

## ORIGINAL SCIENTIFIC PAPER

# The challenges of selected provincial coaches in implementing circuit training: basis for program development. A pilot study

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## Abstract

This research comprehensively explored the challenges of provincial coaches in implementing circuit training. Utilizing a qualitative research design, the study included nine provincial coaches in the Philippines contributing as the main source of data. Using an open-ended guiding questionnaire verified by experts in the field, the research subjects actively participated in focus groups and in-depth interviews. The study revealed five essential themes capturing the significant challenges of provincial coaches in implementing circuit training: Participation in Training, Knowledge about Circuit Training, lack of Equipment and Facilities, Coaches' Expertise in Circuit Training, and Character of Athletes. As this research contributes critical insights into the different challenges associated with the implementation of circuit training, it provides different strategic programs and practices for development and enhancement of the inclusion of circuit training program in provincial areas.

**Keywords:** *Challenges of Provincial Coaches, Implementation, Expertise, Character, Participation, Qualitative Research*

## Introduction

Various training approaches are available in the field of fitness and exercise to improve strength, endurance, and total physical fitness. Circuit training is a notable methodology that has gained a significant status among fitness enthusiasts, athletes, and professionals due to its versatility and high effectiveness. Circuit training is widely recognized for its worth and capacity to accommodate a wide range of fitness purposes. This form of exercise provides a dynamic and organized workout routine that effectively engages different muscle groups, hence optimizing calorie expenditure and cardiovascular advantages.

Circuit training is a dynamic fitness strategy in which series of exercises are performed consecutively, frequently at different stations, with brief rest intervals in between (Shekhawat & Chauhan, 2020). It is particularly developed to improve agility, strength, velocity, and power, resulting in increased physical fitness and endurance. This routine combines cardiovascular training and strength building into a single workout session by

working multiple muscle groups and combining a variety of exercises. The ultimate result is a general improvement in physical fitness characteristics such as power, endurance, strength, velocity, and agility.

According to Halil (2009) and Edwarsyah & Hardiansyah (2020), circuit training is an adaptable exercise regimen that integrates a variety of training strategies with brief periods of leisure. It consists of numerous variations of training that are station-organized in an effort to maximize efficiency and effectiveness. This methodology amalgamates diverse exercises characterized by varying degrees of physical intensity, with the objective of augmenting qualities such as velocity, strength, explosive capability, and stamina. The exercise regimen at each station is customized to accommodate specific athletic demands and prerequisites. Empirical evidence indicates that the integration of weightlifting into circuit training can yield substantial enhancements in strength, muscular endurance, stamina, and cardiovascular capacity. The approach is modern

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in nature and frequently incorporates band resistance training, weightlifting, and bodyweight exercises (e.g., push-ups, squats). Individuals who are in search of sports-specific capabilities and general functional fitness can derive advantages from circuit training, specifically in relation to tasks that require lifting, pressing, or carrying. It facilitates the development of muscular strength and explosive power, which are critical during the anatomical adaptation stage of training. This stage emphasizes conditioning, fundamental strength, and overall preparedness for more challenging exercises (Edwarsyah & Hardiansyah, 2020)

A variety of physiological capabilities—muscular endurance, strength, aerobic capacity, and power—can be enhanced by means of the comprehensive approach provided by this training regimen. Circuit training provides a multifaceted framework encompassing three discrete modalities. According to the research conducted by Mchenry and Nitka (2022), these modalities consist of bodyweight training, which does not require any apparatus and is portable, allowing for workouts to be conducted virtually anywhere. When selecting the circuit type, location and apparatus accessibility should be considered.

Circuit training has surfaced as a potentially effective strategy for encouraging physical well-being and fitness across all age groups and levels of fitness. Provincial instructors are of paramount importance in the Philippines, where sports development initiatives are critical for promoting physical fitness and overall health. They are entrusted with the implementation of exercise programs at the community level. Nevertheless, the incorporation of circuit training into coaching methodologies encounters a multitude of obstacles that are shaped by socio-economic, cultural, and logistical considerations. In the Philippines, several fitness and sports coaches use this circuit training method to strengthen their athletes, specifically in urban areas such as the National Capital Region but limited in provinces. Recognizing this gap, the main objective of this study is to identify the challenges that provincial coaches in the Philippines face when implementing circuit training programs. It also seeks to offer program development for effectively overcoming these obstacles. Additionally, it aims to supply the gap in the literature by delivering significant insights concerning the challenges of provincial coaches in implementing a circuit training program.

## Methodology

### *Research Design and Procedures*

This study used social cognitive theory by Albert Bandura (1960). According to Schunk (2012), social cognitive theory emphasizes the connection between the person and the environment as a determining factor of behavior. The theory provides a guide to understanding how a person learns from observing others, how they regulate their behaviors, and how their values, beliefs, and views influence their action. Thus, a descriptive qualitative research design was utilized to identify the challenges of provincial coaches in implementing the circuit training. According to Regonel (2023), a study method called descriptive qualitative research aims to comprehend phenomena by analyzing their features and attributes. Before the online interview, the coaches who participated in the study signed a consent form to be familiar with the aim of the study. After securing the consent form from the participants, the researcher utilized informal, open-ended, and in-depth online interviews to make the participants feel comfortable so they could precisely discuss what they were thinking. While doing the interviews, the researcher invested in taking down notes and documenting the experienced barriers of provincial

coaches in implementing circuit training supported in gathering essential data.

### *Ethical Consideration*

In conducting the study, compliance with ethical standards was observed. The researcher confirmed that all necessary procedures were taken to guarantee conformity with ethical standards. Tagare and Villaluz (2021) mentioned Bryce's (2001), principles for research in real-world experiences include (1) looking for the truth; (2) people's perspective of life was derived from their own experiences; and (3) leading to new approaches to thinking about philosophy, methods, and philosophy.

Coaches who participated in this study were treated with utmost respect and informed of their rights. Privacy and anonymity were guaranteed, therefore, participants' responses were kept confidential. The researcher provided informed consent to the participants, signifying their independent decision to be part of the study. Before data collection, an orientation session was conducted to clarify the study's objectives and tasks, ensuring fairness and transparency throughout the research process.

### *Research Participants and Materials*

Nine provincial coaches (4 female and 5 male) from different provinces participated in this pilot study. More precisely, 55.56% are from Luzon, 33.33% are from Visayas, and 11.11% are from Mindanao. The researcher utilized non-probability sampling, specifically the purposeful sampling technique. According to Palinkas et al. (2015), in qualitative research, purposeful sampling is frequently employed to find and choose cases that are rich in information on the topic of interest. The participants were selected to provide their challenges in implementing circuit training.

Open-ended questions were utilized by the researcher so that the participants could precisely discuss their challenges in implementing circuit training. The questions are reviewed and validated by five sports coaches in Metro Manila who mastered the implementation of circuit training followed by the analysis of collected data. The researcher also navigates the use of voice recorders, cameras, and memo pads.

### *Data Analysis and Interpretation*

The data of this study were analyzed and interpreted using thematic analysis. Usually, it is used for a collection of texts, such as transcripts or interviews. To find recurring themes—topics, concepts, and patterns of meaning—the researcher scrutinizes the data (Caulfield, 2023). The researcher followed the six steps of Braun and Clarke. In the study of Maguire and Delahunt (2017), they mentioned the six steps of Braun and Clarke which are: Become familiar with the data, Generate initial codes, Search for themes, Review themes, Define themes, and Write-up. With the method mentioned, the researcher set the day of the online interview. The collection of data was written on a memo pad while the interview was being recorded. After the interview, the researcher plays the recording multiple times to identify the respondents' exact words. After that, the statements of participants were categorized by coding and themes. The findings were reviewed for an in-depth characterization of a phenomenon, and then the researcher formulated the phenomenon's basic framework. After the phenomenon's basic framework was formulated, the researcher asked the participants to authenticate the result on the lived challenges of provincial coaches in implementing circuit training. Verification in thematic analysis reinforces the key findings by reviewing the data as often required until the appropriate confirmation level was reached.

## Results

**Table 1.** Essential themes, Category, and Core Ideas on the Challenges of Selected Provincial Coaches in Implementing Circuit Training

Essential Themes	Category	Core Ideas
Participation in training	Participants discuss that athletes' participation is one of the problems in the implementation of circuit training.	Overload circuit training can cause players to quickly fatigue. Too much focus on circuit training can cause compromising. You have to evaluate them individually by doing movement analysis. When the clients are too many in a session, as a coach I would not be able to monitor all of them at the same time. Some of the players are not physically fit, because of a lack experience and because some of them are new for the training drills. Hard to provide circuit training during training because of the athlete's ability to participate in the training.
Knowledge about circuit training	Participants expressed that knowledge of athletes hinders the implementation of circuit training.	Not all kids are familiar in different kind of skills that they encounter in practice. In our provinces, they are not familiar with the concept of circuit training, thus they don't show interest. Lack of awareness and its importance in bringing out proper training for players.
Lack of Equipment and Facilities	Participants discussed that lack of equipment and facilities is one of the contributing factors in the implementation of circuit training.	Unavailability of equipment and limited or tiny space. There are moments inside the gym when some clients want to use the same equipment at the same time. Having no equipment can block the implementation of the circuit training.
Coaches Expertise in circuit training	Participants expressed that their expertise in implementing circuit training is one of the problems.	Teaching circuit training is not feasible without support from other coaches For me as a coach, there might be fewer opportunities for us to attend workshops or training, specifically focusing on circuit training.
Character of Athletes	Participants exposed that the character of the athletes hinders the implementation of circuit training.	Lack of motivation of athletes Lack of discipline of athletes Trainee should be able to construct managing his time to ensure the completeness of the training session. Players are inactive in training because of the intense training.

## Discussion

### *Theme 1: Participation in training*

This theme delves into the challenges of provincial coaches in implementing circuit training. According to the participants, the mainly challenges when it comes to participation in circuit training are: fatigability induced by circuit training, individual differences, and too many participants. Coaches in the provinces typically practice their respective sports without proper conditioning through circuit training. These challenges represent a significant issue that impacts the implementation of the circuit training by the provincial coaches. According to the participants:

"Overload circuit training can cause players to quickly fatigue, and they are very exhausted even if their practice game is not yet started. Compromising their strategy and the technique in the game/play. Too much focus on circuit training can cause compromising and they did not implement their plan and strategies in the game." – Coach Three

When it comes to circuit training, we have what we called individual approach and team or group approach. Individually, people have different maturity, we have those beginner types, we have those average that can adapt and adjust already, and those that are advanced usually do high intensity workouts. You have to evaluate them individually by doing movement analysis. This will ensure if the exercises that you're giving to each of your clients are appropriate in a circuit training set-up" – Coach Seven

When the clients are too many in a session, as a coach I would not be able to monitor each of them at the same time. I will be having a hard time to correct their forms if ever see them." – Coach Nine

"Some of the players are not physically fit, they have lack of experience and they need to train well." – Coach Four

"It is challenging to implement circuit training during our sessions because athletes need to conserve their energy for sports practice." – Coach Five

These challenges regarding participation in training hamper the provincial coaches from implementing circuit training, thus should be addressed. To do so, coaches should identify the capabilities of their athletes. Also, coaches should be responsible for designing long and short training programs for the athletes, including the conditioning program through circuit training. On the other hand, designing a program should consider the number of participants.

Overload circuit training can lead to fatigue if not balanced with adequate recovery, potentially resulting in nonfunctional overreaching or overtraining syndrome, which impacts performance and well-being (Meeusen et al., 2013). According to Mola & Bayisa (2020), not all players are supposed to be in their best performance form all the time, especially when they are new to the given sport or have few experience in this type of training.

### *Theme 2: Knowledge about circuit training*

The second theme that delves into the challenges of provincial coaches in implementing circuit training is the knowledge about circuit training. According to the participants, they are being challenged because not all athletes are familiar with the concept of circuit training. With these challenges, coaches are having a hard time introducing circuit training into their programs. This can be a significant issue that impacts the implementation of the circuit training by the provincial coaches According to the participants:

"Not all kids are familiar in different kind of skills that they encounter in practices. Kids are not familiar with the circuit train-

ing provided to them. Not all players have interest in doing circuit training. In our province, they are not familiar with this concept, thus they don't have interest in circuit training." - Coach Six

"Lack of awareness and its importance in bringing out proper training for players. Because lack of awareness can hinder progress, it is essential to remove such a habit in one's system. Circuit training is a highly effective way to improve overall fitness. If players are not in their complete level of awareness, they cannot perform optimally both in training and competition." - Coach Eight

This theme exposed that familiarity and awareness can easily address the challenges related to knowledge in circuit training. Coaches should not only involve their athletes in physical activity but also help them improve mentally. Experiencing circuit training at the beginner level will help the athletes gain experience and knowledge.

According to Velasco and Jordà (2020), one reason why athletes experience lack of knowledge in terms of training can be the feeling of boredom. This feeling stems primarily from repetitive actions performed during training. These scenarios occur when an athlete has reached a stage when improvement is not occurring as a result of achieving a specific objective and requires additional effort to develop. On the other hand, Brittain-Catlin (2004) emphasized that in training, achieving satisfactory quality requires both feedback and recognition. He pointed out that consistent, constructive feedback helps individuals understand their progress and areas needing improvement, while recognition serves to motivate and validate their efforts. These elements are crucial for fostering a positive and effective training environment, ensuring that participants remain engaged and committed to their development. Without feedback and recognition, trainees may struggle to gauge their performance and feel undervalued, ultimately hindering their growth and satisfaction. Furthermore, offering support during the early post-training stages is crucial for continuous development.

#### *Theme 3: Lack of Equipment and Facilities*

The third theme that delves into the challenges of provincial coaches in implementing circuit training is the lack of equipment and facilities. According to the participants, implementing circuit training needs a required number of equipment and facilities to cater the needs of the athletes. These challenges that deal with the lack of equipment and facilities are significant issues that influence the implementation of circuit training in the province. According to the participants:

"Unavailability of equipment and limited or tiny space. Upon our training it requires a variety of equipment to attain specific objectives and goals that must be executed or reached, and tiny or no space will affect the comprehensive training sessions required." - Coach Two

"Although we have enough equipment like for example, dumbbells, plates, barbells, and other essential equipment, there are moments inside the gym that some clients want to use the same equipment at the same time, thus this is one of the challenges. Coach Seven

"...having no equipment blocks the implementation of the circuit training" - Coach Nine

A prevalent issue in circuit training is the lack of space and equipment. Having appropriate equipment and plenty of space is essential for athletes to feel comfortable while training and to complete their exercises more efficiently. Sports equipment plays a key role in the way people perceive sports. It is important to invest in proper facilities and equipment since they help the athletes in their sporting journey.

Athletes face challenges due to limited training space and equipment, hindering their progress and performance skills. As

a result, one of the biggest obstacles for athletes is how to perform well in competitions (Dehghansai et al., 2021) However, it is important to keep in mind that while planning training, there will be limited space and equipment available (Wahl-Alexander et al., 2021). In the study of Li et al. (2022), it has been emphasized the importance of strict and intelligent management of sports equipment primarily in school-settings because it has been revealed that it may affect children's attitude towards sports participation. This approach of managing equipment in sports could also be applied in gym-settings or training locations. It can basically make the essential sports and gym equipment always readily available for clients and athletes. As described in the article of Li (2015), sports equipment is a requisite in any sports activities. It is a necessary material that somehow keeps most sporting events moving. If there is a lack of equipment, especially in the gym, the training program could be negatively affected, and those set goals may not be reached. According to Lim et al. (2022), in many cases, there are insufficient resources to provide adequate exercise stations and ample space for individuals to work out comfortably and safely. As a result, overcrowding, extended wait times, and logistical difficulties in regulating the circuit's movement may arise, especially when the client-to-coach ratio is high. The lack of resources can also lead to a sub-optimal workout experience, which can have a negative impact on the participants' motivation to exercise regularly.

#### *Theme 4: Coaches expertise in circuit training*

The fourth theme that exposed the challenges of provincial coaches in implementing circuit training is the coaches' expertise in circuit training. According to the research participants, although they are familiar with circuit training, it is still important for them to have a deep understanding of circuit training. This will allow them to help the athletes understand the benefits of engaging in this type of training. According to them:

"... there are a lot of stations to provide different exercises and need coaches for checking the health of the players during training while doing the program to avoid injuries" - Coach Five

"For me as a coach there might be fewer opportunities for us to attend workshops or training, specifically focus on circuit training. This lack of access to resources can make it difficult for us to stay updated with the trends and practices in circuit training." - Coach Eight

This issue is relevant since coaches should have a solid foundation of knowledge before they introduce this type of training. Coaches should also instill in themselves the idea of life-long learning. Seeking for training workshops is one great way to accomplish this. Coaches must understand there are still things in the world, particularly in the sports world.

According to MacDonald et al. (2010), formally trained coaches can produce athletes with "higher personal and social skills" compared to untrained coaches. This suggests that receiving any form of training for coaches is more than enough in terms of helping athletes develop. In addition, those skills are significant not just in sports but in life in general. According to the study by Anyadike-Danes et al (2023), it is found that there are plenty of coaches who still don't apply essential periodization concepts. This is concerning because, as someone who is supposed to be good already in sports training, there are still coaches who probably and unknowingly do such things. This is why the lack of workshops for coaches must be a continuous duty.

#### *Theme 5: Character of athletes*

The last theme that delves into the challenges of provincial athletes in the implementation of circuit training is the character of athletes. According to the research participants, some athletes



do not have enough motivation to do circuit training, do not have time management, and are inactive athletes. This observation of coaches affects their implementation of circuit training. Thus, coaches need to create a space wherein athletes will understand the benefits of circuit training. According to them:

“Lack of motivation of athletes, there are a few athletes who doesn't really like to do the circuit training; and Lack of Discipline of Athletes, there are students who doesn't go through the process of training and hard work, they choose to show off immediately rather than go through the process of training.”- Coach One

It is important that the trainee should be able to construct managing his time to ensure the completeness of the training session. Circuit training is not just a one-time training it has to be planned and well-arranged.”- Coach Two

“Athletes are inactive in training because of the intense training, it affects their mental issues for being absent-minded and also some of the players don't understand the rules of the program.”- Coach Four

These challenges should be addressed as soon as possible because everyone in the field has equal sentiments that character should go first before the skills of the athletes since if an athlete lacks discipline and immediately wants to show off – disregarding his/her training, there will be a lot of problems in the future. It will really be a difficult time for the coach to instill knowledge and a better “game plan” for players who do not trust in the process. Also, coaches and staff should provide clear instructions and perform well, especially those players who are not familiar with and lack understanding of the skills and training program given. Lastly, athletes should also know how to balance their schedules to have a successful training plan.

Motivation encompasses both internal and external factors that drive a person toward a specific course of action. It involves being spurred into action by impulses or desires and experiencing satisfaction and fulfillment upon achieving a goal. In sports, motivation is recognized as crucial for athletes, serving as a fundamental component in their pursuit of success (Kucukibis and Gul, 2019.) Athletes who regularly show up for training understand that it's not just about reaching their goals but also about recognizing the importance of dedication and effort in achieving success in every aspect of life. This mindset, characterized by an internal sense of control, empowers athletes to feel more self-driven and in control of their own paths to success. (Mallett & Hanrahan, 2004). On the other hand, to effectively manage the demands of academic endeavors and sports training, elite athletes need to manage their time well. (Quimbo, 2023). Gontijo et al. (2023) state that an athlete's mind has a major influence on both their performance and overall success. Constructive mental codes, such as believing in oneself after failure, have been shown to be significant in athletes' perseverance, motivation, and performance improvement through a systematic review study. In addition, it has been shown that a positive mindset improves an athlete's performance, indicating that practicing cognitive skills might improve competitive performance.

## Conclusion

In conclusion, this study has explored the challenges of provincial coaches in implementing circuit training. Main findings indicate on five main challenges for coaches in implementing circuit training such as participation in training, knowledge about circuit training, lack of equipment and facilities, coaches' expertise in circuit training, and character of athletes. Participation in training reveals that athlete fatigue, individual differences in fitness level, and large participants are the challenges faced by coaches since they have a hard time designing their conditioning problem. Knowledge about circuit training reveals that familiarity,

skills, and awareness are the contributing factors. On the other hand, the lack of equipment and facilities seems to be a significant factor as well. It shows that lacking space and inadequate access to important equipment hinder the ability to conduct effective training sessions. Coaches' expertise, such as limited access to seminars and training related to circuit training, is contributing to the challenges faced by the provincial athletes. Lastly, the character of an athlete, such as motivation, poor time management, and inactive, affects the implementation efforts.

## Recommendations

Coaches should develop an individualized circuit training program that aligns with athletes' capabilities. They should organize a small group session to monitor its effectiveness and provide quality feedback. Additionally, they should implement a periodization to gradually increase the intensity of the training while ensuring an adequate recovery to avoid overtraining. Coaches should provide comprehensive educational training on benefits and techniques in circuit training, starting from beginner's level sessions to build familiarity. Additionally, coaches should enhance mental engagement through collaborative discussions and demonstrations to foster a deeper understanding of circuit training.

It is essential to invest in and upgrade sports facilities and equipment in provincial areas. During special events such as “palarong pamabansa” or division meets, coaches can ask the local government unit for sponsorship. Implementing a well-planned schedule can help accommodate a large number of participants. Coaches' regular maintenance and intelligent management of equipment can also ensure its longevity. Coaches should establish partnerships with sports organizations to access updated resources and training opportunities. Coaches should actively seek out and participate in training workshops and professional development programs focused on circuit training. Coaches should also seek a mentorship program with other coaches to further develop coaching expertise. Coaches should implement motivational strategies such as attainable goals and recognize athletes' progress. Establishing well-planned training programs with clear expectations can improve athletes' time management skills. Include visualization techniques for athletes to stay focused on the training. Additionally, coaches should create an environment that highlights the benefits of circuit training with an emphasis on discipline and commitment.

## Practical applications

The study is beneficial to the provincial coaches for program development and optimizing resource allocation. By understanding the challenges encountered the design of the circuit training can be practical, relevant, and responsive to the capabilities of the athletes and the environment. Furthermore, this research can help athletes gain quality training programs- athletes can improve their physical fitness, skill development, and general performance by getting better training programs. It also helps the athlete to prevent injury- by finding the things that make circuit training less effective, coaches can better incorporate injury-prevention strategies into their athletes' workout plans, which will lower the chance of injuries related to sports. And enhance performance- through the utilization of the study's findings to optimize circuit training programs, athletes can attain elevated levels of performance, stamina, and resilience throughout training sessions and competitions.

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