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RESEARCH ARTICLE

A COMPARATIVE STUDY ON PSYCHOLOGICAL WELL-BEING OF DAILY RUNNERS AND WALKERS

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ABSTRACT

Exercise is becoming a prescription for mental health issues due to its convenience and the fact that it can be done anywhere. Walking and running/jogging are the most popular exercises these days. But whether one is preferable to the other in terms of improving health has long been debated. Psychological well-being refers to one's positive sense of subjective well-being. It taps six distinct aspects of human actualization: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. The present study focused upon comparing Psychological Well Being of 200 daily Runners (100) and Walkers (100) of Pune City of age group 25-45 years. The research tool used for the study was "The Ryff Scales of Psychological Well-Being" developed by Spring in 2005 which measures six areas of psychological well-being. The sample was collected randomly through simple random sampling and data was analyzed using Mean, SD and Z test. One of the major inclusive criteria of the study was minimum 3 months of regular exercise (Walking or Running/jogging). Results revealed that Runners shows higher value of Psychological well being as compared to Walkers. This may be because running sharpens focus and improves mental stamina, by giving circulation a boost up and increasing the flow of blood to the brain. It also increases confidence. Although there is research both for and against the positive influence of exercise generally it has been linked to increases in mood, self esteem, positive body image, positive physical effect and a decrease in depression.

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INTRODUCTION

Modern science provides us with lots of comforts like remote for almost everything, mechanized transportation, labour saving devices in the home for our daily tasks etc but it has eliminated physical exercise from our day to day life. Today, when most of us are indulged in sedentary lifestyle, we are prone to various acute & chronic diseases. Sedentary lifestyle is associated with various health problems and it is drifting us away from the habit of physical work which in turn add to weight gain, mental and physical stress and other health problems. Therefore, it is very important to keep our body fit and healthy by doing any kind of exercise regularly. So, now the question arises, what is exercise? Well, Exercise is any type of physical activity which works in our body considerably at a greater intensity than our normal level of daily activity. It improves our overall health and well-being. Exercise/physical activity is anything that gets moving like walking on a road or treadmill or in the park, dancing or working in the garden. Any bodily activity which improves or maintains our physical fitness is known as exercise. Doing frequent and regular physical exercise boosts our immune system and prevents us from various diseases like heart disease, cardiovascular disease, type II diabetes and obesity (Stampfer *et al.,* 2000). Exercise is very important in all aspects of life. For a young child, it is good for his/her physical development and for an adult, it is good for his/her better body functioning & immunity. Whether fat or thin, exercise is beneficial for all body types. According to Plante Thomas (2001), when a person exercises, levels of both circulating serotonin and endorphins increases which contribute to improvement in mood, self-esteem, and weight management. Exercise alone can treat and prevent mild forms of depression. For the patients with insomnia regular physical exercise is considered to be the alternative to sleeping pills for resolving insomnia (Youngstedt, 2005). Exercise is considered to be the healthiest, safe and inexpensive way to achieve more and better sleep. Depending on the overall effect they have on the human body, physical exercises are categorised as follows

- Flexibility exercises, such as stretching, yoga (Connor *et al.,* 2005).
- Aerobic exercises, like cycling, swimming, walking, skipping, running etc, which focuses on cardiovascular endurance (Wilmore and Knuttgen, 2003).
- Anaerobic exercises, such as weight training, functional training, and other high-intensity training which

increases short-term muscle strength (De vos *et al.,* 2005).

Aerobic exercises like running/jogging and walking are the most commonly adopted physical activities and mostly uses the large muscle groups. Aerobic exercise is considered to have the many benefits like it strengthens respiratory & the heart muscle, tones up all the bodily muscles, improves blood circulation and reduces blood pressure. It improves oxygen transportation by raising the number of red blood, quality of sleep of insomnia patients, mental health and reduces migraine symptoms, reduces the risk of heart disease and helps to improve the survival rates of cardiovascular diseases patients. It stimulates bone growth and reduces the risk of osteoporosis, increases stamina and blood flow through muscles (Nordqvist, 2017). Psychological well-being is a state of being happy, healthy and satisfied in life. It is an extent to which people experience positive emotions and feelings of happiness (Diener, 2000). It leads to enhanced memory, motivation, self-efficacy, positive judgements about others, being more fruitful and fewer distractions. It is directly dependent on his/her optimistic performance (Özen, 2005). If a person is psychologically well, it leads to his/her improved memory, motivation, and positive outlook about almost everything, more productivity and fewer distractions in life. It enhances the expansion of his/her overall day to day tasks, involving home, family, work or society. So, psychological well-being of a person is a pre-requisite for his/her effective day to day performance. Over recent years the relationship of physical exercise and psychological health has increasingly come under the spotlight. Physical activity of an aerobic nature has been associated with positive changes in psychological well-being. A number of studies have confirmed the positive correlation between exercise and mental health (Molina, Isabel & Queralt, 2011). Regular exercises have a positive impact on the overall well-being of a person. It resolves the problem of depression, anxiety, ADHD, and more. It also relieves stress, improves memory, helps you sleep better, and boosts your overall mood. As running/jogging and walking are two most commonly adopted aerobic exercises, the present study focuses on the impact on running/jogging and walking on the psychological well-being of a person.

Objectives

- To assess the overall psychological well-being of Runners and Walkers with respect to their place of exercise (open and gym).
- To study the overall psychological well-being of Runners and Walkers with respect to their age (25-35 years & 35-45 years).
- To compare the psychological well-being of Runners and Walkers with respect to their place and age.

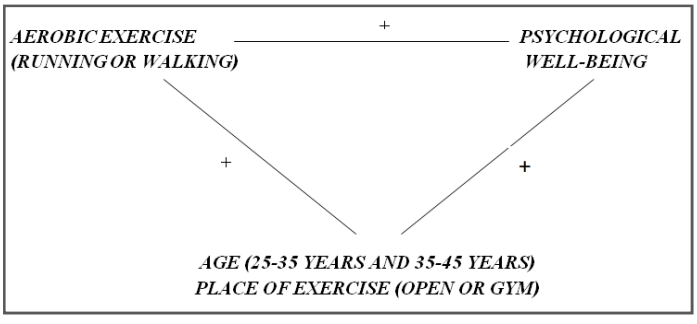


Figure 1. Relationships of the independent, control, and dependent variables

METHODOLOGY

Locale of the Study: The present study was conducted within the premises of Pune city, Maharashtra, India. The subjects were approached in parks, societies and gyms, personally and through email. Few samples were also collected from the Pune GOQii fitness band users.

Participants: A total of 200 participants (Runners-100 and Walkers-100) within the age range of 25-45 years of age were selected using Purposive Snowball Sampling Technique (as illustrated in Figure 2). The reason for doing so is related to accessibility of primary data in a structured manner.

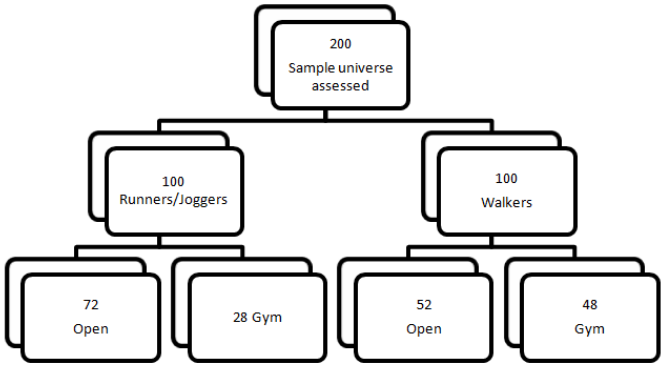


Figure 2. Research Design

Inclusive Criterions

- Participants within the age group 25-45 years were taken.
- Both male and female engaged exclusively in either running/jogging or walking (minimum of 10kms a week) were included in the study.
- Runners or walkers who were engaged in aerobic exercise for minimum of 3 months were included in the study
- Participants were selected irrespective of their acute or chronic illness.

Measure: The Ryff Scale of Psychological Well-Being (Spring, 2005) was used to assess the Psychological Well-Being. It consists of 84 questions (long form) and six areas of Psychological Well-Being (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance). It is a six point Likert scale which ranges from Strongly Disagree (1) to Strongly Agree (6). Internal consistency coefficients of the scale were ranging from 0.86 and 0.93 and the test-retest reliability coefficients was between i.e. 0.81-0.88. scoring is done by selecting from strongly disagree (1), moderately disagree (2), slightly disagree (3), slightly agree (4), moderately agree (5), strongly agree (6). Responses of negatively scored items (-) ware reversed in the final scoring.

Procedure: Initially samples were contacted in societies, gym, gardens and through GOQii app (residing in Pune). They were asked about the type of exercise, they were engaged in. Afterwards, if they were fulfilling the inclusive criteria of age and type of exercise, they were told about the research details and provided with the questionnaire which included basic details like age, duration, place and type of exercise. As questionnaire was time consuming, they were allowed to carry that along with them and were asked to email/WhatsApp the filled questionnaire to the provided contact details. Total of

350 questionnaires were distributed and 109 and 132 questionnaires (for runners and walkers respectively) were returned back by mail/WhatsApp or in hand. Although there was no time limit but they were asked to fill up the measure as soon as possible. Any doubts were made clear to them and this is how the final data was gathered. Out of the total respondents, 200 participants were finally selected.

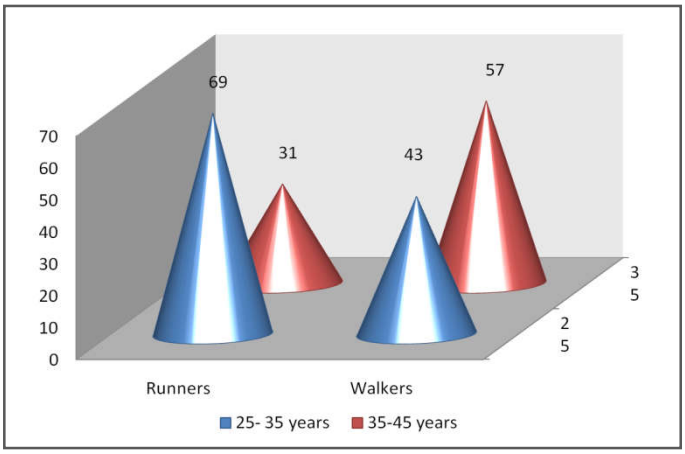
Tabulation and analysis

- Percentage of all the groups under the study.
- Mean, SD and 'z' value of Psychological Well-Being of Runners and Walkers.

RESULTS AND DISCUSSION

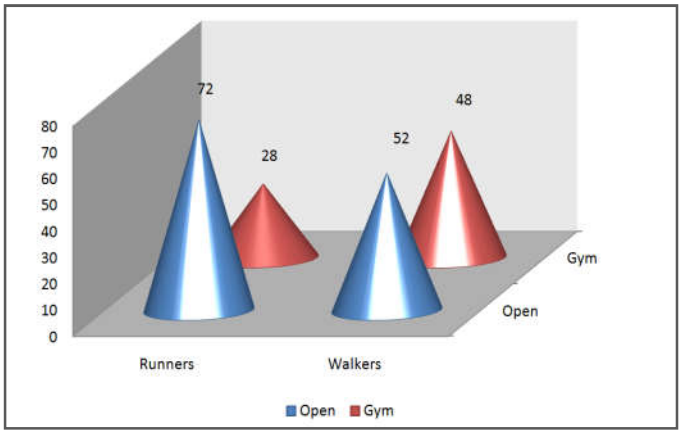
Results of the present study are divided into two categories which are presented as follows

- Percentage scores of the entire group under study.



Graph 1. Percentage scores of Runners and Walkers with respect to their age (25-35 &35-45 years)

Graph 1 revealed the percentage scores of Runners and Walkers with respect to their age (25-35 &35-45 years). Out of total Runners, 69% were of younger age group 25-35 years and remaining 31% were of age group 35-45 years. In Walkers, 57% were of higher age group i.e., 35-45 years and remaining 43% were of younger age group. Walking and running/jogging are the most popular physical activities in adults these days. From the above data, it has been observed that running/jogging is preferred mostly by youngsters. Young people of age group 25-35 years, in this era of competitive world, are stuck with sedentary life and excess work pressure which leads to their mental health and chronic illness. This generation is those who are impatient enough to finish the given tasks. They are the ones who get frustrated easily. They are generally motivated and are ready to take more challenges, which make them messed up and aggravated. Various studies proved that running/jogging can significantly improve physical and mental health. It reduces stress, improve heart health, and even help alleviate symptoms of depression (Loria, 2018). These days lot of marathons and other such events are organised for social cause and mass awareness. Young generations actively participate in such events and keep themselves motivated and fit. Therefore, it might seem obvious that running/jogging, being more strenuous than walking, are preferred by younger age group i.e., 25-35 years. On the other hand, it has been observed from the above data that most of the walkers were from the age group 35-45 years. Walking is considered as the poster boy for moderate exercise. As age increases, body is prone to various health issues like osteoporosis, diabetes, obesity, hypertension etc. Walking is an easy exercise that requires little effort and is an effective way of losing weight and improving overall health. A daily half-hour walk helps avoid serious problems, like cardiac risk factors such as cholesterol, blood pressure, diabetes, obesity, vascular stiffness and inflammation, and mental stress (Harvard Heath Publishing, 2018).



Graph 2. Percentage scores of Runners and Walkers with respect to place of exercise (Open or Gym)

Graph 2 shows the percentage scores of Runners and Walkers with respect to their place of exercise (Open or Gym). Out of the total population of runners, 72% prefer to run in open spaces like garden, streets, pedestrian lane etc for their running/jogging whereas only 28% prefer to run in gym. Walkers on the others hand shows almost equal preferences for running/jogging and walking. 52% of the total walkers prefer open space for walking and remaining 48% prefer gym. "Taking Vitamin G is good for you" is very famous term these days. Many researchers believe that believes the colour green has a calming effect and exercising outdoors is good for the soul. It is a low-cost way to lower stress and recharge the mental batteries. Exercising in nature afforded people a greater feeling of revitalization and positive energy, as well as it decreases tension, confusion, anger and depression (Milne, 2018). Treadmill is a program machine which you can set up according to your need. There are various advantages of running/jogging or walking on a treadmill like no weather and temperature constraints, stop anytime you want, smooth, cushioned surface is easier on the joints or you can do it alone and at any hour. But running or walking indoor is not preferred by most of the population. Many studies have proved that running/walking on treadmill can cause treadmill-related injuries like sprains, falls, head injuries, and cardiovascular events in people who either ran too fast or pushed too hard. Also, most treadmills do not have a downward incline feature which is required to strengthen the anterior tibialis muscles at the front of your legs. Similarly, there are no turns on a treadmill machine, which limits the ability to improve the lateral agility (Quinn 2018). Mean, SD and 'z' value of Psychological Well-Being of Runners and Walkers. Table 1 shows the score of Mean, SD and 'z' value of Psychological Well-Being of Runners and Walkers. The table shows a highly significant difference in the overall psychological well-being of Runners and Walkers, as the calculated 'z' value is higher than the tabulated value at <0.0001 level of significance.

Table 1. Mean, SD and 'z' value of Psychological Well-Being of Runners and Walkers

Dimensions	Runners (n=100)		Walkers (n=100)		z	p-value
	Mean	SD	Mean	SD		
Autonomy	45.53	5.02	36.01	4.89	13.58	< 0.0001
Environmental Mastery	52.17	4.91	41.21	4.07	17.18	< 0.0001
Personal Growth	56.21	5.14	43.31	4.82	18.30	< 0.0001
Positive relations with others	53.01	4.84	46.64	5.21	8.95	< 0.0001
Purpose in life	52.45	4.92	42.36	4.05	15.83	< 0.0001
Self-acceptance	56.78	5.41	46.38	5.08	14.01	< 0.0001
Total	52.70	5.04	42.66	4.69	14.58	< 0.0001

NS: Non-Significant, <0.0005 Significant, <0.0001 Highly Significant

Table 2. Mean, SD and 'z' value of Psychological Well-Being of Runners and Walkers with respect to their age and place of exercise

Dimensions		Runners		Walkers		z	*p*-value
		Mean (N)	SD	Mean (N)	SD		
Age	25-35 years	298.76 (69)	4.35	276.54 (43)	4.13	26.80	<0.0001
	35-45 years	305.52 (31)	4.18	278.34 (57)	4.19	29.09	<0.0001
Place of exercise	Open	304.68 (28)	4.55	289.64 (48)	4.27	14.45	<0.0001
	Gym	280.31 (72)	4.16	274.79 (52)	4.09	7.34	<0.0001

NS: Non-Significant, <0.0005 Significant, <0.0001 Highly Significant

The psychological well-being of Runners is found to be significantly high (z= 14.58, *p*= <0.0001) as compared to Walkers. Further, a highly significant difference in all the dimensions of psychological well-being is also observed. Runners found to be significantly high on all the dimensions with Autonomy (z= 13.58), Environmental Mastery (z= 17.18), Personal Growth (z= 18.30), Positive relations with others (z= 8.95), Purpose in life (z= 15.83), Self-acceptance (z= 14.01). Aerobic exercises like walking and running/jogging have been proved to reduce psychological well being of a person. It improves mental health by reducing anxiety, depression, and negative emotions by improving self-esteem and cognitive function (Wolff et al, 2011). Study of Guszkowska showed that there is positive effect of exercise on emotional state of normal and diseased persons. Aerobic exercise like running/jogging for 15-30 minutes at the frequency of 3 times in a week are responsible for improvement in depression, anxiety and help in creating positive relations with others (Guszkowska, 2004). According to Callaghan P (2004), running/jogging is beneficial for mental health as it reduces nervousness, misery, and negative mood, and improves self-acceptance and cognitive functioning. Social interaction in aerobic activity is proved to be one of the more important predictors of well-being. This likely is due to the reasons that people are socialized to be social beings. This involves both learning to interact with others and acquiring a desire for social interaction. For these reasons, it was found that most people make great companions while they run and make positive relation with others in leisure activities (McTeer and Curtis, 1990). Table 2 reveals the Mean, SD and 'z' value of Psychological Well-Being of Runners and Walkers with respect to their age and place of exercise. There is a highly significant difference in the overall scores of psychological well-being with respect to both the categories i.e. age, and place of exercise, as the calculated 'z' value is higher than the tabulated value at 0.0001 level of significance. Psychological well-being is significantly high among runners of age group 35-.45 years (z=29.09, *p*= <0.0001), and those who prefers to run in Open (z=14.45, *p*= <0.0001). As age increases, a person tends to become more aware of coping up with oneself and with the environment. He/ she are well aware of his/her strength and limitations and are more pragmatic. Like younger generation, such people are more realistic and achievable aspirations and therefore they have good psychologically well being. They utilize their personal strength and work at high level which contributes in their better psychological well-being. Also, they develop good relationships with others, which contribute in their economic, social, personal and psychological growth. Psychological well-being is improved with age because increasing age brings with it a greater acceptance of one's lot in life (McTeer and Curtis, 1990). Result can be supported with the work done by Ransford &, Bartolomeo (1996), according to them aerobic exercise like running, subjective health and psychological well-being was much more strongly related to subjective health and well-being among older than younger respondents. From the above results it was also observed that people who run or walk in open have comparatively better psychological well-being as compared to those who prefer gym. Exercising outdoors reported feelings of revitalization, decreased anger, and increased energy. Also exercising outdoors has an overall positive effect on strength, or your sense of enthusiasm, aliveness, and well-being (Cleland, Crawford & Baur, 2008). In another study it was found that, those who ran in the open air showed higher levels of post-workout self-esteem than those who huffed away inside a gym.

Major findings

- Running/jogging is preferred by younger generations of age group 25-35 years while walking is preferred by people of age group 35-45 years.
- Most of the runners and walkers prefer to run/jog or walk in open as compared to gym.
- Overall psychological well-being was found to be better among runners.
- Psychological well-being was noted to be good among runners of age group 35-45 years.
- Similarly, runners who run/jog in open, found to have better psychological well-being as compared to those who prefer gym for their aerobic exercise.

Implications: The present study has a great importance for people who are engaged in exercises, Welfare organisations, counselors, psychologists, doctors, dieticians and health professionals. As psychological well-being was found to be better among runners, doctors, psychologists and other health professionals can motivate people suffering from depressions

and anxiety to involve themselves in more of running and participate in events like marathons, which will help them to cope up with their illness. It was found that doing aerobic exercises in open have great impact on the psychological well-being of a person. Health professional like gym trainer etc can plan outdoor events of such aerobic exercises which will be greatly beneficial for people suffering with day to day mental issues. The study can be beneficial for Welfare organisations which are working for health of common people. Such organisation can plan awareness events like walkathons, marathons etc for the health and safety of the common people.

Suggestions

- Similar comparative study can be conducted on both the genders.
- Study can also be conducted by comparing normal and ill persons (like those who are suffering from diabetes, thyroid or other metabolic disorders).
- Intervention (3-4 months) study can also be planned for those who are existing walkers/runners and those who are not involved in any kind of aerobic exercises.
- As childhood obesity is on its peak these days, another study can be planned for measuring psychological well-being of such children who are bullied in school and peer group.
- Similar studies can be conducted on the group who are involved in aerobic exercise and in yoga/gym.

Heart attacks, cholesterol and hypertension problems in on rise in age group 25-45 years, intervention study can be conducted on such patients.

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