Kingsley E. (2024) IMPACT OF HIGH-INTENSITY INTERVAL TRAINING ON FAT LOSS IN OBESE INDIVIDUALS: CLINICAL OUTCOMES. Revista Internacional de Medicina y Ciencias de la Actividad Física y el Deporte vol. 24 (98.1) pp. 49-65
DOI: https://doi.org/10.15366/rimcafd2024.98.1.004

ORIGINAL

IMPACT OF HIGH-INTENSITY INTERVAL TRAINING ON FAT LOSS IN OBESE INDIVIDUALS: CLINICAL OUTCOMES

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Recibido 05 de abril de 2024 **Received** April 05, 2024
Aceptado 05 de diciembre de 2024 **Accepted** December 05, 2024

ABSTRACT

In this study, weight, body composition, and metabolic state of obese college students were compared between the effects of high-intensity interval training (HIIT) and moderate-intensity continuous training (MICT). High-intensity interval training has been linked to fat reduction in obese people, according to the research study. Forty obese college students, aged 18 to 25, made up the study's sample; 20 were men and 20 were women. The participants were assigned at random to either the HIIT or the MICT group. With both groups, an eight-week intervention consisting of three weekly sessions with training on different days was carried out. The MICT group was trained with 35 minutes of continuous aerobic exercise at 60–70% of maximum heart rate. For a total of 28 minutes, the HIIT group engaged in four rounds of alternating high-intensity and low-intensity activity. Research studies utilised SPSS software to measure the study and produced results that included chi-square analysis, ANOVA, and correlation coefficient analysis, which also clarified the results of the paired sample test between them. Four minutes of high-intensity exercise at 85–90% of maximum heart rate and three minutes of recovery exercise at 50–60% of maximum heart rate comprised the two phases. Heart rate monitoring was done on both groups before to and after the training sessions in order to ensure that the training intensity was correct. There was no discernible variation in ALT amongst the male subjects. However, a significant distinction was apparent between the female MICT and HIIT cohorts ($P<0.01$). The overall outcome demonstrated the beneficial and significant effects of high-intensity interval training on fat reduction. All things considered, HIIT and MICT have both shown promise for obese college students. Of these, HIIT is more successful than MICT regarding BF% and biochemical markers.

KEYWORDS: High-Intensity Interval Training (HIIT), Fat Loss (FL), Obese Individual (OI), Clinical Outcomes (CO)

1. INTRODUCTION

Obesity is a medical problem in which there is more fatty tissue in the body than standard adipose tissue amounts according to age, height, and gender of the human body. Obesity is termed as the mother of all other diseases because it may lead to many other fatal diseases related to the kidney, liver, heart, lungs, and all other vital body organs. So, there is a need for suitable measures to reduce the increasing factor of obesity in modern society. Exercise may be considered the most effective way to reduce body fat and maintain Physical and mental health(Shiraev & Barclay, 2012). However, in Obese Individuals, normal physical exercise cannot help so much to reduce body fat. So, there is a need for special high-intensity interval training for fat loss in Obese Individuals. Although some other exercises are suggest that obese individuals but high intensity is considered best of them (Wang & Zhu, 2023). The e high-intensity interval training has got much importance in recent years. High-intensity interval Training can be used to describe a special workout method in which there are short bursts of high-intensity training. After this high-intensity interval training, there is a period of rest or low-intensity training(Smith-Ryan et al., 2015). It has been seen that moderate-intensity continuous training is also effective in reducing body fat. Still, the outcomes of high-intensity interval training are more important than those of moderate-intensity continuous training. There is a greater reduction of body fat in high-intensity interval training. This High-Intensity Interval Training helps reduce body weight in different ways. The first important aspect is that there is more calorie expenditure in high-intensity interval training than in moderate-intensity continuous training. There are many ways by which calorie burns increase during high-intensity interval training. For example, all body muscles are intensely used during high-intensity interval training(Boutcher, 2011; Siegel, 2023). The skeletal muscles work better and more intensely; the cardiac functions also increase because of an increased heart rate, and the movement in smooth muscles increases due to high energy demand. In these ways, the number of calories burned increases in the body. The other reason for the high expenditure of calories in the body is anaerobic activity. The muscles rely on aerobic respiration to get energy. Still, sometimes, where there is intense physical activity in the body, the need for energy in the body cannot be fulfilled by aerobic respiration, so there is a need to carry out anaerobic respiration in the body. Because of anaerobic Activity, the breakdown of stored glucose increases in the body, which is also responsible for increased calories burned in the body. The other important aspect responsible for the increased expenditure of calories in the body is lactate production body(da Silva et al., 2020). Recent studies have proved that because of High-Intensity Interval Training, there is more lactate production in the body, and because of this lactate production, there is a need to remove it;

its removal demands energy, so this factor also uses calories for energy. The other important aspect responsible for weight loss because of high-intensity interval training is increased lipolysis body as a result of high-intensity interval training. As we know, extra fats are stored in the body in the form of fatty tissue, so these adipose tissues cause obesity. However, by high-intensity interval training, there is more breakdown of fats, and products of this breakdown are entered into the bloodstream(Duan et al., 2023; Guo et al., 2023).

In this way, the quantity of fats in the body decreases, and ultimately, obesity also decreases. Some aspects are related to the post-exercise process, which is also responsible for reducing body fat. Even after exercise High-Intensity Interval Training, there is more oxygen consumption in the body during the exercise period; the increased oxygen consumption in the body is also responsible for calories burned to reduce body fat. High-intensity interval Training is also related to body metabolism to reduce body weight. We can define metabolism as the set of important reactions in the body. In the exercise period of high-intensity interval training, there is an enhanced metabolism rate, which is responsible for the nutrient supply in the body and reducing the amount of stored fats in the body(Mendelson et al., 2022). During high-intensity interval training and the exercise period, there is fatter oxidation, which reduces obesity in the body. Growth hormones are produced in the human body in variable amounts depending on age, gender, and other factors. This growth hormone also works for muscle gain and reduces the body's stored fat. During the post-exercise period of high-intensity interval training, there is an enhancement in the production of growth hormones in the body, which works very well to eliminate obesity. The body's glucose metabolism is also related to insulin sensitivity. When there is better insulin production and sensitivity in the body, there is enhanced and improved metabolism(Karlsen et al., 2017).

This aspect also works for better outcomes of high-intensity interval training. All types of fatty tissues do not cause obesity in the body. A special type of fatty tissue, brown adipose tissue, helps lose body weight. By high-intensity interval training, there is increased production of Brown fatty tissue in the body. Along with reducing body fats, high-intensity interval training has other benefits. For example, high-intensity interval training is best for cardiorespiratory fitness. Cardiorespiratory fitness means the fitness of the bodysuit is related to the respiratory and cardiovascular systems(Gotthelf et al., 2018). The body has better oxygenation and transportation if there is fitness in this aspect of physical health. The other additional benefit is that it helps reduce diastolic blood pressure in the body up to a few mm of Hg, indicating better physical health. The lipid profile also improves because of High-Intensity Interval Training. These aspects convince us that high-intensity interval training has many benefits(D'Amuri et al., 2021; Guan et al., 2023; Liu et al., 2019).

1.1 Research Objective

The main objective of this research is to understand the use of high-intensity interval training for weight loss in obese individuals. This overview effectively enumerated various applications of high-intensity interval training for the physical and mental health of obese individuals. It has helped reduce the increasing rate of obesity worldwide. The research study determines the impact of high intensity interval training on fat loss. The research paper is divided into five sections. The first portion represents the introduction related to high-intensity interval training and fat loss. The first section also describes the research objective; the second portion represents the literature review, and the description including methodology, including tools and techniques. The fourth section represents the result and its descriptions. The last section summarized the overall research study and presents recommendations about the topic.

2. Literature Review

Researchers reveal that stoutness therapy rules recommend temperate-force consistent preparation, yet the sufferer's consistence to such sign remaining parts miserable. Extreme cardio exercise is a period-saving preparation manner for whom metabolous impacts aren't satisfactory. Studies were meant to decide if a twelve-week extreme cardio exercise was more powerful than temperate-force consistent preparation toward fat reduction in stout grown-ups. In solid grown-ups along heftiness, extreme cardio exercise contrasted & temperate-force consistent preparation prompted comparative fat reduction & cardiac danger elements advancement yet brought about a bigger expansion in cardio-pulmonary wellness beyond a more limited time(D'Amuri et al., 2021). This precise audit is led to assess the impact of extreme cardio exercise & temperate-force consistent preparation on corpse piece & cardio-pulmonary wellness in the youthful & moderately elderly. The impact of extreme cardio exercise on losing weight & cardio-pulmonary wellness in the youthful & moderately elderly is like or best than temperate-force consistent preparation, which that maybe affected by epoch (Eighteen to forty-five Years), entanglements (corpulence), span (greater than six Weeks), recurrence, & extreme cardio exercise stretch(Guo et al., 2023). Studies suggest that liver obesity is an indicator of metabolous disturbances related to stoutness, therefore workout preparation is a possible treatment. Given reviews that straightforwardly contrast extreme cardio exercise & control (six examinations), extreme cardio exercise was gainful toward advancing a decrease in Liver obesity. The outcomes of this study propose that extreme cardio exercise might prompt enhancements in Liver obese of fleshy & fat grown-ups along with metabolous issues regardless of no fat reduction(Khalafi & Symonds, 2021). This research indicates that an Extreme Cardio Exercise scheme with next to no dietetic alterations may work on actual wellness & endothelium capability amid young people. These discoveries are pathologically pertinent because

they sustain a decrease in endothelium harm that goes before the improvement of coronary artery disease(da Silva et al., 2020). Scholars suggest that PA is a foundation for treating corpulence & metabolous disorders. Studies show that very miserable-magnitude span preparation, in any event, whenever performed at temperate power, is adequately successful in upgrading cardio-metabolous wellbeing in large metabolous disorder sufferers. The discoveries of this study support the essential job of practice in the therapy of corpulence & metabolous disorder(Reljic et al., 2021). This deliberate survey & postmodern investigation of riffled dominated preliminaries contrast corpse combinative modifications involving heavyweight, muscle-to-obese ratio, & fatless weight, among various sorts of extreme cardio exercise also with respect to a Con (for example., no activity) requirement. Generally, pedaling-founded extreme cardio exercise might give the best consequences for corpse organization because of its capacity to diminish muscle to obese ratio & heavy weight whilst expanding fatless weight(Khodadadi et al., 2023). Studies plan to measure the impacts of extreme cardio exercise on cardio-pulmonary wellness by taking into account possible mediators & to portray portion reaction connections of extreme cardio exercise factors that might boost cardio-pulmonary wellness upgrades in obese & large grown-ups. The portion reaction connection examination gave a few starters information in regard to the preparation time frame, preparing power, & meeting span. Be that as it may, it's as yet impractical to at present give exact proposals(Wang et al., 2021). The point of this orderly audit was to decide the impact of extreme cardio exercise versus temperate-force consistent preparation on Liver obesity in grown-ups. Extreme cardio exercise evokes practically identical enhancements in Liver obese to temperate-force consistent preparation though frequently compelling fewer power & duration responsibilities. Additional examinations should be embraced to evaluate the general significance of high-impact practice solution factors, like force, on the Liver obese(Sabag et al., 2022). Studies elaborate that compared with temperate-force consistent preparation, extreme cardio exercise isn't unrivaled at decreasing metabolic syndrome, Carnosine or expanding emaciated brawn bulk in grown-ups along adiponectin. The two preparation forms further developed metabolic syndrome, brawn bulk & corpse constitution(Gallo-Villegas et al., 2022). This research aims to figure out what kind of extreme cardio exercise solutions will be more successful in lessening obese gathering, aggravation, & working on metabolous transformation & workout execution in moderately elderly & more established obese grown-ups. The outcomes show that an 8-week long extreme cardio exercise or Medium-extreme cardio exercise intercession (3 meetings each Week, thirty-two min for every meeting) might be a viable methodology for working on the high-impact limit(Lee et al., 2024). The findings of this study show regardless of the quantity of preliminaries being and & the Rating of Suggestions Evaluation, Advancement, & Valuation of entire results being extremely despicable, extreme cardio exercise + starvation emphatically affect the corpse constitution of obese & stout grown-

ups, & fundamentally further develops maximal oxygen uptake. For grown-ups who are obese & and have extended haul multimorbidity, extreme cardio exercise + starvation was a preferred method for further developing fasting plasma glucose over extreme cardio exercise solo or starvation solo(Guo et al., 2022). Studies determined that extreme cardio exercise has been intended like a period proficient activity convention to work on metabolous wellbeing; however, straightforward correlations along greater-quantity temperate-force consistent preparation below unaided contexts are restricted. Studies and discoveries propose that base-quantity extreme cardio exercise may evoke a comparable advancement of cardiac wellness as customary greater-quantity temperate-force consistent preparation fleshy/large moderately elderly males(Poon et al., 2020). Studies claim that extreme cardio exercise & temperate-force consistent preparation decreased visceral adipose tissue by more than three & a year. For Liver obese, extreme cardio exercise would generally furnish a somewhat more noteworthy decrease contrasted along temperate-force consistent preparation. The discoveries of this study sustain extreme cardio exercise like gainful assistance or option in contrast to temperate-force consistent preparation for lessening instinctive & Liver obesity in sufferers of coronary artery disease(Taylor et al., 2020). Studies aimed to evaluate either extreme cardio exercise, solo or along Citrulline, further develop brawn capability, utilitarian limits, fat Kleenex quality articulation, & mitochondria-targeted cross-check procedures in overweight, more seasoned grown-ups. The extreme cardio exercise was displayed to further develop brawn & mitochondria-targeted capability in solid youthful & elderly grown-ups & to further develop corpse constitution in overweight, more seasoned grown-ups(Marcangeli et al., 2022). Scholars explain that an extremely low-cellulose, extremely-caloric nutriment, whether in confinement or in blend along extreme cardio exercise, was displayed to prompt a critical decrease in visceral adipose tissue multitude & corpse synthesis factors. Extreme cardio exercise solo didn't cause such consequences for corpse constitution; however, it further developed practice limit(Cipryan et al., 2021). This study aims to analyze the impacts of extreme cardio exercise on muscle-to-obese ratio pointers in corpulent & stout grown-ups. The results of this research indicate that extreme focus practice preparation may actuate corpse constitution upgrades in corpulent & stout people. Extreme cardio exercise might be a period-proficient part of calorie restriction schemes(Vale et al., 2020). This research surveyed the impacts of about a month & a half of extreme cardio exercise or temperate-force consistent preparation on oxygen-consuming wellness & corpse constitution in guys along corpulent. Temporary (a month & a half) pedalling preparation didn't further develop corpse structure in guys along stoutness. Upgrades in oxygen-consuming wellness were similar among task-paired extreme cardio exercise & temperate-force consistent preparation(Ram et al., 2020). Researchers contrast the impacts of extreme cardio exercise & temperate-force consistent preparation on adiponectin awareness & different

significant metabolous transformations in grown-ups with corpulence. The discoveries of this explore sustain the thought that the adiponectin-sharpening impacts of the two extreme cardio exercises & temperate-force consistent preparation are intervened by considerations coming from the latest activity séance(s) instead of variations that build along preparing(Ryan et al., 2020). Studies show that the two extreme cardio exercises & temperate-force consistent preparation are powerful in further developing maximal obese corrosion in corpulent & stout grown-ups, & they make comparable impacts. Due to the absence of reviews analyzing the impact of extreme cardio exercise on maximal obese corrosion in corpulent & stout grown-ups & the extraordinary variety in the preparation conventions in the current examinations, scholars couldn't produce stable proposals for preparing(Yin et al., 2023). Scholar studies reveal that taking part in extreme cardio exercise or dart intervals preparation may further develop obese corrosion over workout, along with bigger impacts anticipated toward extended preparation diets & people with stoutness. Whilst certain impacts appear to be little, they might be significant in comprehensive ways to deal with improved metabolous wellbeing & oversee weight(Atakan et al., 2022). Studies purpose is to analyze the impacts of extreme cardio exercise & temperate-force consistent preparation on grown-ups along obesity & stoutness. Extreme cardio exercise & temperate-force consistent preparation didn't altogether contrast in that frame of mind on load, body mass index, midriff perimeter, or muscle-to-obese ratio mass in grown-ups along stoutness. However, a temperate valuable impact of extreme cardio exercise was seen on adiponectin responsiveness(Sanca-Valeriano et al., 2023). Studies explain that practice preparing to shrink extreme cardio or temperate-force consistent oxygen-consuming activity lessens intrahepatic triglycerides & instinctive fats in diabetes corpulent sufferers along with alcohol-free elevated Liver infection. No distinctions were seen among the impacts of the two activity schemes on diabetes stout sufferers along alcohol-free elevated Liver infection(Abdelbasset et al., 2020). Scholars reveal that extreme cardio exercise isn't better than continuous cardio exercises in diminishing body obesity or stomach instinctive obesity in people portrayed by an overabundance burden. Although extreme cardio exercise displayed advantageous consequences for cardio-pulmonary wellness, complete cholesterin & starvation Blood dextrose were contrasted with continuous cardio exercises(Kramer et al., 2023). Researchers elaborate that over extreme focus workout, sugars are the principal wellspring of power, though, with despicable-power workout, obesity turns into the transcendent power origin. These perceptions infer that extreme cardio exercise & cardio interval preparation may diminish obese multitude over episodes of activity however being related with diminish degrees of obese corrosion(Kolnes et al., 2021). The review intended to research and deliberately survey the proof connecting with the impacts of extreme cardio exercise v/s temperate-force constant preparation on cardiac capability like blood vessel distance across, blood vessel solidness, beat wave

speed, blood stream, & so forth in people with obese & stoutness. Extreme cardio exercise is a greater viable & Time-proficient activity toward improving cardiac capabilities in people along corpulent(Shishira et al., 2024).

3. Tools Techniques, Methods of Research

The research study demonstrates that high intensity interval and its impact on fat loss. The research based on primary data analysis for determine the research used SPSS software and generate result included correlation coefficient analysis the linear regression analysis also that explain the descriptive statistic result between them. A large number of the population around the world is facing obesity-associated health problems. Obesity is one of the common health problems in developing countries as it causes other serious health disorders. Eating disorders and other complex disorders result from obesity. Obese people are at higher risk of developing diabetes. Controlling weight gain through exercise strategies is the only solution to obesity. Some people use medications to lose weight but these medications have more side effects than benefits Health professionals suggest obese people lose weight in trough healthy way. By overcoming the problem of obesity in developing and developed countries, the mortality rates due to obesity greatly decreases. There are many treatments for obesity but the only effective and healthy way is to stop eating unhealthily and do sports to physical exercise activities. By actively taking part in physical exercises people tend to lose weight fast Exercise helps people to lose weight and maintain a healthy body. The improvement in CRF is due to the positive impact of exercise on the body. obese people are provided with exercise-based training ranging from moderate to high First onset people are provided with aerobic exercises so that their body can adapt to exercise routine then gradually from moderate to high-intensity training sessions are provide. After aerobic exercise-based training, obese people are provided with level two training. Level two training is MICT. Moderate training is characterized by forty to six percent oxygen uptake during exercise. This type of exercise training is safe and less injury risk is associated with it. The time suggested for moderate exercise-based training is almost 400 minutes.to take 7 hours to do moderate exercise is impossible for people to perform, so most people soft form moderate to high-intensity training for weight loss. The only drawback of moderate exercise is that it requires a lot of time to show its effectiveness on obese people. High-intensity training is ideal for people who are obsessed and want to lose weight in a short period.HIIT is based on intervals. The first interval includes training at high intensity then comes the second interval which is based on the period of moderate-intensity exercise. These two intervals shift during the whole session of HIIT Studies data made on MICT and HIIT predicts that HIIT is far better than MICT as it provides improved results in obese people Moreover, the composition of the body of obsess people improves using the HIIT-based training exercise. There are several ways to perform HIIT For example move a bicycle pedal as fast as you

can for almost forty seconds then take the rest of 20 seconds. Repeat this process two or three times until your first set of exercises is completed. The bicycle padding exercise is one of the simplest forms of HIIT-based training. Another example includes doing squats for thirty to 60 seconds and then walking for a few seconds, and then repeating squats for thirty to sixty seconds. This squat exercise mainly reduces the fat on the thighs and helps in strengthening the legs. The first thing that gets reduced as a result of HIIT is body fat. People who are obese tend to have thick layers of fat cells on their body.to shred these fat cells, HIIT sessions are provided to obese people. The fat around the abdominal regions is reduced by short-duration HIIT as this exercise has a positive influence on adipose cells.in most cases the fat loss due to HITT results from the EPOC released after the exercise duration. One major effect of HIIT on body fat is that it reduces fat in a short period with minimal intervals of high-exercise training. Different types of exercises are categorized as HIIT For example, burpees greatly reduce obesity-causing fat cells. Bicycling junk is a great HIIT-based exercise that speedily reduces weight. Most health professionals suggest that obese people indulging in HIIT show great weight loss results.in most cases, the majority of obese people are inactive during their period of gaining weight. Coming back to a healthy lifestyle and eating habits is a difficult task for obese people.to make obese people hooked on exercise that gives them positive results is a great task for weight loss trainers. Trainers indulge such obese people in HIIT so that such people can observe the difference in their body posture before and after doing HIIT-based exercise. Many people have concerns regarding HIIT exercise being safe for obese people or not. Many studies reveal that HIIT is a safer exercise and does not have any serious health outcomes in people However in some people HIIT results in muscle stiffness and joint pains. These pains are normal and occur in people who previously never indulged in any form of physical exercise. Moreover, the benefits associated with HIIT make people stick to this training exercise. The cardiovascular health of obese people greatly improves because of HIIT.

Table 1: Result of ANOVA

ANOVA						
MODEL		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.467	3	.822	2.363	.083[b]
	Residual	16.013	46	.348		
	Total	18.480	49			
A. DEPENDENT VARIABLE: FAT LOSS						
B. PREDICTORS: (CONSTANT), OBESE INDIVIDUALS, HIGH-INTENSITY INTERVAL TRAINING 1, HIGH-INTENSITY INTERVAL TRAINING 2						

The results of the ANOVA test in Table 1 analysis are reported, together with the F statistic and sum of square values, which all contribute to the

explanation of each model's significance. According to the regression model, the total rate is 18.480, the residual value is 16.013, and the sum of square values is 2.467. Regression model's significant value of 0.083 indicates an 8% significant level of difference between them.

Table 2: Result of Coefficients

COEFFICIENTS						
MODEL		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.571	.403		3.901	.000
	High-Intensity Interval Training 1	.279	.138	.279	2.031	.048
	High-Intensity Interval Training 2	-.033	.148	-.031	-.221	.826
	Obese Individuals	-.267	.149	-.250	-1.787	.080
a. Dependent Variable: Fat Loss						

The results above of table 2 show that beta and standard error were included in the unstandardised coefficient value obtained from the linear regression analysis. The primary independent variable result for the high intensity interval training 1 is described by its beta value of 0.279. 13% is the standard error value. 2.031 is the t statistic rate. A positive and 4% significant correlation with fat reduction is indicated by the significant value of 0.048. Comparably, the results of the high-intensity interval training 2 independent variable demonstrate that there is an 82% significant but negative relationship between them, with a t statistic rate of -0.221 and a significant value of 0.826. The results of using obese people as a mediator variable show that the t statistic value is -1.787. The significant value of 0.080 indicates a negative correlation between them of 8%.

Table 3: Result of Paired Samples Statistics

PAIRED SAMPLES STATISTICS					
		Mean	N	Std. Deviation	Std. Error Mean
PAIR 1	High-Intensity Interval Training 1	1.5000	50	.61445	.08690
	Fat Loss	1.5200	50	.61412	.08685
PAIR 2	High-Intensity Interval Training 2	1.4800	50	.57994	.08202
	Obese Individuals	1.5800	50	.57463	.08127

The results of table 3 show that the standard error of each pair's mean values, as well as mean values and standard deviation rates, are described by the paired sample statistical analysis results.

The first pair includes fat loss and high-intensity interval training; the mean value is 1.5000, the standard error rate is 8%, and the standard deviation rate is 61%. Comparably, the results of the second pair—high intensity interval training 2 and obese individuals—describe mean values of 1.4800 and 1.5800, respectively, with a standard deviation rate of 57%. Comparably, there is an 8% error rate between them in the standard error of the mean value.

Table 4: Result of Paired Samples Correlations

PAIRED SAMPLES CORRELATIONS				
		N	Correlation	Sig.
PAIR 1	High-Intensity Interval Training 1 & Fat Loss	50	.270	.058
PAIR 2	High-Intensity Interval Training 2 & Obese Individuals	50	-.179	.214

The result of table 4 mentioned above indicates that fat loss and high-intensity interval training 1 are the first pair's correlation coefficient analyses. There is a 5% significant relationship between them, a positive correlation of 0.270, and a significant rate of 0.058. the second pair is high intensity interval training 2 and obese persons result indicate that its correlation value is -0.179 and its significant rate is 0.214 demonstrates negative yet its 21% significant relationship between them.

Table 5: Result of Paired Samples Test

PAIRED SAMPLES TEST									
		Paired Differences					T	Df	Sig. (2-Tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
PAIR 1	High-Intensity Interval Training 1 - Fat Loss	-.02000	.74203	.10494	-.23088	.19088	-.191	49	.850
PAIR 2	High-Intensity Interval Training 2 - Obese Individuals	-.10000	.88641	.12536	-.35191	.15191	-.798	49	.429

The results mentioned previously in table 5 show that the paired sample test results provide information about each pair's significant rates as well as mean values, standard deviation rate, and 95% confidence interval with t statistical analysis. The results of the first pair, high intensity interval training 1, indicate that the standard deviation rate is 74% and the mean value is -0.0200 for fat loss. The significant rate between them is 85%, and the t statistic rate is -0.191. The results of the second pair, which include high-intensity interval training 2, indicate that the t statistic value for obese people is -0.798. The significant rate between high intensity interval training and obese people is 0.429, which indicates a negative but significant level of 42%.

Table 6: Result of Test Statistical

TEST STATISTICS				
	High-Intensity Interval Training 1	High-Intensity Interval Training 2	Fat Loss	Obese Individuals
CHI-SQUARE	19.240[a]	21.280[a]	18.280[a]	19.480[a]
DF	2	2	2	2
ASYMP. SIG.	.000	.000	.000	.000
a. 0 Cells (0.0%) have Expected Frequencies less than 5. The Minimum Expected Cell Frequency Is 16.7.				

The data reveal that tests statistical analysis result of table 6 depict chi square values, associated to the high intensity interval training and Fat loss also obese patients. 19.240 is the chi square rate, while 21.280 indicates a positive chi square. The fat loss rate is 18.280, while the rate for obese people is 19.480, indicating a positive chi square value between them. The overall significant rate of 0.000 indicates that there is a 100% significant level of relationship between the independent and dependent variables.

4. Conclusion

One significant factor associated with HITT exercise is enjoyment. As this exercise is based on intervals, people feel enjoyment in doing this interval-based exercise. The enjoyment factor associated with HIIT makes it the most widely adopted exercise in people's daily life routines. HITT is not a continuous exercise rather it is based on multiple types of short exercises. Obese people feel enjoyment in performing multiple exercise-based activities and thus it results in weight loss. Many studies made to assess the mood of people after lengthy exercises reveal that people's moods become bad after indulging in lengthy exercises, while people involved in HIIT show positive mood outcomes. Other than fat loss HIIT training provides many benefits to obese people. The first benefit of HIIT is that it improves the blood pressure of obese patients. The second benefit is that it improves the heart rate of a person. The overall research concluded that positive and significant impact of high intensity interval

training on fat loss. The level of oxygenated blood in the body increases when an obese person indulges in HIIT-based exercise. This oxygenated blood improves blood circulation and saves the person from future health problems. By reducing sugar levels HIIT helps in lowering the risk of diabetes 2 onsets in people. Besides the physical health benefits, HIIT is renowned for providing mental health benefits to obese people.

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