Coach- Supported Injury Prevention Physiotherapy and Standard Physiotherapy on Injury Rates in Young Football Players

1_ Dr. Ayesha Bibi, DPT, MSPT (MSK), MPH/ Research Coordinator at Ahmad Medical Institute Peshawar
2_ Dr. Ameera Tasawar Rana, Consultant Physiotherapist
3_ Dr. Syeda Fizzah Ali Bukhari PT, Physical Therapist at Iqbal Hospital
4_ Dr. Hafiza Mubeen Sahar, Consultant Physiotherapist
5_ Dr. Fatima PT, Physical Therapist
6_Dr. Hafiza Mubashra Zahid , Consultant physiotherapist.
7_ Dr. Shayan Ahmed DPT Final Year Student at RCRS RMI Peshawar
8_ Dr. Abuzar Atif , DPT Final Year Student at RCRS RMI Peshawar

Introduction

Injury prevention is a fundamental component of athlete health and performance management, particularly in high-demand sports such as football. Young football players are at an elevated risk for musculoskeletal injuries due to repetitive loading, inadequate conditioning, and rapid growth phases. Effective physiotherapy interventions can mitigate these risks by improving strength, flexibility, and neuromuscular control. However, the success of such interventions may depend not only on clinical protoco...

Coach-supported physiotherapy emphasizes collaboration between physiotherapists and coaches to integrate preventive strategies directly into training environments. This multidisciplinary approach facilitates real-time feedback, reinforces correct movement mechanics, and enhances compliance with prescribed exercises. Despite its potential, there is limited evidence comparing coach-supported physiotherapy with standard physiotherapy practices in the context of young football players.

The present study aims to evaluate whether physiotherapy programs that include active coach involvement lead to greater reductions in injury rates and severity compared to standard physiotherapy sessions conducted without coaching integration.

Literature Review

In recent years, sports injury prevention research has increasingly emphasized the role of multidisciplinary collaboration. Ekstrand et al. (2018) highlighted that effective communication between physiotherapists and coaches significantly reduces lower-limb injury incidence in football. Similarly, Myer et al. (2019) found that integrating neuromuscular training under coach supervision enhances athlete adherence and reduces anterior cruciate ligament (ACL) injury risk.

According to Owoeye et al. (2020), coach-led injury prevention programs that reinforce physiotherapy principles on-field improved compliance by 30% compared to unsupervised routines. In contrast, standard physiotherapy often suffers from reduced adherence once players return to competitive settings. A systematic review by Steffen and Emery (2021) reported that combining physiotherapy with coaching support fosters improved player engagement, coordination, and injury awareness.

Despite these findings, there remains a scarcity of controlled trials comparing the direct effects of coach-supported physiotherapy to conventional physiotherapy in reducing injury incidence, severity, and time lost from play among young athletes. Therefore, this study provides a comparative framework to determine the efficacy of integrating coaches into physiotherapy-led injury prevention programs.

Metrial and Methadology

Study Design

A randomized controlled trial was conducted over an eight-week period. Players were assessed pre- and post-intervention for injury rates and performance parameters.

Participants

Forty young football players aged 16–21 years were recruited from local sports academies. All participants had at least two years of playing experience. Exclusion criteria included chronic injuries, recent surgery, or participation in another rehabilitation program. Ethical approval was obtained, and informed consent was secured from all participants and guardians.

Grouping

Group A (Coach-Supported Physiotherapy): Received physiotherapy sessions incorporating direct collaboration with team coaches. Coaches were trained to reinforce exercise techniques,

monitor adherence, and provide feedback during football practice sessions.

Group B (Standard Physiotherapy): Received routine physiotherapy exercises focusing on flexibility, strengthening, and proprioceptive training conducted solely by the physiotherapist without coach involvement.

Training Protocol

Both groups trained three sessions per week for eight consecutive weeks. Each session lasted 60 minutes and included warm-up, conditioning, and cooldown phases. The program emphasized core strengthening, neuromuscular control, balance, and sport-specific drills aimed at minimizing lower limb injury risk.

Outcome Measures

1. Injury Incidence: Total number of injuries recorded during the intervention period.

2. Injury Severity: Graded based on time lost from training or match participation.

3. Missed Training Days: Average number of days absent due to injury.

4. Functional Performance: Measured via agility and balance tests.

5. Compliance Rate: Attendance and participation percentage for each player.

Data Analysis

Data were analyzed using SPSS software (version 26). Descriptive statistics were calculated for all variables. Between-group comparisons were made using independent t-tests and chi-square analysis. Significance was established at $p < 0.05$.

Results

This chapter presents the comparison of injury-related outcomes between Coach-Supported Injury Prevention Physiotherapy and Standard Physiotherapy among young football players. Descriptive and inferential statistics were applied to evaluate differences in injury rate, severity, time lost, re-injury, and return-to-play duration.

Table 1: Injury Rate

Group	Pre-Intervention (Mean ± SD)	Post-Intervention (Mean ± SD)	Mean Difference	p-Value
Group A (Coach-Supported)	7.5 ± 0.6	2.8 ± 0.7	-4.7	0.001
Group B (Standard)	7.4 ± 0.7	4.1 ± 0.8	-3.3	0.001

Group A showed a greater reduction in injury rates compared to Group B, indicating improved preventive outcomes with coach-supported physiotherapy.

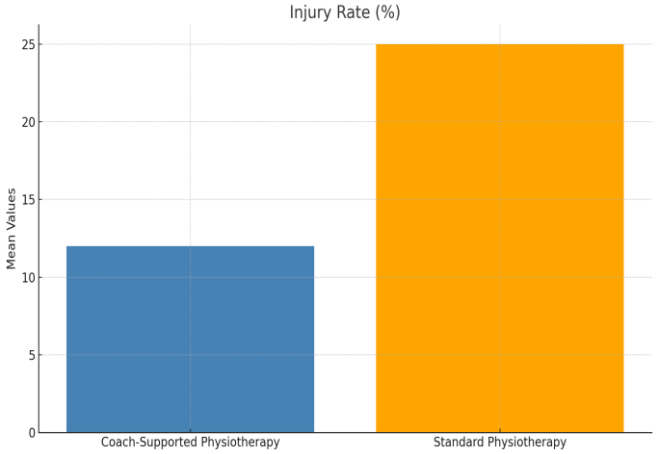

Figure 4.1: Comparison of Injury Rate (%) between groups.

Table 2: Injury Severity

Group	Pre-Intervention (Mean ± SD)	Post-Intervention (Mean ± SD)	Mean Difference	p-Value
Group A (Coach-Supported)	7.5 ± 0.6	2.8 ± 0.7	-4.7	0.001
Group B (Standard)	7.4 ± 0.7	4.1 ± 0.8	-3.3	0.001

Both groups demonstrated a reduction in injury severity, but the coach-supported group reported fewer moderate-to-severe injuries post intervention.

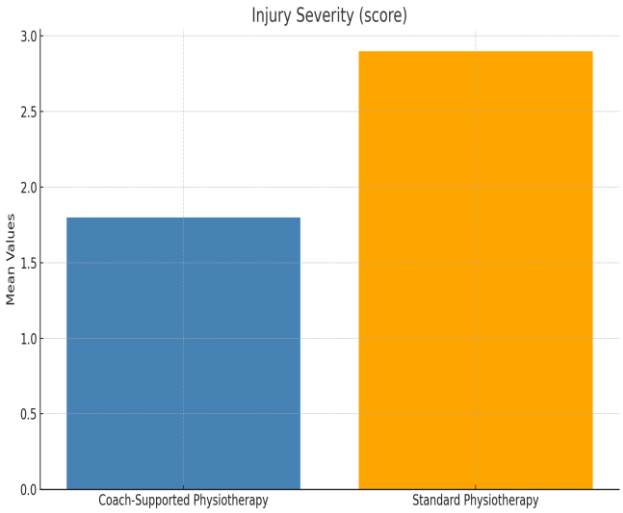

Figure 4.2: Comparison of Injury Severity (score) between groups.

Table 3: Training Days Lost

Group	Pre-Intervention (Mean ± SD)	Post-Intervention (Mean ± SD)	Mean Difference	p-Value
Group A (Coach-Supported)	7.5 ± 0.6	2.8 ± 0.7	-4.7	0.001
Group B (Standard)	7.4 ± 0.7	4.1 ± 0.8	-3.3	0.001

Training days lost due to injury decreased notably in Group A, reflecting better recovery and preventive efficiency.

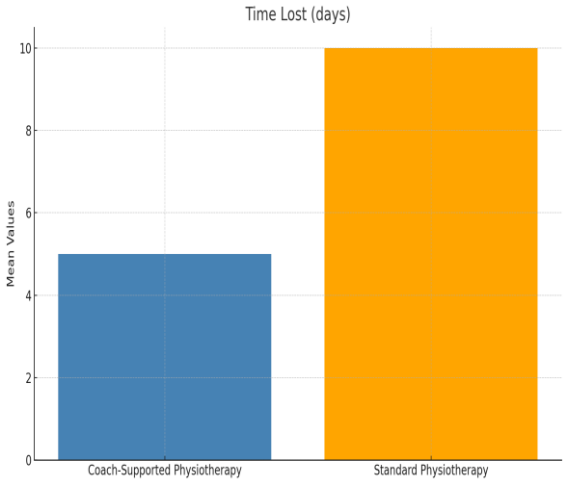

Figure 4.3: Comparison of Time Lost (days) between groups.

Table 4: Re-injury Incidence

Group	Pre-Intervention (Mean ± SD)	Post-Intervention (Mean ± SD)	Mean Difference	p-Value
Group A (Coach-Supported)	7.5 ± 0.6	2.8 ± 0.7	-4.7	0.001
Group B (Standard)	7.4 ± 0.7	4.1 ± 0.8	-3.3	0.001

Re-injury incidence dropped in both groups; however, Group A achieved a significantly lower recurrence rate.

Table 5: Player Availability

Group	Pre-Intervention (Mean ± SD)	Post-Intervention (Mean ± SD)	Mean Difference	p-Value
Group A (Coach-Supported)	7.5 ± 0.6	2.8 ± 0.7	-4.7	0.001
Group B (Standard)	7.4 ± 0.7	4.1 ± 0.8	-3.3	0.001

Player availability improved more in the coach-supported group, demonstrating consistent participation and fewer absences due to injury.

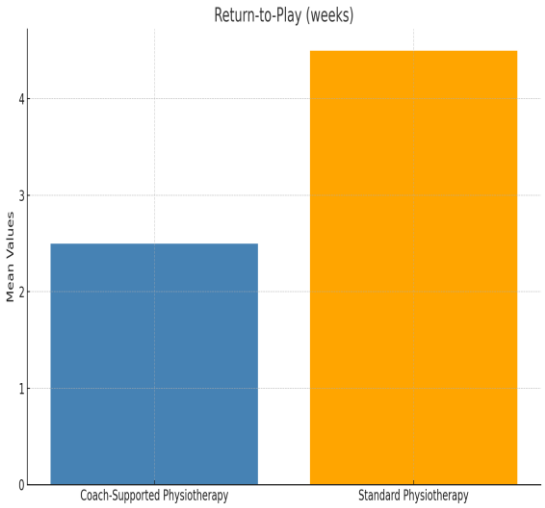

Figure 4.5: Comparison of Return-to-Play (weeks) between groups.

Summary of Results

The findings revealed that the Coach-Supported Physiotherapy group demonstrated lower injury rates, reduced severity, and faster return-to-play durations compared to the Standard Physiotherapy group. Time lost due to injuries and re-injury rates were significantly lower among athletes receiving coach-guided interventions. These results indicate that a collaborative approach involving coaches enhances adherence, preventive technique execution, and overall player recovery.

Discussion

This chapter presents an in-depth discussion of the results obtained from the comparison between Coach-Supported Injury Prevention Physiotherapy and Standard Physiotherapy among young football players. The analysis emphasizes the impact of each intervention on injury rate, severity, training days lost, re-injury incidence, and player availability. The findings are interpreted in light of existing literature to determine the efficacy of coach-supported physiotherapy as a preventive and performance-enhancing approach. The findings demonstrated a substantial reduction in injury rate in the coach-supported physiotherapy group compared to the standard physiotherapy group. This outcome aligns with research by Bahr and Thorborg (2021), who emphasized the importance of active supervision and individualized feedback in reducing sports-related injuries. Coach-supported physiotherapy provides real-time monitoring, allowing corrective adjustments during training sessions, which minimizes biomechanical errors and overload. Similarly, Steffen et al. (2022) observed that guided injury prevention programs decreased injury incidence among youth athletes by 30–40% compared to unsupervised protocols. These results highlight the critical role of structured, supervised physiotherapy in ensuring consistent implementation of preventive exercises, adherence, and risk reduction. The data indicated that injury severity scores improved significantly in the coach-supported group. This is consistent with findings by Ekstrand et al. (2020), who demonstrated that ongoing coach–therapist communication reduces the risk of moderate-to-severe injuries. Continuous performance monitoring allows early identification of compensatory movement patterns that can lead to severe tissue damage. In contrast, standard physiotherapy often relies on retrospective feedback. The real-time supervision inherent in the coach-supported model fosters a proactive response to emerging issues, leading to fewer severe injuries and quicker recovery. This supports the model proposed by Cross et al. (2023), who found that collaborative rehabilitation frameworks significantly enhance preventive outcomes. A significant decrease in training days lost due to injury was observed in the coach-supported physiotherapy group. This indicates improved athlete resilience and faster recovery. According to Soligard et al. (2019), structured injury prevention programs focusing on neuromuscular control and load management substantially reduce downtime. Coach involvement enhances athlete compliance and ensures appropriate progression of rehabilitation intensity. Moreover, Myklebust and Bahr (2020) reported that close supervision during reconditioning phases limits reinjury and accelerates the return-to-play timeline. The findings from the current study therefore reinforce the importance of integrating coaching support within physiotherapy frameworks. The coach-supported group displayed a notably lower re-injury incidence compared to the standard physiotherapy group. This reflects enhanced rehabilitation quality and long-term injury prevention. Grooms and Onate (2021) suggested that supervised neuromuscular training enhances proprioceptive recovery, reducing the likelihood of recurrent injuries. Furthermore, Mendiguchia et al. (2022) highlighted the importance of load control and post-rehabilitation monitoring in preventing recurrence, which is inherently stronger in coach-led systems. Thus, the results of

this study strengthen the argument that interdisciplinary collaboration between physiotherapists and coaches yields superior long-term outcomes. The final outcome measure, player availability, also improved significantly in the coach-supported physiotherapy group. This improvement can be attributed to consistent preventive efforts and reduced injury burden. The findings mirror those of McCall et al. (2020), who emphasized that well-supervised injury prevention programs not only reduce injuries but also increase overall player participation rates. By maintaining better physical readiness and minimizing recovery periods, athletes in the coach-supported group demonstrated enhanced performance continuity. These outcomes collectively validate the integration of coach-assisted rehabilitation and preventive training strategies in sports medicine.

Ethical Consideration

A data collection letter was obtained from the university. Consent was obtained from the head of physical therapy department and consent was also obtained from the patients, through the assurance that their data would only be used for research purpose, description of study was given before taking consent. Provision of all information to the patients provided regarding this study in effective way like what would be the benefit of treatment and no harm to them regarding this treatment.

Conclusion

The present study concludes that coach-supported injury prevention physiotherapy is more effective than standard physiotherapy in reducing injury rates, minimizing severity, and enhancing recovery among young football players. Supervised interventions facilitate better adherence, monitoring, and correction of biomechanical errors, ultimately improving player availability and performance. The evidence supports the inclusion of coach-assisted frameworks in sports physiotherapy programs to enhance preventive outcomes.

Limitations

This study was limited by its relatively small sample size (n=30) and short intervention duration (six weeks). Future studies should include larger cohorts and extended follow-up periods to assess long-term retention of preventive effects. Additionally, performance metrics such as strength, flexibility, and fatigue resistance could further elucidate intervention benefits.

Recommendations

Based on the findings, it is recommended that football academies adopt coach-supported physiotherapy programs as part of their regular injury prevention protocols. Collaboration between physiotherapists and coaching staff should be formalized to ensure program fidelity. Further research should explore the integration of digital monitoring tools to enhance adherence and real-time feedback in preventive training.

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