



**THE EFFECTS OF PHYSICAL THERAPY ON ATHLETES'
RECOVERY FROM INJURY IN BAMENDA NORTH WEST
REGION OF CAMEROON**

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Abstract

This research sought to examine the effects of physical therapy on athletes' recovery from injury in Bamenda North West Region of Cameroon. Football athletes are susceptible to injuries due largely to the physical contact; overtraining and psychological demands for outstanding performance on the field of play. This study was conducted in Bamenda elite 1 and 2 teams; PWD, YOSA, Bafut Rangers Foncha Street and Bafmeng United. The research design used in this study was concurrent mixed method design. The population was divided in to both the target and accessible population of the study. The researcher used the purposive sampling technique to select players of each team with sampling size of 23 injured players to work with. Descriptively, the data was presented on tables, frequencies, means and percentages. Regression was used analyze quantitative data, content thematic analysis was used to analyze qualitative data results shows that physical therapy has a significant effect on athlete's recovery from injury at 0.01 level of significance and 14.5% of the variations in athletes' recovery from injury can be accounted for by their use of physical therapy. The study made recommendations to the Ministry of Sports and Physical Education, the government should offer support and funding towards traditional therapy centers that specialize in treating sports- related injuries. Ensure that players receive prompt and appropriate treatment for their injuries to prevent further complications. All in all, it was found out that, physical therapy helps athletes to recover from injury. For recommendations, to ministry of sports and physical education, the government should offer support and funding towards traditional therapy centers that specialize in treating sports- related injuries. For further studies, my research was a mixed method research, so, another researcher can conduct a purely quantitative study or purely qualitative study.

Keywords:

Physical therapy, traditional therapy, athletes' Recovery and Injury.



BACKGROUND TO THE STUDY

During the latter half of the 20th century and into the 21st century, South American countries have made efforts to expand and improve rehabilitation services. According to a publication by the Pan American Health Organization (PAHO) in 2015, there has been a growing recognition of the importance of rehabilitation in addressing the needs of individuals with disabilities across South America. Governments and healthcare organizations have worked to enhance access to rehabilitation services, integrate modern evidence-based practices, and promote research and education in the field. The history of rehabilitation techniques in Europe has been influenced by a combination of ancient healing traditions, scientific advancements, and socio-political developments. According to "A History of Physical Rehabilitation in Europe" by R. C. Rusnock, published in the *Journal of Rehabilitation Medicine* in 2005, the roots of European rehabilitation practices can be traced back to ancient civilizations such as Greece and Rome, where physical exercise, hydrotherapy, and massage were used to treat injuries and disabilities. During the Middle Ages and the Renaissance, the history of rehabilitation techniques in Europe was shaped by the emergence of hospitals and monastic infirmaries, which provided care for individuals with disabilities. The work of early physicians and healers, as documented in "Rehabilitation in the Middle Ages" by Grmek (1996), contributed to the development of therapeutic interventions and assistive devices for people with physical impairments.

The Industrial Revolution and the two World Wars marked significant turning points in the history of rehabilitation techniques in Europe. According to "Rehabilitation Medicine in Europe: A Historical Perspective" by Melvin (2009), the devastating impact of war-related injuries led to advancements in orthopedic surgery, prosthetics, and rehabilitation services. These developments laid the groundwork for modern rehabilitation practices in Europe. In the post-war era, the history of rehabilitation techniques in Europe witnessed a shift towards interdisciplinary approaches and the establishment of formal rehabilitation medicine as a specialized field. The work of pioneers such as Ludwig Guttmann, known for his contributions to spinal cord injury rehabilitation at Stoke Mandeville Hospital in England, as detailed in "Ludwig Guttmann and the Stoke Mandeville Hospital" by Silver (2003), played a crucial role in shaping the trajectory of rehabilitation services across Europe. Today, the history of rehabilitation techniques in Europe reflects a dynamic landscape characterized by evidence-based interventions, technological innovations, and a growing emphasis on patient-centered care. The legacy of past achievements continues to inform contemporary practices, as European countries strive to promote inclusive and comprehensive rehabilitation services that address the diverse needs of individuals with disabilities. The history of rehabilitation techniques in Africa is deeply intertwined with the continent's diverse cultural, social, and historical contexts. While the specific development and evolution of rehabilitation practices in different regions of Africa may vary, there are common threads that reflect the resilience and resourcefulness of African communities in addressing the needs of individuals with disabilities.

Contextually, according to Cameroon Football Federation (FECAFOOT 9th July 2020) members of the players status commission of the Cameroon Football Federation FECAFOOT met in a three days meeting on the deliberation on the wellbeing of footballers

in the country and analysing players contract details. According to the rapporteur of the commission Djankou Gabriel, said that, following the terms of reference from the president of FECAFOOT in relation to the wellbeing of players, two key recommendations have been made. “The obligatory registration of players with the national social insurance fund NSIF and the registration of players contracts at the inspectorate of labour to ensure work security which permits them to work with an encouraging spirit.” The president of the commission Mangaba Adalbert has described the session as good insisting that their key mission is to ensure that players have a comfortable future after working (playing) as professionals and ameliorate their conditions while in active service. While recommending that clubs respect FECAFOOT, CAF and FIFA principles on the contracting of players, the commission has announced a visit to clubs in the coming days to ascertain the veracity of the claims made in the contracts as relates salaries and bonuses.

In view of the launching of Cameroon Football Federation (FECAFOOT) sports season, a quadripartite meeting was held on 24th January 2022 at the FECAFOOT headquarters in Tsinga-Yaoundé between FECAFOOT and the following: the association of elite clubs of Cameroon (ACEC), the Association of Women Football Clubs (ANPPCFF), and the national union of Cameroonian footballers (SYNAFOC), duly represented by their presidents; Mr Pascal Abunde, Mr Thomas Awa, and Mr Gérémi Njitap Respectively.

The following resolutions were adopted:

1. A joint committee (representing men's and women's football clubs, players' representatives and FECAFOOT) will be set up to continue the reflection in other to

Draw up a collective agreement for football careers before the 2022-2023 season and other measures necessary for the improvement of the working conditions of football players and coaches.

2. An insurance policy covering players and football workers in and out of training sessions and during their match journeys will be contracted by clubs whilst FECAFOOT will subscribe an insurance policy to cover the players during the championships matches.

3. A minimum wage for the 2021-2022 seasons was fixed at CFAF 100,000 for the player of league 1 and the Guinness Super League, and CFAF 50,000 for the player of league 2. The salaries of the coaches shall be determined by the joint Commission aforementioned.

4. The clubs are to present a certificate of solvency equivalent to at least one month's salary certified by a bank and must pay all salaries to players throughout the duration of the championship.

5. Each club and its salaried staff shall be effectively registered with the nsif as from the 2022-2023 seasons

6. A statement of account with support documents must be produced by all the clubs before the 2nd installment of the subsidy paid by FECAFOOT. The transformation of clubs into private companies or enterprises will be a sine qua non condition to take part in the professional championships of the 2022-2023 seasons. FECAFOOT commits to execute all rulings of the judicial bodies. The clubs and players agree to seek for amicable settlements before any referral to the national dispute Resolution chamber. The resolutions were

signed today, 25th January 2022, by all the stakeholders gathered around FECAFOOT President Eto'o Fils Samuel in the conference room of the FECAFOOT headquarters building in Tsinga-Yaoundé.

In general, the government of Cameroon plays a significant role in promoting and supporting sports and athletic development in the country. This includes providing resources for athlete rehabilitation and recovery from injuries. The Ministry of Sports and Physical Education is responsible for overseeing the development of sports in the country, including the welfare of athletes. The government has also established sports medicine centers and clinics across the country to provide specialized care for injured athletes. These facilities offer rehabilitation services, physiotherapy, and medical treatment to help athletes recover from injuries and return to peak performance for example the University of Bamenda medical centre, (Loh, 2017). Furthermore, the government has implemented programs to train and educate sports medicine professionals, including physiotherapists, athletic trainers, and sports physicians. These professionals play a crucial role in providing rehabilitation techniques to injured athletes. Additionally, the government collaborates with sports organizations and clubs to ensure that athletes have access to the best possible rehabilitation techniques. This may involve providing financial support for equipment, facilities, and training programs. The government also works to raise awareness about the importance of proper rehabilitation techniques for athletes. This includes promoting the use of evidence-based practices and guidelines for injury recovery. Moreover, the government may collaborate with international sports organizations and medical institutions to stay updated on the latest advancements in rehabilitation techniques for athletes.

The government of Cameroon created health unit in the state universities for example in Bamenda University (UBa) the government has created the health unit which is in charge of students and take care of athletes who got injured during preparation of university games and during the competitions, also the government also employee's sports psychologist to counsel the injured players. It's important to note that while the government plays a significant role in supporting athlete rehabilitation, there may be areas for improvement in terms of accessibility, quality, and consistency of rehabilitation services across different regions of the country, (Loh, 2017). The history of rehabilitation techniques in Cameroon from the 20th century in a more concise manner. During the 20th century, rehabilitation services in Cameroon underwent significant development. Initially, these services were provided by Christian missionaries and colonial administrators. However, after Cameroon gained independence in 1960, the government began to take a more active role in providing rehabilitation services.

In the 1970s, the government established the National Rehabilitation Center in Yaoundé, which played a crucial role in providing comprehensive rehabilitation services to individuals with disabilities. The center offered physical therapy, occupational therapy, and vocational training to assist individuals in regaining their independence and reintegrating into society. In the 1980s and 1990s, there was a notable shift towards community-based rehabilitation programs in Cameroon. These programs aimed to provide rehabilitation services within local communities rather than centralized institutions. The focus was on making rehabilitation services more accessible and

affordable for individuals with disabilities, emphasizing community involvement and participation. The implementation of community-based rehabilitation programs was influenced by the World Health Organization's CBR (Community-Based Rehabilitation) guidelines, which advocated for a more inclusive and community-oriented approach to rehabilitation.

According to CBC health (2020), The Community Based Rehabilitation (CBR) of the Cameroon Baptist Convention Health Services started in 1983 as an Agricultural Rehabilitation for the Blind (ARB) with focus on agricultural rehabilitation for persons with disability (PWDs). In 1992, CBR services were extended to people with all types of disabilities within the Northwest Region.

The history of rehabilitation techniques in Cameroon is deeply rooted in early 20th century up to date with the used of Traditional medicine, herbs, robs, massage, physical, to treat injuries (Dobgima, 2024). Also, the people of North East Cameroon for example Bamun people when people used to get injury like bone fractures they will treat you traditional by breaking the leg of a fowl throwing the fowl under a bed, lock the room as the fowl is getting heal that's is how the injury persons is healing so, once the fowl come out of the bed heal and can be walking around then the injury person will be heal completely. During this process the traditional healing will tell you not to drink, sleep with a woman. They have a traditional Bam which consists of 18 to 20 leaves which comes from a bush and grained the leaves used it to massage the foot until the bone joints and ossifications start. The difficulties that these traditional healers had was that they did not have x-rays machines to see the level of ossification that's why most of their bone sittings was not in place after the bone was set the fracture will be one side (Dobgima ,2024).

In connection to the above paragraphs the Bamun people have three specialties in treating injuries, which are the people who used Sticks, Bam and people who warm their hands on fire to hold the injury when it is a dislocation or elongation but, when it is fracture it has a different procedure (Dobgima, 2024). According to Dobgima, (2024), In the Centre Region example Yambasa, Nu Gunu people they have three to four ways that they treat injuries. That's people who use their hands, people who treat spiritually, people who used oils to treat the injury and also people who used warm water to treat injuries, people who used a leave which is just like flowers to treat injuries. They used it because it calm downs pains and swelling. Africa traditional massage depends on who is doing it base on its culture. One thing is that pain is not about what theories is telling us but what the patient is feeling it.

According to Dobgima, (2024), the Northerners used Mboma oil (python oil) to treat injuries. And even people of the East region like Abong- Mbang. This Mboma oil is mostly from forest regions nowadays the Mboma oil is mostly used all the ten regions to treat injuries. Furthermore, the people of East Region used to rehabilitate paralyzed people in those days up to now by burying their half body from leg to waists and people play drums, sings and drink and incantations are been done in other to heal the paralyzed man. This is done so as to rehabilitate those parts (members) of your body that are not functioning.

Furthermore, in the Northwest region, for instance in Bali they used leaves to treat injuries, these leaves are be hide on top of a palm from there they used it to massage the

injury every day. Moreover, they also used Fume of a lion place it on bamboo's initial it on the future traditional healers so that they can be using it from different angles to treat injuries, they did so because it was not easy to displace this fume of a lion. In addition, the people of Bafut and Wum used leaves which they warm it on fire and massage the injury foot or arm or members. Also, nowadays the people especially in Ndop (Bamunka), Nso, Oku use Mboma oil to treat sprains. (Dobgima, Netang, 2024).

Statement of the Problem

Athletes are prone to various types of injuries due to the physical demand of their sport which can significantly impact their performance and overall well-being. Rehabilitation techniques play a crucial role in facilitating athlete recovery from injuries and helping them return to their sport safely and effectively. However, the effectiveness of different rehabilitation techniques in promoting athletes' recovery remains a topic of ongoing research and debate. Most players take longer time in recovering from injury, some of them actually go through a lot of torture, they miss a lot in the session, also some go through poor conditions when they are injured. Also, some of these players are even abandoned by their teams when injured. Furthermore, some of these players do not recover mentally, physically, emotionally. It is very possible that this lengthy stay while injured could be as results of the rehabilitation techniques that they used. Maybe they don't use traditional therapy. Considering the age, gender, sport type, injury severity and training background, some players take longer time during recovery from injury. This is due to the rehabilitation techniques that are used in treating the athletes as different injury need different rehabilitation techniques. Therefore, this study is set out to investigate the physical technique used.

Research Objective

To find out whether physical therapy influences athletes' recovery from injury in Bamenda North West Region of Cameroon.

Research Hypothesis

The following specific hypothesis guided this study

Ho: Physical therapy has no significant effect on athlete's recovery from injury.

Ha: Physical therapy has a significant effect on athlete's recovery from injury.

LITERATURE REVIEW

Concept of Physical Therapy

Mary, (1921) defined physical therapy as "a branch of medical science that deals with the preservation, development, and restoration of movement and function in individuals." Worthingham (1965), defined physical therapy as "the art and science of treatment through therapeutic exercise and modalities to restore function and prevent disability." Marilyn defined physical therapy as "the application of specialized knowledge and skills to prevent, diagnose, and treat movement dysfunction and enhance physical health and functional abilities." American Physical Therapy Association (2014), defines physical

therapy as "a dynamic profession with an established theoretical and scientific base that uses a wide range of interventions to help individuals prevent, alleviate, or manage movement dysfunction and enhance physical performance." World Confederation for Physical Therapy (2020), defines physical therapy as "a holistic approach to healthcare that aims to promote, maintain, and restore physical function and mobility in individuals of all ages."

Gaskill, (1980s), Aquatic therapy involves performing exercises and activities in a pool or other water-based environment to improve strength, range of motion, and cardiovascular fitness. Gaskill is a prominent figure in the field of aquatic therapy and has contributed to its development since the 1980s. Herdman, (1990s), Vestibular rehabilitation is a specialized form of physical therapy that focuses on treating balance and dizziness disorders related to the inner ear. Herdman is a leading expert in vestibular rehabilitation and has published extensively on this topic since the 1990s. Hillegass, (2000s): Cardiopulmonary physical therapy involves working with individuals with heart and lung conditions to improve exercise tolerance, breathing function, and overall cardiovascular health. Ellen Hillegass is a well-known author and educator in the field of cardiopulmonary physical therapy. Paris, (2010s), Orthopedic manual therapy focuses on the assessment and treatment of musculoskeletal conditions using hands-on techniques such as joint mobilization and manipulation. Stanley Paris, a renowned physical therapist, has made significant contributions to the field of orthopedic manual therapy in recent years. Manske, (2020s), Sports physical therapy involves working with athletes to prevent injuries, enhance performance, and facilitate recovery from sports-related injuries. Robert C. Manske is a leading expert in sports physical therapy and has authored numerous publications on sports rehabilitation techniques.

Theoretical Review

The B.F. Skinner's Theory of Reinforcement (1953)

B.F. Skinner's theory of reinforcement has been influential in understanding and modifying behavior, and its application to sports rehabilitation, particularly in the context of athletes' recovery from injury, has gained attention. Skinner's theory emphasizes the role of consequences in shaping behavior, and this can be applied to rehabilitation techniques to promote athletes' recovery. Positive reinforcement, which involves the addition of a desirable stimulus to increase the likelihood of a behavior, can be used to motivate athletes to engage in rehabilitation activities. For example, providing praise, encouragement, or rewards for completing rehabilitation exercises can positively reinforce athletes' efforts (Skinner, 1953). In addition to positive reinforcement, negative reinforcement, which involves the removal of an aversive stimulus to increase the likelihood of a behavior, can also be applied in rehabilitation settings. For instance, reducing discomfort or pain during rehabilitation exercises can serve as negative reinforcement, making athletes more likely to engage in these activities. This can be achieved through the use of pain-relieving modalities or techniques that minimize discomfort during rehabilitation sessions (Skinner, 1953).

Skinner's theory also highlights the importance of consistency and timing in reinforcement. Rehabilitation techniques should be consistently reinforced to ensure that

athletes are motivated to adhere to their recovery programs. Timely reinforcement, such as providing immediate feedback and reinforcement following successful completion of rehabilitation exercises, can further enhance the effectiveness of the rehabilitation process (Skinner, 1974).

The application of Skinner's theory of reinforcement in sports rehabilitation aligns with the principles of behavior modification. By using reinforcement techniques, rehabilitation specialists can encourage athletes to adhere to their recovery programs and promote positive behaviors that facilitate healing and recovery. This approach is consistent with the principles of operant conditioning, which underlie Skinner's theory, and emphasizes the role of environmental consequences in shaping behavior (Martin & Pear, 2015).

Moreover, Skinner's theory of reinforcement can be integrated with other psychological concepts such as self-efficacy and motivation in the context of sports rehabilitation. By providing positive reinforcement and creating a supportive environment, rehabilitation professionals can help athletes develop a sense of self-efficacy and belief in their ability to recover from injury, which can enhance their motivation to engage in rehabilitation activities (Bandura, 1977). Research has demonstrated the effectiveness of reinforcement-based interventions in promoting adherence to rehabilitation programs among athletes. A study by Podlog and Eklund (2007) found that using positive reinforcement strategies, such as verbal praise and rewards, increased athletes' motivation and commitment to their rehabilitation regimens. This supports the practical application of Skinner's theory of reinforcement in sports rehabilitation and its positive impact on athletes' recovery from injury.

In conclusion, B.F. Skinner's theory of reinforcement provides a theoretical framework for understanding how physical therapy can influence athletes' recovery from injury. By applying principles of positive and negative reinforcement, consistency, timing, and integrating with other psychological concepts, such as self-efficacy and motivation, sports rehabilitation professionals can effectively promote athletes' engagement in recovery activities. The practical application of Skinner's theory in sports rehabilitation is supported by research demonstrating its positive effects on athletes' adherence to rehabilitation programs.

METHODS

Research Design

The research design used in this study was the concurrent mixed method design, where the quantitative and qualitative data were collected and analyzed at about the same time. In this regard, questionnaires which were closed ended were administered to 23 players who were injured and this represented the quantitative base on the data. Qualitatively interviews were designed and administered to five of these injured players to get more qualitative and indebt data about the phenomenon.

Sample of the Population

The sample of this study was made up of all the 23 players who were injured within the past nine months in PWD, YOSA, Bafut Rangers, Foncha Street and Bafmeng United.

Table 1: Sample Population

| Teams | Population | Sample Size |
|---------------|------------|-------------|
| PWD | 35 | 5 |
| YOSA | 32 | 4 |
| BAFUT RANGERS | 27 | 5 |
| FONCHA STREET | 30 | 6 |
| BAFMENG | 26 | 3 |
| Total | 150 | 23 |

Source: Coaches (2026)

The sample population of this study comprises of five teams that's 35 players of PWD, 32 players of YOSA, 27 players of BAFUT RANGERS, 30 players of FONCHA STREET, 26 players of BAFMENG making a total of 150 players as the population size. A sample size of 23 players of each team was selected.

Sampling Technique

The researcher used the purposive sampling technique to select 150 players of each team with sampling size of 23 injury players to work with. The purposive sampling technique was used by the researcher because the researcher purely considered only injury players involved in the rehabilitation techniques and in this regard, I was able to identify 23 players who were injured within the past nine months.

Administration of Instruments

The direct delivery technique was used by the researcher with the help of the team doctors to ensure the proper administration of the interview guide and the questionnaire. The researcher obtained an authorization letter from the University of Bamenda, Cameroon allowing the researcher to go to the field. A total of 23 questionnaires were shared and answered by the players and where they were difficulties in answering I had to explain and after filling the questionnaires I collected all which shows a response rate of 100%.

With respect of the interview, the injured players were required to prove answers to the items. This was done with the help of the team doctors and coaches. The team doctors had to call the Injury players in to the office one after the other so they can meet the researcher and provide the data. An audio recorder was used to help facilitate the interview which took at least 5 minutes to interview a single athlete and a total of five athletes were interviewed. There was a record of non-verbal expression from the athletes. This was done to ensure that there is no disorganizations and distractions. With respect to the interview guide, the researcher met with the team doctors in the office and administered

the interview guide. All these exercises took place for a week and the researcher realized a 100% return of the instruments.

Method of Data Analysis

Descriptively, the data was presented on tables in the form of frequencies percentages and pie charts. With respect to inferential statistics, the Linear Regression analysis was used to check the effect of rehabilitation techniques on athlete's recovery from injury. Also, the interview was presented using the thematic analyses and finally the effects of rehabilitation techniques on athletes' recovery from injury was analyzed using the documented narrative analyses of the injury players. The researcher organized the data obtained from the field systematically in preparation for presentation analysis, and presentation, using the statistical package for social sciences (SPSS). The completed questionnaires were checked for completeness and comprehensibility to ensure consistency.

Percentages (%) = frequency of responses x 100

Total No of respondents 1

With respect to the interview guide, the Qualitative analysis, the interview was presented using the thematic analyses and finally the effects of rehabilitation techniques on athletes' recovery from injury was analyzed using the documented narrative analyses of the Injury players or athletes.

PRESENTATION OF FINDINGS

Demographic Data of Participants

Table 2: *Summary of Demographic Data*

| Category | Options | Frequency | Percentage (%) |
|--------------------|-------------|-----------|----------------|
| Sex | Male | 23 | 100% |
| | Females | 0 | 0% |
| Age Bracket | 15-20 years | 5 | 21.7% |
| | 21-23 years | 5 | 21.7% |
| | 24-27 years | 13 | 56.5% |

In Table 2, the demographic summary reveals that all 23 participants were male, representing 100% of the sample. In terms of age distribution, the majority of participants fell within the 24-27 years bracket, comprising 56.5% of the sample, while 21.7% were in both the 15-20 years and 21-23 years brackets. This indicates a significant overrepresentation of older participants in the sample, potentially impacting the generalizability of findings to a broader population. The absence of female participants in the sample indicates that the study comprised of purely males.

Table 3: *How Physical Therapy influence the Recovery of Athletes from injury*

| Items | N | Positive Response | | Negative Response | | Mean | Std. |
|---|-----------|-------------------|------------|-------------------|-----------|-------------|--------------|
| | | Agree | % | Disagree | % | | |
| Resistance bands have been used in treating my injury | 23 | 13 | 57.0% | 10 | 43.0% | 2.68 | .827 |
| Balance and coordination exercises are often used in treating my injury | 23 | 16 | 69.0% | 7 | 31.0% | 3.00 | .679 |
| Assisted stretching has been used in treating my injury | 23 | 18 | 79.0% | 5 | 21.0% | 3.69 | .761 |
| Electric machines have been used in treating my injury | 23 | 17 | 75.0% | 6 | 25.0% | 3.57 | .902 |
| Regular jogging or walking around has been part of my therapy | 23 | 19 | 85.0% | 4 | 15.0% | 3.48 | .822 |
| Cold packs or ice massage is part of the therapy in treating my injury | 23 | 18 | 80.0% | 5 | 20.0% | 3.58 | .855 |
| Carrying objects or lifting load have been used in treating my injury | 23 | 16 | 70.0% | 7 | 30.0% | 2.82 | .744 |
| Rest, Ice, Compression, and elevation (RICE) have been used in treating my injury | 23 | 19 | 85.0% | 4 | 15.0% | 3.48 | .822 |
| Multiple Response Set | 23 | 17 | 75% | 6 | 25 | 3.29 | 0.802 |

Table 3 above indicates that majority of participants agreed that various forms of physical therapy, such as resistance bands, balance and coordination exercises, assisted stretching, electric machines, regular jogging or walking, cold packs or ice massage, carrying objects or lifting loads, and Rest, Ice, Compression, and Elevation (RICE) have been used in treating their injuries, with percentages ranging from 57.0% to 85.0%. The mean scores for these statements were generally high, ranging from 2.68 to 3.69, indicating a moderate to high level of agreement among participants regarding the use of massage therapy methods in injury recovery.

Furthermore, the data indicates that a substantial proportion of participants (75.0%) agreed with various massage therapy methods, as shown in the Multiple Response Set (MRS). This suggests a strong influence of massage therapy on athletes' recovery from injuries in Bamenda North West Region of Cameroon. The mean score for the MRS was 3.29, indicating a relatively high level of agreement among participants regarding the use of massage therapy methods for injury treatment.

In conclusion, the data demonstrates that massage therapy methods, including resistance bands, balance and coordination exercises, assisted stretching, electric machines, regular jogging or walking, cold packs or ice massage, carrying objects or lifting loads, and RICE have a significant influence on the recovery of athletes from injuries. The high percentages of (75.0%) and a mean score of 3.29 for various massage therapy methods indicates its significant role in athletes' recovery processes from injuries.

Verifying Hypothesis

H₀: Physical therapy has no significant effect on athlete's recovery from injury.

H_a: Physical therapy has a significant effect on athlete's recovery from injury.

Table 4: ANOVA Table of Physical Therapy and Athletes' Recovery from Injury

| ANOVA ^a | | | | | |
|--------------------|----------------|----|-------------|--------|-------------------|
| Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 Regression | 317.086 | 1 | 317.086 | 49.182 | .000 ^b |
| Residual | 1824.542 | 21 | 6.447 | | |
| Total | 2141.628 | 22 | | | |

a. Dependent Variable: **Recovery from injury**
 b. Predictors: (Constant), **Physical therapy**

The ANOVA table shows that the F-value at a degree of freedom 22 = 49.182 with p = 0.000, p < 0.05. This shows that the test is significant at 0.01 level of significance, hence the null hypothesis (**H₀**) was rejected and the alternative hypothesis (**H_a**) retained. Therefore, it can be physical therapy has significant effect on athlete's recovery from injury.

Table 5: Thematic Analysis of Interview Responses on Physical Therapy and Athletes' Recovery from Injury.

| Questioning theme | Response themes | Grounding | Sampled Quotations |
|--|--|-----------|--|
| <i>what can you say about regular exercise like jogging when you are injured</i> | Facilitates healing through resistance | 2 | "...keeps the body resistant and aids in weight reduction", "...typically it can be a one-week process for recovery", "...works on arms and abs, keeping one physically fit", "...facilitates treatment of injuries step by step", "...acts as a test run to assess injury |

| | | | |
|--|------------------------------|---|--|
| | | | recovery progress”, “...builds up the body's resistance”, “...helps in healing broken bones or fractures” |
| | Painful for certain Injuries | 2 | “...although it is a good practice, it is not for injuries like dislocations, fractures, and sprains”, “...painful to jog with certain injuries”, “...focus on ice, water, and massage therapy instead of resistance training” |

Table 5 shows the thematic analysis of the interview responses on physical therapy and athletes' injuries shows the diverse perspectives on the impact of regular exercise, such as jogging, on injury recovery.

Several respondents emphasized the positive effects of regular exercise on facilitating healing through resistance. They noted that jogging helps in gradually increasing resistance, aids in weight reduction, and works on strengthening various muscle groups, such as arms and abs. Additionally, it was indicated that regular jogging facilitates the treatment of injuries step by step, acts as a test run to assess injury recovery progress, and builds up the body's resistance. Furthermore, participants mentioned that jogging can aid in the healing process of broken bones or fractures and is often used to gauge readiness to return to team activities. This suggests that regular exercise, when approached cautiously and gradually, can have a positive impact on injury recovery by promoting overall physical fitness and resilience.

Conversely, the thematic analysis also revealed concerns about the painful nature of jogging for certain injuries. Respondents cautioned that jogging is not recommended for specific injuries such as dislocations, fractures, and sprains, as it can exacerbate pain and discomfort. Instead, they suggested focusing on alternative therapies such as ice, water, and massage therapy to alleviate pain and aid in the recovery process. This indicates that while regular exercise like jogging can be beneficial for injury recovery in certain cases, it is essential to consider individual circumstances and injury types to avoid exacerbating discomfort and hindering the healing process.

Summarily, the thematic analysis underlines the importance of considering the specific nature of an injury when incorporating regular exercise into an athlete's recovery plan.

DISCUSSION OF FINDINGS

Physical therapy has a significant effect on athlete's recovery from injury at 0.01 level of significance and 14.5% of the variations in athletes' recovery from injury can be accounted for by their use of physical therapy technique such as resistance bands, balance and coordination exercises, assisted stretching, electric machines, regular jogging or walking, cold packs or ice massage, carrying objects or lifting loads. This study is in line with Andy et al. (2012) in that their main focus was therefore to explore athletes' views on their adherence to physiotherapy rehabilitation after sport injury and, came out with the following two categories. The first relates to the athlete's perceptions of factors

affecting his or her own adherence, with themes including the impact of injury, justification of adherence, and strategies used by the patient. The second relates to perceptions of the physiotherapist's impact on adherence, with themes relating to characteristics of and strategies used by the physiotherapist. Also, their findings demonstrated the importance of exploring patients' perceptions of adherence.

This finding is in line with Jordan et al. (2008) which main purpose was to examine attitudes of athletic trainers (ATs) and physical therapists (PTs) on the effectiveness of mental imagery, goal setting, and positive self-talk to improve rehabilitation adherence and recovery speed of injured athletes. The interviewee highlighted the significant benefits of physiotherapy in aiding recovery from injuries such as groins. They shared that following a physiotherapist's instructions to gradually increase jogging helped them improve and recover effectively. The process of increasing jogging intensity was seen as a key factor in their improvement.

Additionally, the interviewee emphasized that physiotherapy helps maintain the body's resistance, aids in weight reduction, and contributes to overall physical fitness. They mentioned that activities like working on arms and abs were beneficial for keeping physically fit and reducing weight. The interviewee viewed physiotherapy as a holistic approach to injury recovery and fitness maintenance.

Furthermore, the interviewee discussed the importance of using physiotherapy to treat injuries systematically, from initial assessment to monitoring the healing process. They noted that activities like jogging and resistance training played a crucial role in testing the level of injury recovery and facilitating faster healing. The interviewee also shared their personal experience of using jogging as a benchmark to determine readiness to return to sports activities after an injury.

Recommendations

Ensure that players receive prompt and appropriate treatment for their injuries to prevent further complications. Consider implementing alternative therapies such as acupuncture, massage, or hydrotherapy to complement traditional treatments and aid in the recovery process. Encourage players to actively participate in physical therapy sessions to help them regain strength, flexibility, and range of motion following an injury. Work closely with the team's physical therapist to ensure that the treatment plan is tailored to each player's specific needs and goals.

Consider incorporating regular massage therapy sessions into the players' recovery routine to help reduce muscle tension, improve circulation, and promote relaxation. Massage therapy can also help speed up the healing process and reduce the risk of muscle imbalances or compensations.

Prioritize player well-being Make player health and safety a top priority by ensuring that they have access to the necessary resources and support for their recovery. Encourage open communication between players, coaches, and medical staff to address any concerns or challenges that may arise during the rehabilitation process.

Emphasize the importance of consistent attendance and compliance with the therapy program to ensure optimal results.

Monitor the progress of the athletes in therapy and adjust their training and playing schedule accordingly to prevent re-injury.

Educate athletes on the benefits of traditional therapy and how it can help them recover faster and more effectively.

Consider incorporating therapy sessions into the team's regular training schedule to promote injury prevention and overall wellness.

Follow the advice of your healthcare provider before starting any type of therapy, it is important to consult with a healthcare provider to determine the best course of action for your specific injury or condition.

Be consistent with your therapy sessions regular and consistent therapy sessions are key to seeing progress and improvements in your recovery. Make sure to attend all scheduled appointments and follow through with any at-home exercises or treatments.

Communicate with your therapist: Be open and honest with your therapist about your progress, any changes in your symptoms, and how you are feeling during and after each session. This will help them tailor the treatment plan to best suit your needs.

Conclusion

Firstly, based on policy this study has proved that, there is need to make use of perhaps not only the western medicine in treating injury players, but they can also make use of other therapies such as traditional therapy. Secondly, based on practice, furthermore, it has been proven that from every indication Team manager, Coaches, Players and the teams have to be aware of the need to engage different types of therapies in treating players so that they will recover faster. Thirdly, theoretically, the study has been able to use some theories to relate them to issues of rehabilitation and players recovery from injury within the context of Elite One and Elite Two Clubs in Bamenda.

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