Circuit Training on Athletes' Behavior and Performance

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Abstract

This study determined the relationship between circuit training on athletes' behavior and performance. Specifically, it sought to identify the level of circuit training in terms of time efficiency, strength and endurance, variety, and adaptability, the level of student athletes' behavior in terms of competitiveness, goal-oriented, responsibility, and resilience, the level of student-athlete performance in terms of practical test, the significant relationship between circuit training and student-athletes behavior, significant relationship between circuit training and student-athletes performance,

This research uses a descriptive design that utilizes a quantitative method that using a simple random sampling technique. The respondents were 80 student-athlete from City College of Tagaytay. A self-made survey questionnaire was used in this study.

Findings show that the level of circuit training in terms of time efficiency, strength and endurance, variety, and adaptability appears to strongly agree with the verbal interpretation of very high, the level of student athletes' behavior in terms of competitive, goal-oriented, responsibility, and resilience appears to strongly agree with the verbal interpretation of very high, the level of student-athlete performance in terms of practical tests appears to be satisfactory. Lastly, the relationship between circuit training and student-athletes' behavior and the relationship between circuit training and student-athletes performance are both significantly as manifested by lower probability values in its indicator.

Thus, the researcher therefore concludes that the research null hypotheses are rejected. There is a significant relationship between circuit training and student-athletes behavior. Which implies that circuit training and student-athletes' behavior underscores the impact of structured physical training on various aspects of behavior and personal development. Circuit training, a form of exercise that combines cardiovascular fitness and strength training in a rotating sequence of activities, offers distinct benefits that can influence athletes' discipline, mental health, social interactions, and academic performance. There is a significant relationship between circuit training and student-athletes Performance. Which implies that circuit training enhances physical attributes such as strength, endurance, and agility, but it also improves psychological resilience and concentration, all of which are crucial for athletic success. Schools and sports programs should consider integrating or continuing to support circuit training in their training regimes to maximize these benefits, ensuring that student-athletes can achieve and maintain peak performance levels.

Based on the drawn conclusions resulted to the following recommendations: Student-athletes should undergo regular training to maintain their peak condition, It is suggested that school's official especially the athletic director make a comprehensive training manual for student-athletes.

Keywords: Circuit training, Behavior and Performance

1. Introduction

Circuit training can have a positive effect on core stability, as it can target and strengthen the muscles that support the spine and pelvis. Core stability refers to the ability of the muscles of the trunk to stabilize the spine and pelvis during movement, which is essential for overall movement efficiency and injury prevention. Most of Sporting activities require coordination between the upper and lower body. Moreover, Circuit Training is a form of body conditioning that involves endurance training, resistance training, high-intensity aerobics, and exercises performed in a circuit, similar to high-intensity interval training. The circuit training program improved the muscle strength, agility, anaerobic capacity, and cardiovascular endurance of the study subjects. This program may be used as a guideline for selecting a set of exercises to improve physical fitness. (Sonchan et. al, 2017).

Athletes' behavior in sports encompasses a wide range of actions, attitudes, and interactions displayed by individuals engaged in athletic competition. This behavior can significantly impact not only the athlete's performance but also the overall dynamics of the sporting event. Among the key athletes' behaviors are: sportsmanship, competitiveness, teamwork, leadership, resilience, adaptability, and self-control. Athletes' behavior in sports plays a significant role in shaping the competitive environment, promoting fair play and sportsmanship, fostering teamwork and leadership, and contributing to the overall success and enjoyment of the sport. The performance of athletes is the result of a combination of factors, including physical prowess, technical mastery, tactical acumen, mental toughness, and relentless dedication to their craft. By honing these attributes and maintaining a disciplined approach to training and competition, elite athletes achieve remarkable success in their chosen sports.

The researcher through this study will assess and evaluate the effects of circuit training on athletes' behavior and performance at the City College of Tagaytay.

2. Review of Related Literature

Athletes' behavior is found to be significant in this study.

According to Martin et. al. (2016), an athlete's behavior pertains to ethical behavior, fair play, and respect for the sport, the participants, and the spectators. Elite athletes have become societal role models, whether or not they wish to carry this burden. In recent years, because of increased and instantaneous media attention, the behavior of these athletes has come under society's microscope, off as well as on the playing field, for every aspect of their lives.

In addition, Nicholls et al. (2016) athletes' behavior may also be affected by stress the results of his study that elite athletes seriously influence the moral and ethical development of children and youth of many societies.

According to Willinger et. al., (2022), there are some factors affecting athletes' competitiveness. Firstly, personal traits, certain personality traits, such as competitiveness, ambition, and desire for achievement, play a significant role in shaping athletes' competitiveness. Athletes with a strong competitive nature tend to thrive in competitive environments and are more driven to succeed. Secondly, motivation, athletes' motivation levels can impact their competitiveness. Intrinsic motivation, which comes from within and is driven by personal satisfaction and enjoyment of the sport, often leads to higher levels of competitiveness. However, extrinsic factors such as rewards, recognition, and pressure from coaches or teammates can also influence athletes' competitiveness.

Moreover, Rangarajuin (2019), goal-oriented athletes tend to maintain expectations. goal-oriented athletes set clear and measurable targets, providing them with a specific direction in their training and

competition. This clarity helps maintain high expectations consistently, as goals define what they strive to achieve and keep their efforts focused. Setting goals can significantly enhance motivation, especially with challenging yet achievable targets. The desire to meet or exceed these goals can propel athletes to maintain rigorous training schedules and persevere through setbacks. Thus, expectations or goals should be challenging, yet within a person's or group's grasp. Goals create common tasks and processes for a group or individuals. By having them, a group knows what it has to do and
can work together on the goals.

Furthermore, Gokaraju (2019) goal-oriented athletes take time. Initially, the members must be introduced to the process, develop necessary skills, implement procedures, and record evaluations. Goals often push athletes to extend their limits, encouraging them to improve continually. The expectation to reach these goals can lead to enhanced performance, as athletes are driven not just to participate but to excel. Goals necessitate strategic planning. Athletes and their coaches need to devise training regimes and competition strategies that will best allow them to meet their objectives. This planning helps athletes maintain a high standard of preparation, aligning with their high expectations. Organizational goal setting can be difficult when trying to set goals that all members agree with and will actively pursue.

Responsibility as an athlete's behavior is a variable found in this study.

According to Larmar & Lodge (2015), responsibility has been shown to have
a positive relation on learning. When individuals take responsibility for their learning. A responsible athlete seeks continual personal and technical improvement, acknowledging areas of weakness and actively working to enhance them. Athletes are expected to diligently follow training schedules, maintain physical fitness, and prepare adequately for competitions. This includes adhering to nutrition plans, attending practice sessions regularly, and engaging in recovery activities. Observing the rules of the sport, including competition regulations and anti-doping guidelines, is fundamental. This responsibility ensures fairness and integrity in sports. Many athletes take on the responsibility of engaging with and giving back to their communities, whether through charity work, youth sports
programs, or public speaking engagements.

Moreover, Shapiro (2018), states that responsibility is how well students are equipped to achieve their present and future academic, personal, and professional goals through the growth of knowledge, a sense of responsibility and a connection to the college and wider community. Responsibility is a key aspect of an athlete's behavior, encompassing a range of duties and ethical considerations that extend beyond personal performance and into broader interactions with teammates, coaches, sports organizations, and even the public. Responsible behavior in athletes not only affects their personal growth and athletic career but also influences team dynamics, the sport's reputation, and the broader community.

In addition, Anderson and Prawat (2018) mentioned that those who feel in control are more likely to take responsibility for their own learning. However, as Soilemetzidis et al. (2016) point out, in order to ensure that students are able to fulfill their inherent role in the learning process, "institutions have a vital responsibility to facilitate and ensure effort, engagement, interaction and active, and deep learning". Such a joint effort and a sense of responsibility between students and institutions can help facilitate meaningful and sustained learning.

Resilience as an athlete's behavior is a variable found in this study.

According to Palestinos (2018), resilience is the capacity to adapt successfully in the face of threat or disaster. It is also not something that you're either born with or not. Resilience develops as people grow and gain better thinking and self-management skills and more knowledge. Resilience also comes from supportive relationships with parents, peers and others, as well as cultural beliefs and traditions that help people cope with the inevitable bumps in life.

As stated by Herrman et. al., (2016), fundamentally, resilience refers to positive adaptation, or the ability to maintain or regain mental health, despite experiencing adversity. Definitions have evolved as scientific knowledge has increased. Resilience is studied by researchers from diverse disciplines, including

psychology, psychiatry, sociology, and more recently, biological disciplines, including genetics, epigenetics, endocrinology, and neuroscience. However, no consensus on an operational definition exists. The central question is how some girls, boys, women, and men withstand adversity without developing negative physical or mental health outcomes.

Based on Wu (2018), resilience is the ability to adapt successfully in the face of stress and adversity. Stressful life events, trauma, and chronic adversity can have a substantial impact on brain function and structure and can result in the development of posttraumatic stress disorder, depression, and other psychiatric disorders.

Resilient athletes can effectively manage stress and anxiety, maintaining composure under pressure during crucial moments in training or competition. They develop healthy coping strategies to deal with disappointments and frustrations, such as mindfulness, visualization, and cognitive restructuring techniques. Resilient athletes can adapt their tactics and strategies in response to different opponents or changing conditions in their sport.

It is very evident in the cited literature that the competitiveness, goal-oriented, responsibility, and resilient of the student-athletes contribute to the athletes' behavior. Resiliency empowers student-athletes to face adversity, be it in the form of a loss, injury, or academic challenge. Their resilience is reflected in behaviors such as perseverance, adaptability, and a positive mindset. They are likely to view setbacks as learning opportunities, and this attitude helps them to recover quickly from difficulties and persist in their efforts.

Performance as an athlete's behavior is a variable found in this study.

Performance is the true measure of student development is how well students are prepared to accomplish their current and future academic, personal, and professional goals through the development of knowledge, a sense of responsibility and self-reliance, and a connection to the college and wider community. While administrators tend to center student success around degree completion, students often want much more than a degree from their college experience, says Shapiro (2018).

However, Gallagher (2018) mentioned that students' performance
consists not just of good grades and steady progress toward graduation, but also a holistic sense of fulfillment, students want to become strong candidates for careers in their chosen fields, emerge as competent and trustworthy adults, look back on their time without regrets, and make their mentors and family members proud. Moreover, Di Giunta et al., 2018) state that athletes' performance may be the effect of effective interpersonal communication and enhance intrinsic motivation. Student-athletes behavior greatly affects their performance, especially the practical test. Thus, performance and athletes' behavior are both a key factor in sports.

According to Lucozade Sport (2016), circuit training is one such training method used in a strength and conditioning program, and in this fact sheet we provide information related to the correct design and implementation of a circuit training program. Effective program design and implementation can result in improved athletic performance.

According to Dailey (2018), circuit training is a mix of strength training and endurance training. In a circuit-training workout you do a group, or circuit, of exercises with little or no rest between exercises. Usually, one circuit is 4 to 10 exercises. You do each exercise for a set number of repetition period time before you move to the next exercise. For example, you might do squats for 15 seconds, rest 15 seconds, and then do bench presses for 15 seconds followed by other exercises. Depending on your fitness level, you might do one circuit or several circuits during each workout.

As stated by Smith (2016), the most basic definition of circuit training is moving from exercise to exercise until all of the exercises are completed. Circuits can be done with or without equipment or apparatus. However, the most successful circuits use equipment to define the circuit better and to facilitate movement from exercise to exercise. Another component of successful circuit training is timing each exercise. It is ideal for the length of each segment to be the same throughout the workout.

According to Train Fitness (2024), Time efficiency is important in circuit training because it involves a series of exercises back-to-back with little to no rest, it's an efficient way to get a full body workout in less time. A 30-minute circuit training workout can provide similar benefits to longer traditional workouts.

Moreover, Factory Weight (2024), mentioned that the time efficiency of circuit training is well-defined. Circuit training is a type of workout that involves performing a series of exercises in a specific order, often referred to as a circuit, with little to no rest in between each exercise. It is a popular form of exercise because it provides a full-body workout that can be completed in a short amount of time. Circuit training can be adapted to meet a variety of fitness levels and goals, making it a versatile option for those looking to improve their overall fitness or target specific areas of the body. This type of training is great for burning fat, building muscle, and improving overall fitness.

Finally, according to Phelps (2022), the time efficiency of circuit training shows result, high-intensity circuit training does just that by providing an effective and convenient way to increase exercise results in less time.

Strength and endurance in circuit training is an indicator found significant in this study.

According to Heath (2023), There is a variety of exercise in a single circuit training routine. Thus, circuit training is a fantastic workout that's great for everyone, regardless of fitness level. It incorporates a variety of exercises at separate stations and you take part in small groups, taking on each exercise at your own pace.

Furthermore, Dvorak (2023), Variety of exercise in circuit training makes it a complete body program, during circuit training, you move through different stations where a new exercise is introduced. You may do squats, overhead presses, lunges, bicep curls, triceps extensions, and sit-ups.

Adaptability in circuit training is an indicator found significant in this study.

According to Dietz (2022), Adaptability training is something that you would complete 3 days a week and not longer than 3 or 4 weeks in a row. You will notice that instead of sets and reps, you are given a time frame to lift as many reps and sets as possible in the given time depending on the level you choose. You can pick a weight that you could perform 15 to 20 reps with maximum effort. After you have picked the weights on the prescribed exercises you are ready to begin that exercise cycle. Select 2 exercises, opposite to each other. An Example would be to start with Dumbbell Incline and complete 5 repetitions then quickly go to the Lat Pull Down and complete 5 additional repetitions.

3. Methodology

This study used a descriptive design and utilized quantitative method to determine the effects of circuit training on athletes' behavior and performance in PE. This method is the most widely used research design as indicated by theses, dissertations, and research reports of research institutions. In educational research, the most commonly used descriptive methodology is the survey, when the researcher summarizes the of individuals or groups or the physical tangible environment of schools.

The respondents of the study are 80 student-athletes in the City College of Tagaytay S.Y. 2023-2024.

A research population is generally a large collection of individuals or objects that is the focus of a scientific query. It was for the benefit of the population that research is done. However, due to the large size of populations, research often cannot test every individual in the population because it is too expensive and time-consuming.

This research design was used to study the effects of circuit training on athletes' behavior and performance at the City College of Tagaytay.

4. Result and Discussion

Table 1

Level of Circuit Training in terms of Time Efficiency

STATEMENT When I am training…	**MEAN**	**SD**	**REMARKS**
I set short rest intervals of 15-30 seconds between exercises.	3.65	0.68	Strongly Agree
I maximize the time needed to perform an exercise	3.69	0.59	Strongly Agree
I perform exercises that target the specific muscle group with proper time allocation	3.53	0.76	Strongly Agree
I assign a specific time for a selected exercise.	3.61	0.67	Strongly Agree
I set time limits and the number of repetitions in every exercise routine	3.70	0.60	Strongly Agree
Weighted Mean	3.65		
SD	0.66		
Verbal Interpretation	**Highly Trained**		

Table 1 shows that student-athlete Strongly Agree that they set time limits and the number of repetitions in every exercise routine. (M = 3.70, SD=0.60). Furthermore, student-athlete Strongly Agree that they performed exercises that target the specific muscle group with proper time allocation. (M=3.53, SD= 0.76).

This imply that circuit training in terms of time efficiency reveals that student athletes maximized the time needed to perform exercise this is to take advantage of the time allocation in their training.

Table 2

Level of Circuit Training in terms of Strength and Endurance

STATEMENT Strength and endurance training is…	**MEAN**	**SD**	**REMARKS**
A great way to improve the respiratory system by providing exercises that elevate my heart rate.	3.64	0.66	Strongly Agree
A best way to improve heart and lung function that boost fatigue resistance.	3.68	0.63	Strongly Agree
A way of strengthening and clearing the flow of blood in the entire body	3.59	0.69	Strongly Agree
A practical way of dealing stress brought by a stationary lifestyle	3.73	0.55	Strongly Agree
A very good way to deal with everyday stress	3.76	0.53	Strongly Agree
Weighted Mean	3.68		
SD	0.62		
Verbal Interpretation	**Highly Trained**		

Table 2 shows that student-athlete Strongly Agree that a very good way to deal with everyday stress

got the highest mean of (M = 3.76, SD=0.53). Likewise, student-athlete Strongly Agree that it is way of strengthening and clearing the flow of blood in the entire body got a mean of (M = 3.59, SD=0.69) indicating a highly trained in terms of strength and endurance.

Table 3

Level of Circuit Training in terms of Variety

STATEMENT When I train...	**MEAN**	**SD**	**REMARKS**
I used different exercise of the same muscle group every time I train	3.63	0.62	Strongly Agree
I use a variety of exercise for specific time allocation and duration	3.59	0.69	Strongly Agree
I never combine exercise of the opposite discipline, i.e. I separate training for speed, and separate training for strength.	3.58	0.71	Strongly Agree
I use a variety of equipment for training a different part of the body	3.69	0.63	Strongly Agree
I use a variety of training venue to avoid boredom in training	3.61	0.70	Strongly Agree
Weighted Mean		3.62	
SD		0.67	
Verbal Interpretation		**Highly Trained**	

Table 3 shows the level of level of circuit training in terms of variety.

Table 3, student-athlete Strongly Agree that they use a variety of equipment for training a different part of the body (M = 3.69, SD=0.63). Likewise, student-athlete Strongly Agree that they never combine exercise of the opposite discipline, i.e. I separate training for speed, and separate training for strength (M = 3.58, SD=0.71).

Table 4.

Level of Circuit Training in terms of Adaptability

STATEMENT As a student-athlete...	**MEAN**	**SD**	**REMARKS**
I can adapt and respond effectively to changing circumstances, or challenges during a workout.	3.68	0.63	Strongly Agree
I can involve my self being flexible and versatile in my approach to training	3.64	0.66	Strongly Agree
I can allow modifications based on various factors such as fitness level, equipment availability, and other environmental conditions.	3.73	0.64	Strongly Agree
I can increase the intensity, duration, or complexity of my exercises over time.	3.74	0.59	Strongly Agree
I can adjust the resistance, repetitions, or sets to continually challenge my body.	3.71	0.62	Strongly Agree
Weighted Mean		3.70	
SD		0.63	
Verbal Interpretation		**Highly Trained**	

Table 4, student-athlete Strongly Agree that they can increase the intensity, duration, or complexity of their exercises over time. (M = 3.74, SD=0.59). Likewise, student-athlete Strongly Agree that they can involve themselves being flexible and versatile in their approach to training. (M=3.64, SD=0.66).

Table 5

Level of Student Athletes' Behavior in terms of Competitive

STATEMENT As a student-athlete...	**MEAN**	**SD**	**REMARKS**
My performance is fueled by a strong desire to win, whether it's for the team or a personal achievement.	3.49	0.86	Strongly Agree
I exhibit high levels of intensity and effort during training and competitions.	3.51	0.86	Strongly Agree
I consistently push myself to perform at my best, even when faced with challenges or adversity.	3.44	0.85	Strongly Agree
I set specific, measurable, and challenging goals to continuously improve my and performance.	3.49	0.86	Strongly Agree
Instead of being discouraged, I use setbacks as learning experiences to enhance my performance	3.48	0.86	Strongly Agree
Weighted Mean		3.48	
SD		0.85	
Verbal Interpretation		**Highly Trained**	

Table 5, student-athlete Strongly Agree that they exhibit high levels of intensity and effort during training and competitions. (M = 3.51, SD=0.86). Likewise, student-athlete Strongly Agree that they consistently push myself to perform at my best, even when faced with challenges or adversity. (M = 3.44, SD=0.85).

Table 6

Level of Student Athletes' Behavior in terms of Goal-Oriented

STATEMENT As a goal-oriented student-athlete...	**MEAN**	**SD**	**REMARKS**
I have a clear understanding of what i want to achieve	3.81	0.51	Strongly Agree
My objectives are specific and well-define, providing a roadmap for my athletic journey	3.73	0.57	Strongly Agree
I understand the importance of hard work, discipline, and perseverance in achieving success	3.75	0.56	Strongly Agree
I engage in strategic planning to outline the steps needed to reach my objectives	3.75	0.58	Strongly Agree
I break down long-term goals into smaller, manageable tasks.	3.79	0.52	Strongly Agree
Weighted Mean		3.77	
SD		0.55	
Verbal Interpretation		**Highly Trained**	

Table 6, student-athlete Strongly Agree that they have a clear understanding of what i want to achieve. (M = 3.81, SD=0.51). Likewise, student-athlete Strongly Agree that they understand the importance of hard work, discipline, and perseverance in achieving success and I engage in strategic planning to outline the steps needed to reach my objectives both. (M = 3.75, SD=0.56, SD=0.58).

Table 7

Level of Student Athletes' Behavior in Terms of Responsibility

STATEMENT As a responsible student-athlete...	**MEAN**	**SD**	**REMARKS**
I effectively manage time to meet both my academic and athletic commitments	3.64	0.62	Strongly Agree
I balance sports and academic responsibilities, ensuring that neither aspect is neglected.	3.69	0.61	Strongly Agree
I acknowledge mistakes and learns from them, demonstrating a growth mindset.	3.66	0.64	Strongly Agree
I navigate unexpected challenges with a positive attitude and problem-solving skills.	3.76	0.58	Strongly Agree
I understand the connection between well-being and optimal performance.	3.78	0.55	Strongly Agree
Weighted Mean		3.71	
SD		0.60	
Verbal Interpretation		**Highly Trained**	

Table 7, student-athlete Strongly Agree that they understand the connection between well-being and optimal performance. (M = 3.78, SD=0.55). Likewise, student-athlete Strongly Agree that they effectively manage time to meet both my academic and athletic commitments. (M= 3.64, SD=0.62).

Table 8

Level of Student Athletes' Behavior in terms of Resilience

STATEMENT As a resilient student-athlete...	**MEAN**	**SD**	**REMARKS**
I view difficulties as opportunities for growth and learning.	3.64	0.62	Strongly Agree
I have a realistic understanding of personal strengths and weaknesses.	3.69	0.61	Strongly Agree
I seek opportunities for self-improvement and personal development.	3.66	0.64	Strongly Agree
I understand that success often involves overcoming adversity and requires sustained effort	3.76	0.58	Strongly Agree
I applies lessons learned to future situations, fostering continuous growth	3.78	0.55	Strongly Agree
Weighted Mean		3.71	
SD		0.60	
Verbal Interpretation		**Highly Trained**	

Table 8, student-athlete Strongly Agree that they apply lessons learned to future situations, fostering continuous growth. (M= 3.78, SD=0.55). Likewise, student-athlete Strongly Agree that they view difficulties as opportunities for growth and learning got a mean of (M= 3.64, SD=0.62) indicating highly manifested in terms of Resilience.

Table 9

Level of Student-Athlete Performance in terms of Practical Test

Students' Performance in terms of Practical Test 1	**Frequency (f)**	**Percentage (%)**	**Verbal Interpretation**
96-100 (1.25 -1.00)	0	0 %	Excellent
90- 95(1.75-1.50)	22	27.5 %	Very Satisfactory
84-89 (2.25-200)	32	40 %	Satisfactory
78-83 (2.75-2.50)	20	25 %	Fairly Satisfactory
77 and below (3.00 and below)	6	7.5 %	Need Improvement
Mean =2.01 SD=0.39	**N=80**	**100 %**	**Satisfactory**

It can be gleaned from table 9, that the level of Students' Performance in terms of Practical Test 2.01 with "Satisfactory" as verbal interpretation. The standard deviation of 0,39 indicates that the level of Students' Performance in terms of Practical Test is homogenous.

Table 10

Significant Relationship between Circuit Training and Student-Athletes' Behavior

Circuit Training		**Student-Athlete Behavior**			
		Competitive	Goal Oriented	Responsibility	Resilience
Time Efficiency	Pearson Correlation	0.272	0.584	0.776	0.776
	Sig. (2-tailed)	.000	.000	.000	.000
	N	80	80	80	80
Strength and Endurance	Pearson Correlation	0.296	0.665	0.740	0.740
	Sig. (2-tailed)	.000	.000	.000	.000
	N	80	80	80	80
Variety	Pearson Correlation	0.305	0.588	0.801	0.801
	Sig. (2-tailed)	.000	.000	.000	.000
	N	80	80	80	80
Adaptability	Pearson Correlation	0.275	0.0744	0.717	0.717
	Sig. (2-tailed)	.000	.000	.000	.000
	N	80	80	80	80

***Significant at 0.05**

The computed r-value of 0.296, 0.665, 0.740, and 0.740 respectively, the p-value of 0.000 in terms of competitive, goal oriented, responsibility, and resilience indicates that there is a significant relationship between circuit training in terms of strength and endurance and student-athletes' behavior which is less than the level of significant value of 0.05 among one hundred (80) respondents. This imply that circuit training typically involves a sequence of exercises targeting different muscle groups by performing these exercises with little rest between stations, athletes enhance strength and endurance.

Table 11

Significant Relationship between Circuit Training and Student-Athletes' Performance

Circuit Training	r	Interpretation	P	Analysis
Time Efficiency	0.0224	Negligible	0.184	**NS**
Strength and Endurance	0.0210	Negligible	0.199	**NS**
Variety	0.0470	Negligible	0.0532	**NS**
Adoptability	0.0252	Negligible	0.159	**NS**

***significant at 0.05** **ns-not significant**

Table 11 shows that there is no significant relationship between Circuit Training and Student-Athletes' Performance in terms of Time Efficiency, Strength and Endurance, Variety, and Adoptability which predicts significantly as manifested by lower probability values in its indicator at 0.05 level of significance.

5. Conclusion

The researcher therefore concludes that the research null hypotheses are rejected.

1. There is a significant relationship between circuit training and student-athletes' behavior. Which implies that circuit training and student-athletes' behavior underscores the impact of structured physical training on various aspects of behavior and personal development. Circuit training, a form of exercise that combines cardiovascular fitness and strength training in a rotating sequence of activities, offers distinct benefits that can influence athletes' discipline, mental health, social interactions, and academic performance.
2. There is a significant relationship between circuit training and student-athletes' performance. Which implies that circuit training enhances physical attributes such as strength, endurance, and agility, but it also improves psychological resilience and concentration, all of which are crucial for athletic success. Schools and sports programs should consider integrating or continuing to support circuit training in their training regimes to maximize these benefits, ensuring that student-athletes can achieve and maintain peak performance levels.

6. Recommendations

Based on the drawn conclusions resulted to the following recommendations:

1. The researcher recommended that student athletes should perform circuit training in their training program as it helps in improving their performance in terms of time efficiency, strength and endurance, variety and adaptability. It is suggested that school's official especially the athletic director make a comprehensive training manual for student-athletes.
2. The researcher recommended to use different survey and questionnaire to measure student athletes' behavior.
3. The researcher recommended the use of different test to evaluate the student athlete's performance.

4. The researcher recommended to future researcher to use experimental research to further evaluate the connection of Circuit training and student athletes' behavior and performance.

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