do physical activities, and they enjoy rest time and food time in their lives. This results in a chronic illness which affects life expectancy and longevity. Thus, this study will let the readers understand the importance of exercise in life.

Limitation And De-Limitation

The limitation of the study is the lack of time and budget, due to which it is impossible to take surveys or interviews of individuals who either do exercise or prefer to live a lazy life. However, to overcome the limitation, the researcher has decided to make a meta-analysis through which the researcher will analyze the already published literature and will provide authentic findings and conclusions valid for the population of the United States.

Thesis Layout

This document consists of five chapters: introduction, literature review, methodology, findings, and conclusion. The first chapter will provide an overview of the problem, the second chapter will discuss the already published scholarly literature, and the third chapter will discuss the researcher's methodology to reach of study. The findings of the study will be discussed in the fourth chapter, and the final chapter will be about the conclusion of this study.

Literature Review

This study aims to evaluate the relationship between exercise and longevity, and for this purpose, the researcher reviewed several published literature. This chapter of the study is about the literature review which is being done with the help of primary and secondary sources. The primary sources included scholarly published articles, whereas the secondary source included the already published data on the Internet, data available at the library, and available notes. However, different researchers have worked to evaluate how the longevity of the person can be affected with the help of daily basis exercise or any other physical activity.

Franco, Laet, and Peeters (2013) published a study in which they provided complete numerical information on how exercise affects the longevity of a person in different stages of life. He discussed that life longevity is highly dependent on the health of a person, which can be achieved by proper physical activities. He discussed that physical activities in different stages of life add different years to longevity. The findings of the study were helpful in analyzing that exercise is highly essential to staying healthy and strong, which, as a result, helps the person to live longer (Franco, Laet, and

Peeters). Further, the study was continued by Reimers, Knapp, and Reimers (2013), who discussed life mortality and the impact of exercise on it. According to them, nowadays, life has become full of tension and stress, and that is why it has become essential for people to remain calm. Exercise is the way which reduce hypertension in people and helps them to stay active, calm, and away from chronic illness. The findings of the study showed that physical activities decrease the chances of mortality from 30% to 35% and can increase life expectancy from 0.4 to 4.2 years. This means to stay healthy and to live long, exercise or physical activity is highly important (Reimers, Knapp, and Reimers).

Smith (2015) also discussed the relationship between exercise and life expectancy. According to him, it is BMI which plays an essential role in a person's life. If the BMI is higher, it may cause obesity, overweight, diabetes, heart disease, and other chronic diseases. If the BMI is less, it indicates weakness, due to which different diseases may attack the person. This means that maintaining the BMI is essential, and this can only be done through proper physical activities. Daily physical activities keep the person away from all chronic diseases and increase life expectancy. Exercise or physical activities also keep a person fresh and active due to which a person becomes able to control its tension or stress. Thus, the findings of the study showed that exercise or physical activities decrease the mortality rate and increase longevity (Smith).

From this literature review, it can be analyzed that exercise is highly important for a better and healthy lifestyle. No physical activities mean an invitation to chronic illness, such as diabetes, cardio diseases, obesity, overweight, high blood pressure, and others. These chronic diseases become the major cause of death and, thus, decrease life expectancy. Thus, being active, healthy, and new means a decrease in mortality and an increase in longevity, which can only be achieved through exercise.

Methodology

The study aims to examine how exercise increases longevity in human beings. However, to obtain the answer to this question, the researcher followed a meta-analysis methodology. According to this methodology, the researcher analyzed already published scholarly literature and analyzed the findings and conclusions published by other scholars or researchers. For this purpose, the researcher initially collected so many published articles by using search engines, such as Google. The searching process was done by using keywords, such as Exercise and Longevity, Physical activities, Mortality, Life Expectancy, Exercise and chronic illness, and impact of exercise on life.

Data Collection

Initially, the researcher collected more than 20 articles about exercise and longevity. After the collection of articles, filtration was processed by the researcher by closely related articles. Only those articles were included in the findings which were published in recent years (last five years), and which

discussed the relationship between exercise and longevity. After the filtration process, a total of eight articles were selected as primary sources, which were further analyzed for the findings of the research and to make a strong conclusion.

Data Analysis

The researcher selected eight scholarly articles as a primary source, which were then analyzed to evaluate the relationship between exercise and longevity. For this purpose, the researcher collected useful data from each article and stored it in a password-protected computer. The statistical data was analyzed and stored in Excel to make graphical analysis charts or graphs. On the other hand, general data was analyzed and stored to collect all useful information which could be further used to make the strong conclusion of the study. The analyzed data is further discussed in chapter four (Findings) of the study.

Findings

The researcher used eight scholarly articles as the primary source of the meta-analysis to evaluate the relationship between exercise and longevity. Each article was analyzed separately to evaluate how exercise has an impact on lifestyle. The findings of this meta-analysis showed that exercise plays an important role in a person's life because it not only controls the BMI of the person but also helps the individual to live a healthy lifestyle. The researchers discussed in their articles that most of the time, people become lazy, and thus, they neglect their physical activities. Especially, nowadays youth is deeply indulged in the usage of gadgets due to which they prefer to sit at one place and to play games at play station, laptop, I Pods, and on mobile phones. Due to these habits, the youth is neglecting its physical activities and daily exercise (Reimers and Knapp). This is causing high BMI in youngsters who are obese and overweight, which in turn is contributing to the chances of diabetes, high blood pressure, and other chronic diseases. The research showed that exercise is highly essential for a healthy lifestyle because this helps the individual to maintain their BMI, to reduce the chances of obesity and overweight, and to remain healthy. When a person does exercise on a daily basis, then he remains healthy and active. Daily exercise also reduces the chance of hypertension and brain stress in the individual and also reduces the mortality chances of 31% to 35% (Reimers and Knapp).

Daily exercise keeps a person healthy, due to which a person becomes able to perform his normal life tasks with great accuracy and a fresh mind. Also, physical activity maintains glucose levels in the body, due to which the chances of diabetes decrease. Moreover, physical activities also maintain the blood flow in the vessels of the human body, which controls the stress level and blood pressure of the human body (Waller, Silvennoinen, and Koch). Not only this, but also physical activities keep body parts active and strong, due to which person remains active and able to perform any task easily. Also, daily exercise keeps the muscles of the human body strong. The research also showed that daily exercise and physical activities lower the mortality rate by 40% and increase the life expectancy by

five years (Reimers and Knapp). The research showed that different type of physical activities leaves a different impact on the longevity. The details of the impact of physical activities are discussed in the table below;

Types of Physical Activities	Reduction/ Increase in Life Expectancy.
Sports	+ 5.0 y
Cycling	+ 8.0 y
Power exercise	+1.6 y
Running	+ 4.0 y
Long Distance Running	+ 5.7 y
Aerobics	+ 2.0 y
Resistance Exercise	+ 4.2 y

The above table shows that different kind of physical activities or exercises leaves a different kind of impact on the life expectancy or longevity. According to the table, sports increases the longevity by five years; cycling increases the life expectancy by eight years, power exercises, such as weightlifting increases the life expectancy by 1.6 years. Similarly, other exercises, such as running, long-distance running, aerobics, and resistance exercises, increase the life expectancy by 4, 5.7, 2.0, and 4.2 years respectively (Garcia-Valles 793-801).

In actuality, when a person does exercise, the fats of the body decrease. Exercise also maintains the BMI of the body maintains the body fat, blood pressure, glucose level, and other functions of the body. Also, daily physical activities maintain lipid metabolism, stroke, coronary heart disease, and malignancies in the body, due to which the risk factor of mortality decreases. It also keeps the person away from chronic diseases and thus increases the life expectancy or longevity of the person (Richard, Martin and Wanner 184-192). The physical activity helps the individual to maintain the weight of the body. However, it is not only the physical activity which affects the longevity or life expectancy. Along with exercise, a healthy diet and a healthy lifestyle also contribute to longevity. When a person does not smoke, does not do any unhealthy activity, or takes a healthy diet, then his risk factor of mortality also decreases. The research has shown that the person who never smoked, had a healthy diet, followed a proper physical activity plan, and consumed only moderate alcohol had

11.1 years longer life expectancy than those who never tried to maintain healthy life behaviours (Silvennoinen, Rantalainen, and Kainulainen 51–58).

The meta-analysis also showed that it is not all about longevity or life expectancy; instead, it is all about healthy living. Spending more years of life with diseases is not the aim of life; instead, a healthy life and disability-free years of life must be the aim of the individual. A person can have a longer life, but that life may be full of chronic disease if he does not follow a physical activity plan. Exercise maintains all functions of the human body, and thus, it keeps man free from all sorts of disability and chronic diseases. This means that exercise not only increases longevity but also keeps a man healthy for a long time and free from disability and chronic diseases.

U.S. Department of Health and Human Services also showed that exercise or physical activity is essential for day to day health lifestyle of a human. The report recommended that the adults between ages 18 and 64 engaged in physical activities are found to live longer than the lazy individuals. According to the report, resistance exercises leave a very positive impact on life expectancy and longevity, but regular aerobic physical activity for 2 to 2.5 hours per week also increases the longevity of the person. Furthermore, the research showed that leisure-time physical activities, such as jogging, tracking, running, hiking, and others, also increase life expectancy or longevity by 4.2 years (Geus and Bartels 262–271). To perform physical activities, there is an HHS guideline which guides the person to perform daily basis physical activities according to the age and BMI of the individual. The more the person follows the guideline, the more life expectancy will increase. The results of the follow-up of HHS guideline and its impact on life expectancy are shown in the figure below:

The above figure shows that the person who follows 50% of HHS guidelines gains 1.5 years of life expectancy. However, the person who follows 100%, 200% and 300% of the HHS guidelines then gains 3.4, 4.2, and 4.4 years of life expectancy, respectively. However, it does not mean that low-level activities are useless. The research showed that low-level activities also increase longevity. This means a person should be physically active no matter whether he is doing high-level physical activity or low-level activities (Rottensteiner 509–518). The aim of a person should be to stay away from chronic diseases and to stay healthy for a long time. As said by (Moore 1335).

“Our findings highlight the important contribution that leisure-time physical activity in adulthood can make to longevity; regular exercise extended the lives in every group that we examined in our study—normal weight, overweight, or obese.”

The findings of the study also showed that it is not only about physical activity, but it also depends on the physique of the person. Although the results of the physical activity were found to be similar for men and women, but are different for Black Americans and White Americans or for those who had chronic diseases in family history. The people who had a family history of cancer or heart disease were found to have a strong relationship between exercise and longevity. It means that people who have chronic diseases in their family medical history must focus on physical activities because it will help them stay safe from chronic diseases and have a long, healthy life.

However, the government of the United States also must play an essential role in spreading awareness of healthy lifestyles and the importance of physical activities. The research has shown that many people have no idea about the importance of physical activities. That is why the health departments of the United States must arrange some conferences, seminars, and awareness gatherings to let people know about the importance of physical activities in their lives and its impact on longevity. The healthcare department can arrange seminars at schools, colleges, and universities to make people aware of the benefits of exercise. The parents and teachers must also play a positive role and encourage the children to stay active and stay healthy. In this way, people will become aware of the benefits of exercise and will become addicted to a healthy lifestyle. In this way, chronic diseases will decrease in society, and people will live healthy and long lives with an active lifestyle.

Conclusion

The study aimed to highlight the importance of exercise or physical activities and its impact on life expectancy or longevity. To obtain the results, the researcher followed the meta-analysis pattern, in which the researcher initially gathered twenty articles, which were then filtered by recently published articles and closely related articles on the topic. Finally, the researcher included eight scholarly published articles as a primary source. The findings of the meta-analysis showed that exercise plays a significant role in a person's life. When a person is physically active, then it means he will remain physically fit. Also, daily basis exercise reduces the risk of mortality because it reduces the risks of chronic diseases, such as heart attack, diabetes, obesity, overweight, high blood pressure, and other diseases. In actuality, it is the higher BMI or obesity which contributes to chronic diseases. However, daily basis physical activity helps the individual to main individual's body mass index, due to which a person remains healthy and his body functions properly. This is because exercise maintains the blood flow, stress level, glucose level, and other functions of the human body. This healthy lifestyle also increases life expectancy or longevity. However, the increase in life expectancy or longevity depends on the level of physical activity. The more the person will be physically active, the more he will be healthy, and more he will stay alive. However, it does not mean that low-level physical activities are useless. A person should be physically active because even a low-level physical activity also increases the life expectancy and reduces the mortality.

The research also showed that people with chronic diseases in family medical history must focus on physical activities. This is because physical activities reduce the chance of chronic diseases in a person's life maintain healthy body weight, healthy bones, joints, and muscles, and promote psychological well-being. Conclusively, the findings of this meta-analysis showed that exercise is highly essential for a healthy lifestyle because this helps the individual to maintain their BMI, reduce the chances of obesity and overweight, remain healthy, and reduce the mortality chances of 31% to 35%. Also, daily physical activities maintain lipid metabolism, stroke, coronary heart disease, and malignancies in the body, due to which the risk factor of mortality decreases. However, it is not only physical activity which affects longevity; instead healthy diet and a healthy lifestyle also contribute to longevity and increase by 11.1 years of life expectancy. Moreover, spending more years of life with

diseases is not the aim of life; instead, exercise keeps man free from all sorts of disability and chronic diseases and increases the healthy life period. This means that exercise not only increases longevity but also keeps a man healthy for a long time and free from disability and chronic diseases.

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