



Role of Hiking Trekking in Lifestyle Diseases a Case Study of Baderkali Trekking Trail

Aijaz Ahmad Lone*

**Master of Physical Education (M Pe d) Jiwajji University Gwalior, Pandithpora, Langate
Jammu and Kashmir*

*Corresponding Email: *aijubks@yahoo.co.in*

Received: 18 May 2022

Accepted: 06 August 2022

Published: 11 September 2022

Abstract: *Hiking is one of the most accessible physical activities, carried out for recreation, pilgrimages, educational Field Trips. Security agencies patrols and has aesthetic value. The subtle distinction between Hiking and trekking is that of duration only. Hiking involves long walks along the trail for a single day mostly, while Trekking is done for a number of consecutive days and nights. These strolls have significantly become first line of defense in keeping lifestyle diseases including obesity, hypertension, diabetes, and fatty liver at bay. Patients with non-alcoholic fatty liver disease by brisk walks have not only shown weight loss, but also reduction in higher levels of the liver enzymes like Alanine transaminase (ALT), Serum glutamic pyruvic transaminase (SGPT), and Serum glutamic oxaloacetic transaminase (SGOT). Regular walking has substantiated the increase in High-density lipoprotein (HDL) and decrease in low-density lipoprotein (LDL). Scientists investigate the links between walking and lifestyle diseases to guarantee its health benefits. Subsequently practice should be carried forward to ensure health benefits and research should seek to understand as to how Trekking and life style diseases are interlinked.*

Keywords: *Hiking, Trekking, Lifestyle Diseases, Weight Loss.*

1. INTRODUCTION

Since the dawn of mankind, hiking and trekking have been integral part of human civilizations. Pastoral nomads used to go from one location to another by foot according to a predetermined seasonal or annual plan. This was because pastoral nomads did not have settled houses, agricultural methods, permanent paddocks or access to food for their livestock. The practice of trekking can be traced back to the rise of nomadism. In the past, people would migrate around to different locations in order to graze their cattle in the various grasslands and forest canopies.

Hiking is a common recreation taken by a non-athletic unprofessional person and usually lasts for a single day, while Trekking is carried out by professionals through rigid and tough terrains and would last for two or more consecutive days. These low cost physical activities are gaining rise in popularity all over the world, ushering in a new paradigm in the world of



physical activities and sports science. People from all walks of life actively participate in these activities, not only for the aesthetic value and recreation but also to overcome life style diseases.

Sedentary lifestyles have a great negative impact on our daily lives, from increase in the risk of obesity, diabetes, high blood pressure, to fatty liver, depression, and cardiovascular disease. The main contributor to body fat accumulation that raises the risk of lifestyle diseases is physical inactivity. Chronic conditions such Steatosis, Non-alcoholic steatohepatitis (NASH), fibrosis, cirrhosis, and liver cancer are the outcomes of obesity and non-alcoholic fatty liver. NokiTanak, Takefumi Kimura, and Eiji Tanaka In their study titled "Current Status, Problems, and Perspectives in Non-Alcoholic Fatty Liver Disease Research," NokiTanak, Takefumi Kimura, and Eiji Tanaka claims that the prevalence of non-alcoholic fatty liver disease (NAFLD) has increased in many nations among youngsters and the elderly alike due to the global expansion of sedentary lifestyles and diet westernization. Without high ethanol consumption, 25% of adults in the United States have fatty livers. In annual health examinations, about one-third of people in Japan were found to have NAFLD, amounting to an estimated 20 million NAFLD sufferers. Fatty liver disease is anticipated to affect 20% of Chinese people by 2020 in China, where it is growing at a rate of 0.594% annually. The most prevalent liver disease worldwide is NAFLD.

There is a connection between outdoor activities like hiking and trekking and lifestyle disorders. It is now a widely recognized and acknowledged truth that engaging in regular physical activity, such as going for a brisk walk, can help prevent lifestyle-related diseases. Engaging in physical exercise, (aerobic or anaerobic) can assist in the burning of calories and the loss of excess weight, which in turn can reduce the levels of high liver enzymes. According to Leon Adams "Current treatment recommendations are limited to weight loss & exercise, although several promising medications are on the horizon".

Research Objective

The primary purposes and goals of the study are to provide a description and conduct an analysis of the impact that hiking and trekking play in the prevention of lifestyle-related disorders such as diabetes, high blood pressure, obesity, and hypertension, as, alternate treatments, such as hiking and trekking on forest trails, are the primary focus of this research project, with the primary objective being the reduction of body fat and improvement of fatty liver disease.

2. MATERIAL & METHODS

To achieve the goals and objectives of the study, data were gathered using two different research approaches. The first method involved conducting a survey, using analytical and documentary methods, and collecting secondary data from reliable sources such books, websites on the internet, newspaper articles, and a variety of foreign periodicals and magazines.

Stratified random sampling was utilized to collect primary data. The researcher's assessment of who can supply the most relevant data and statistics to achieve the study's objectives will determine how to use stratified random sampling. 25 volunteers were questioned in a close-ended, semi-structured manner to achieve the objectives of the study. Fifteen to forty-five minute interviews some were at people' homes, some were at tourist attractions, and some



were near retailers. Informed consent was provided by the interviewees at home. Prior to home interviews, emphasis was placed on learning how to knock, open, and initiate a conversation. The study also ran a test to learn more about how trekking and hiking relate to lifestyle disorders. Repeated interviews were performed to unambiguously resolve data collection issues. For the data analysis in the study, programs like the SPSS 25.0 package and MS Excel were used.

Area of study

Badrakali Hiking & Trekking is one of the first trekking trails established by J&K forest department in the year 2021. It is located approximately 120 kilometres away from the capital city. With its dense, verdant forest canopies and well-maintained network of routes, this region offers a wealth of opportunities for hiking and trekking. While some parts of the trail are rather easy, others that involve climbing uphill can be quite difficult. The hike features several options and switchbacks that wind through dense vegetation. The communities of Gujjarpati, Yamlar, and Galganzara are visited throughout the journey. The researcher decided to conduct his study at the Baderkali eco-spot, because it provided him with the opportunity to talk to members of the local population as well as Trekkers, which made it easier for him to complete the research.

Reference of places;

Badrakali: is one of the forest blocks of forest department. It has historical religious importance. Shri Mata Badrakali is said to be resting on this Place, in a temple

BadrakaliAsthapan. The geographical location of the place is 34°22'32"N 74°12'56"E

Gujjarpati: Is one of the adjacent villages of Baderkali, just half a kilometer distance. The geographical location is:34°23'15"N 74°13'04"E

Yamlar; this is a tribal area which falls in the centre of trekking trail. The geographical location is as 34°22'56"N 74°12'06"E

Galganzara: the destination of trekking route, where the trail comes to an end. The geo location of the place is 34°24'46"N 74°12'15"E

3. RESULT AND DISCUSSION

The health of nomads in the past was substantially aided by adopting a lifestyle that was less sedentary, eating organic food, and taking long walks with their livestock. According to Warburton De, there is an almost perfect correlation between the amount of time spent being physically active and one's current condition of health. The research comparing nomadic lifestyles to sedentary lifestyles has led researchers to the conclusion that nomadic lifestyles are associated with fewer or no lifestyle diseases, whereas sedentary lifestyles put people at risk for developing lifestyle diseases. In light of this fact, researcher from Handwara town conducted a study on the Badrakali Hiking and Trekking Trail in association with 8 volunteers with obesity and Non Alcoholic fatty liver from Handwara town.

Going on a hike is a low cost and economical exercise. Hiking has been convenient agent to promote health benefits in their study paper titled "Hiking as a low-cost, accessible intervention to promote health benefits." It is an outdoor physical activity with possible health advantages.



Trekking significantly aids with weight loss. Walking promotes calorie consumption, which aids in losing those extra pounds that are stored as fat.

Nonalcoholic fatty liver disease is on the rise, but it can be slowed down by eating healthily, exercising (such as walking), and maintaining a healthy weight.

One of the life threatening conditions that can result in a heart attack is high cholesterol levels in the blood. There are 2 types of cholesterol High Density lipoprotein (HDL) and Low density lipoprotein (LDL) Trekking could increase good cholesterol and decrease bad cholesterol by taking a walk for an hour, three to four times per week.

3.1 Four Week’s Hiking and Trekking Programme

The Badrakali Forest Block of the Langate Forest Division is main agency for the establishment of hiking and trekking trails in the year 2021. These trails include three primary routes: Badrakali-Galganzara (8 kilometres), Badrakali-Machipora (7 kilometres), and Badrakali-Bangus (6 kilometres) (16 kms). For research objectives, the aforementioned hiking path was followed. On this trail, eight Trekkers from a variety of backgrounds and walks of life, most of them diagnosed with life style diseases such as obesity and fatty liver, volunteered to go hiking and trekking.

The program began on June 19, 2022, and continued till July 17, 2022. The plan of action was successful and special thanks to the contributions of the volunteers, who actively participated in its implementation and execution. The most important findings from this trial were a reduction in body fat and an improvement in liver function. The participants were taken out on the route three times a week, and they hiked an average of ten kilometres per day. On the weekends, the volunteers would embark on a journey of approximately 30 kilometres, which would take them anywhere from two to three days to complete. The itinerary for the hike can be found in the following table, which covers the time period from June 16th to July 17th, 2022.

Table (1.1)

	Day	Activity	Distance Covered	Route Chosen
WEEK 1st	Sunday	Hiking	10 Kms	Badrakali To Galganzara
	Monday	-do-	10 Kms	Badrakali To Machipora
	Tuesday	-do-	10 Kms	Badrakali To Machipora
	Wednesday	Rest	Rest	Rest
	Thursday	Rest	Rest	Rest
	Friday	Hiking	10 Kms	Badrakali To Galganzara
	Saturday	Trekking	30 Kms	Badrakali To Mankal
	Sunday	Trekking	30 Kms	Mankal to Bnagus
WEEK 2nd	Monday	Rest	Rest	Rest
	Tuesday	Hiking	10 Kms	Badrakali To Machipora
	Wednesday	-do-	10 Kms	Badrakali To Galganzara
	Thursday	-do-	10 Kms	Badrakali To Galganzara
	Friday	-do-	10 Kms	Badrakali To Machipora
	Saturday	Trekking	30 Kms	Badrakali to Kashtwar
	Sunday	Trekking	30 Kms	Kashtwar to Bangus



W E E K 3rd	Monday	Rest	Rest	Rest
	Tuesday	Rest	Rest	Rest
	Wednesday	Hiking	10 Kms	Badrakali To Machipora
	Thursday	Hiking	10 Kms	Badrakali To Galganzara
	Friday	Hiking	10 Kms	Badrakali To Galganzara
	Saturday	Trekking	30 Kms	Sanzipora to Nilwan
	Sunday	Trekking	30 Kms	Nilwan to Bangus
W E E K 4th	Monday	Rest	Rest	Rest
	Tuesday	Rest	Rest	Rest
	Wednesday	Hiking	10 Kms	Badrakali To Galganzara
	Thursday	-do-	10 Kms	Badrakali To Galganzara
	Friday	-do-	10 Kms	Badrakali To Machipora
	Saturday	Trekking	30 Kms	Badrakali to Mankal
	Sunday	Trekking	30 Kms	Mankal to Bangus

Source: Primary data

The volunteers began to lose body fat with each passing day as they hike an average of 10 kilometres each day and 30 kilometres on the weekends. The weight that was recorded just before the beginning of the action was lower, when compared to the weight that was recorded on the very last day of the program. In the majority of the individuals, there was an average loss of one kilogram in body weight; nevertheless, there were three participants who demonstrated unexplained weight loss during the course of action. After additional investigation, it was discovered that the cause had been a decrease in the amount of calories that they were consuming. Their diet plan had been sugar free and oil free, on the trail as well as off the trail. The amount of weight lost by the volunteers as a result of implementing the plan of action is detailed in the table that follows (1.2).

Body weight loss Table (1.2)

S.No	Name of Volunteer	Age in years	Weight Before study	Weight After Study
01	Ab Kabir Bhat	58	90 kg's	86 kg's
02	Liyaqat Ali Dar	45	88 kg's	87 kg's
03	Fayaz Ahmad Lone	43	75 kg's	73.50 kg's
04	RubeenaAkhtar	37	56 kg's	53 kg's
05	SurayaNabi	30	52 kg's	50.60 kgs
06	Adnan Qayoom	28	74 kg's	70 kg's
07	Suhail Ahmad	28	70 kg's	69 Kg's
08	Aamir Bhat	25	68 kg's	67.40 Kgs



S.No 01, 04 & 06 showed drastic weight loss due to heavy restrictions in calorie intake. It is important to note that in addition to keeping a record of their weight before and after the weight loss, volunteers were also required to undergo a liver function test. After the course of action, some of the volunteers showed a decreased level of liver enzymes, whereas other participants showed an elevated level of liver enzymes before the course of action. The data is documented and displayed in table (1.3).

S.No	Name of Volunteer	Age	Date of 1 st Test	Results			Date of 2 nd test	Results	
				SGOT	SGPT	Normal		SGOT	SGPT
01	Ab Kabir Bhat	58	14/06/2022	67	54	Normal Range for SGOT is 0-32 U/L & Normal Range for SGPT is 0-33 U/L	19/07/2022	58	44
02	Liyakat Ali Dar	45	-do-	57	45		20/07/2022	52	38
03	Fayaz Ah Lone	43	-do-	62	55		20/07/2022	54	46
04	Rubeena Akhtar	37	-do-	60	58		-do-	44	38
05	Suraya Nabi	30	-do-	38	35		-do-	34	33
06	Adnan Qayoom	28	-do-	58	54		17/07/2022	42	40
07	Suhail Ahmad	28	-do-	40	38		19/07/2022	34	32
08	Aamir Bhat	25	-do-	35	36		19/07/2022	32	33

Source: SRL Diagnostics for biological References interval units.

3.2 Views of respondents, other than volunteers from adjacent villages of trekking Trail

The study adopted survey method to collect the information from 25 respondents in both Kashmiri and Urdu language. The respondents were both male and female for the most part browsed remote sensing area of Baderkal Handwara. The 3 point scale has been put into practice for finding the outcome from the respondents. Viz Y- yes N- no and NI- No idea. The 3 point scale is referenced as below.

Analysis and interpretation

S.No	Question	References		
		Yes	No	No Idea
01	Is walking (Trekking) through forests beneficial for health?	20 (80%)	2 (8%)	3 (12%)

Table 1(a) this study shows that there is a positive impact on the health of 25 respondents from Baderkali and the villages that are near to it. The empirical research asks participants to provide their responses to the topic, "Is hiking in forests advantageous for health?" There are



a total of 25 participants in the study. Eighty percent of those who participated in the survey held the opinion that hiking and trekking have a variety of favourable effects on one's health, whereas twelve percent stated that they had no idea due to a lack of understanding and semantic hurdles. In addition, very scanty just 2% of people have come across such a problem and observed the negative effects it has had.

S.No	Question	References		
		Yes	No	No Idea
02	Could walking help prevent life style diseases?	16 (64%)	4 (16%)	5 (20%)

Table 1(b) reveals the opinions of respondents regarding the prevention of lifestyle diseases, where the majority of respondents believed that lifestyle diseases can be prevented to a greater extent by trekking, while 20% of respondents were unaware of the association between hiking and trekking and lifestyle diseases. When asked, 20% of the people who responded said "No" because they lacked the necessary expertise and experience.

S.No	Question	References		
		Yes	No	No Idea
03	Is trekking beneficial for body weight loss?	18 (72%)	3 (12%)	4 (16%)

Table 1(c) revealed the correlation between going on hiking trips and losing weight. According to the results of the survey, 72% of respondents believe that trekking has a favourable impact on weight reduction, 3% of respondents believe that trekking does not have a beneficial impact on weight loss, and 16% of respondents are unaware of the connection between trekking and weight loss. It is relevant to highlight here that, among the respondents, 72% reported that some of them had lost weight as a result of walking in the forests.

S.No	Question	References		
		Yes	No	No Idea
04	Do people come here on the trail to walk, for health benefits?	20 (80%)	3 (12%)	2 (8%)

Table 1 (d) reveals the number of individuals who are knew people coming on hikes for the purpose of improving their health. It was discovered that 80% of respondents have seen and witnessed individuals crowding on the trail in order to obtain health benefits, while 12% of respondents claimed that people don't come here for health benefits but other purposes. Eight percent of respondents have no idea whether or if people travel here for the purpose of seeking health advantages.

S.No	Question	References		
		Yes	No	No Idea
05	Have you been part of trekking programs held on	16	9	



	this trail?	(64%)	(36%)	(0%)
--	-------------	-------	-------	------

Table 1 (e) revealed the significant amount of persons that were actively participating in this outdoor activity. They have previously visited the jungle, but not for any particular cause. Approximately 64% responded yes to have participated in the trekking programs been held on this trail. 36% of those polled “did not take part” in the activity because of the demands of their employment, businesses, or agricultural responsibilities.

4. CONCLUSION

Badrakali Hiking & Trekking was officially inaugurated by the Jammu and Kashmir Forest Department in the Langate Forest Division. Since that time, a large number of people have flocked to the location for obtaining beneficial health effects and discovering alternative treatments for lifestyle diseases.

Researcher got an opportunity to identify a connection between hiking and lifestyle diseases, as well as the possibility to work on it, with the establishment of this centre. The research was carried out in two stages: the first stage involved active participants, and the second stage involved passive responders. In the first phase of the research, there were a total of eight persons who volunteered their time from the town of Handwara. In the second portion, there were total of 25 respondents who were contacted from the neighbouring villages of Badrakali hiking trail.

Before the start of the study, the results of the tests were documented, and then again after the study was over, additional tests were done. The results of the experiments are discussed in the study, and it was substantiated that long distance hiking and trekking have the potential to serve as an absolute alternative therapy and can significantly improve physical health. In addition, it would prevent people from poly-pharmacy and taking an excessive amount of drugs to recover.

There are countless opportunities for hikes and treks in Kashmir, which has magnificent mountain ranges and peaks. From traversing steep inclines to ambling leisurely around winding labyrinths, from squeezing through tight spaces to traversing rugged terrain. It satisfies all of the criteria for a good hiking trail. In spite of the fact that Jammu and Kashmir is a paradise on earth and has immense potential for ecotourism, very little of it has been explored so far. It may be a long rope to hoe, but not impossible to open vistas for Hike n Trek. It is primary responsibility of the government to enhance the financial potential for ecotourism hotspots. Ecotourism offers a variety of benefits, including a monetary contribution to the state's gross domestic product as well as health benefits.

Conflict of interest and Funding

The author states unequivocally that they do not have any known financial conflicts of interest or personal ties that could have given the appearance of influencing the work that is disclosed in this paper.

Acknowledgement

I want to express my sincere gratitude to everyone who assisted me in finishing this job. I owe everyone a sincere debt of gratitude. The motivation that helped me develop a novel plan for completing my research is due to the authors and scientists who had previously written



publications on a related topic. Many thanks to everyone who participated in the interview schedule by taking the time and making the effort to do so.

5. REFERENCES

1. Anderson, Z., & Jones, M. (2020). Rethinking the Role of a Mobile Computing in Recreational Hiking. In *HCI Outdoors: Theory, Design, Methods and Applications* (pp. 291-305). Springer, Cham.
2. Brockelman, W. Y., & Dearden, P. (1990). The role of nature trekking in conservation: A case-study in Thailand. *Environmental Conservation*, 17(2), 141-148.
3. Brymer, E., & Lacaze, A. M. (2013). The benefits of ecotourism for visitor wellness. *International handbook on ecotourism*.
4. Chavan, R. R. (2021). Regularly practice & development of physical fitness it is effective for healthy life style of student.
5. Collins-Kreiner, N., & Kliot, N. (2017). Why do people hike? Hiking the Israel national trail. *Tijdschrift voor economische en sociale geografie*, 108(5), 669-687.
6. D'souza, T. B., & Puttaraju, S. (2020). Examining the influence of trekking in nature on adaptive response to stress in individuals. *Indian J. Psycho*, 8, 2349-3429.
7. Dar, S. A. (2022). Bangus The Unabated Destiny Due To Lack Of Political Leadership "Explored The Unexplored. *British Journal of Global Ecology and Sustainable Development*, 3, 42-54.
8. Das, M., & Chatterjee, B. (2015). Ecotourism: A panacea or a predicament?. *Tourism management perspectives*, 14, 3-16.
9. Fritz, A. (2013). Navigate your way to wellness-wellness. *HR Future*, 2013(12), 10-11.
10. Gonda, T., & Csapo, J. (2019). The Role of Active Tourism and Physical Activity in the Travel Habits of the Hungarian Population. The Results of a Representative Survey. *Journal of Tourism Challenges and Trends*, 12, 25-45.
11. Grénman, M., & Raikkonen, J. (2017). Taking the first step: From physical inactivity towards a healthier lifestyle through leisure walking. In *The Routledge International Handbook of Walking* (pp. 288-299). Routledge.
12. Humra, H., Turksoy, N., & Inan, Ç. (2016). „The Role of Tourism Activities in Rural Development“, na. In *IBANESS Conference Series*.
13. Ichinohe, S. (2011). Alternative Medicine and Health Promotion. In *Asian Perspectives and Evidence on Health Promotion and Education* (pp. 87-98). Springer, Tokyo.
14. Kang, S. J. (2014). Trekking exercise promotes cardiovascular health and fitness benefits in older obese women. *Journal of exercise rehabilitation*, 10(4), 225.
15. Kurz, M. Assessment of biomechanical parameters during in-field mountain hiking.
16. Lawton, L., & Weaver, D. (2001). Nature-based tourism and ecotourism. *Tourism in the twenty-first century: reflections on experience*, 34-48.
17. Lee, S. A., Manthiou, A., Chiang, L., & Tang, L. R. (2018). An assessment of value dimensions in hiking tourism: Pathways toward quality of life. *International Journal of Tourism Research*, 20(2), 236-246.
18. Leister, W. (2019). Strengthening tourists' engagement in guided hiking and trekking. *Administrative Sciences*, 9(2), 45.
19. Magray, N. A. (2018). Ecotourism: an adversity in itself with special reference to Jammu& Kashmir. *International Journal of Global Science Research*, 5(2).



20. Malik, I. H. (2015). Socio-economic, political and ecological aspects of ecotourism in Kashmir. *Best Int J Hum Arts Med Sci (BEST: IJHAMS)*, 3(11), 155-166.
21. Niedermeier, M., Grafetstätter, C., Hartl, A., & Kopp, M. (2017). A randomized crossover trial on acute stress-related physiological responses to mountain hiking. *International Journal of Environmental Research and Public Health*, 14(8), 905.
22. Nordin, M. R., & Jamal, S. A. (2021). Hiking tourism in Malaysia: Origins, benefits and post Covid-19 transformations. *Int. J. Acad. Res*, 11, 88-100.
23. Orams, M. B. (1995). Towards a more desirable form of ecotourism. *Tourism management*, 16(1), 3-8.
24. PV, A. B., & Michael, M. B. C. An article on preventing health threats and life style diseases through life style change.
25. Zhang, Y., Wong, I. A., Duan, X., & Chen, Y. V. (2021). Craving better health? Influence of socio-political conformity and health consciousness on goal-directed rural-eco tourism. *Journal of Travel & Tourism Marketing*, 38(5), 511-526.