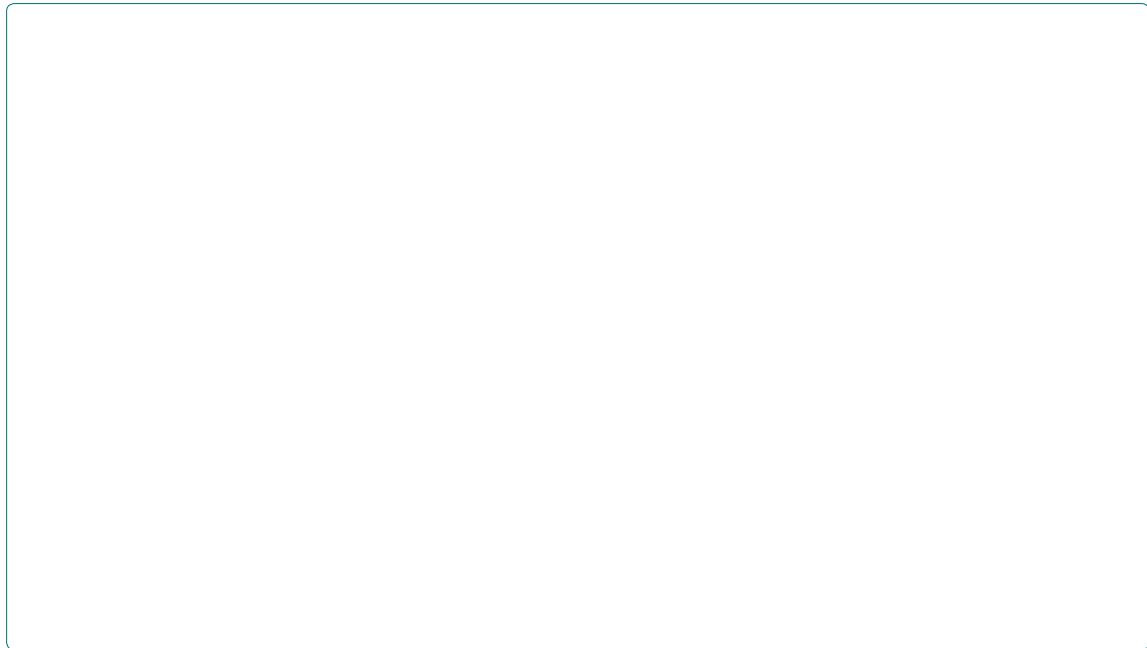


Efficiency and Cost-Effectiveness of a Pediatric-Specific Soft Tissue Injury



Keywords: Soft tissue injuries; Pediatric patients; Physiotherapy-led clinic; Healthcare resource utilization

Introduction

Soft tissue injuries are a prevalent health issue among pediatric patients, often leading to visits to emergency departments (EDs) or primary care physicians (PCPs). These injuries encompass a wide range of musculoskeletal conditions, including strains, sprains, contusions, and minor fractures, and can result from various activities, such as sports, recreational play, and accidents. While these injuries are typically non-life-threatening, they contribute significantly to healthcare resource utilization and costs. The traditional approach to managing pediatric soft tissue injuries involves ED visits or PCP consultations, which can lead to prolonged wait times and increased healthcare expenditures [1]. Moreover, these settings may not always be equipped with the specialized knowledge and resources necessary to provide optimal care for such injuries. As a result, there is a growing interest in alternative models of care that streamline the assessment, diagnosis, and treatment of soft tissue injuries in pediatric populations. One such model is the Soft Tissue Injury Clinic (STIC) led by physiotherapists. The STIC model aims to provide specialized care for soft tissue injuries, optimizing resource utilization, reducing wait times, and improving patient satisfaction. While studies have shown the effectiveness of physiotherapy-led STICs in the management of musculoskeletal conditions in adults, limited research has focused on their application in the pediatric population. This study seeks to address this gap by evaluating the efficiency and cost-effectiveness of a pediatric-specific STIC through an interrupted time series analysis.

Methods

Study design

This research employed an interrupted time series study design, a robust quasi-experimental design commonly used in healthcare research to assess the impact of interventions over time. Data were collected over a 24-month period, comprising 12 months before the implementation of the pediatric-specific STIC and 12 months after its establishment.

Participants

The study included all pediatric patients (aged 18 years and under) with soft tissue injuries who sought medical care within the healthcare system during the study period. Patients were identified through medical records and administrative data.

Intervention

The intervention consisted of the introduction of a pediatric-specific Soft Tissue Injury Clinic, led by experienced physiotherapists.

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injury cases, healthcare resource utilization, wait times, patient satisfaction, and costs were collected and analyzed. The primary outcome measure was the change in healthcare resource utilization and associated costs following STIC implementation.

A total of 342 pediatric soft tissue injury cases were included in the study. Following the introduction of the STIC, there was a significant reduction in practitioner consultations ($p = 0.003$). Wait times for assessment and treatment were substantially reduced.

The clinic was designed to offer specialized assessment, diagnosis, and treatment for pediatric soft tissue injuries, including strains, sprains,
