ABSTRACT

Background: Hemophilia is a hereditary bleeding disorder characterized by recurrent joint and muscle bleeding, leading to progressive musculoskeletal complications and functional disability. Although physiotherapy plays a crucial role in managing these complications, there is a lack of standardized prehabilitation protocols specifically designed for hemophilic patients. Prehabilitation focuses on improving functional capacity and preventing complications before their onset, making it highly relevant in hemophilia care.

Methodology: This study adopted a cross-sequential design conducted in three phases: protocol development, content validation, and feasibility analysis. A physiotherapy-based prehabilitation protocol was developed using an extensive literature review and expert input. Content validity was established using the Content Validity Index (CVI) through expert evaluation. The feasibility of the protocol was assessed over a period of 4–6 weeks in 16 participants selected through purposive sampling. Outcome measures included Hemophilia Joint Health Score (HJHS), 6-Minute Walk Test (6MWT), Manual Muscle Testing (MMT), and Numeric Pain Rating Scale(NPRS),HaemQoL.

Results: The developed protocol demonstrated high content validity with strong expert agreement. Feasibility analysis indicated good patient adherence, safety, and acceptability. Preliminary findings suggested improvements in joint health, functional mobility, muscle strength, pain reduction, and quality of life among participants.

Conclusion: The physiotherapy-based prehabilitation protocol is a valid, feasible, and safe approach for hemophilic patients. It has the potential to enhance functional outcomes, prevent complications, and improve overall quality of life. Further large-scale studies are recommended to establish its long-term effectiveness.

Keywords: *Hemophilia, Prehabilitation, Physiotherapy, Joint Health, Quality of Life*

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