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The Role of Medical Screening in Physiotherapy

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Abstract

Introduction: In some European countries, patients have the right to self-referral or examination without referral from a doctor to a triage physiotherapist, who has additional expertise and is capable of advanced clinical reasoning. A triage physical therapist must be trained in a timely manner to identify signs and symptoms of a serious illness other than neuromusculoskeletal disorders. The screening process allows the physiotherapist to detect warning signs – red flags that require additional medical attention. The reason for doubt and referral to a specialist doctor may also be an unexpected outcome or unresponsiveness of symptoms to physiotherapeutic treatment. *Methods:* A descriptive literature search method in the PubMed and CINAHL databases between November 2023 and March 2024 was conducted. The review included open access of randomized controlled trials and systematic reviews published since 2018. We searched using the search string of keywords or their combinations in English: direct access, physiotherapy, red flags. *Results:* The review included 12 studies investigating the effects and implications of self-referral options or access to physiotherapy without referral to a doctor. The authors mostly report a decrease in the number of referrals to specialist doctors, a decrease in drug consumption, an improvement in the patient's satisfaction with medical care, and thus a reduction in treatment costs. *Discussion and conclusions:* A physical therapist has a responsible task in the process of ensuring the patient's basic right to appropriate, safe, and quality treatment. Physiotherapeutic treatment is based on a physiotherapeutic examination, which must exclude as clearly as possible the presence of serious illnesses or detect individuals in whom serious illnesses have not yet been detected. The screening process helps physiotherapists determine the degree of doubt about whether the patient in question is suitable for physiotherapeutic treatment and choose the most effective physiotherapeutic procedure.

Keywords: screening, red flags, physiotherapy, physiotherapeutic diagnosis

Introduction

Musculoskeletal Conditions

Musculoskeletal pain problems including osteoarthritis, low back pain, shoulder pain and neck pain in ageing population are leading causes for disability globally (Murray et al., 2010). This group of diseases is characterized by persistent pain, and limited functional and psycho-social abilities. Musculoskeletal (MSK) disease is second most common cause for primary care visits and work absentisem in Slovenia (Ministrstvo za zdravje, 2023). Evidence show that they often relapse and become long-term conditions (Dunn et al., 2006). As such, they are a growing challenge for primary care and a huge economic burden of the healthcare system worldwide. In Slovenia, they represent 5 % of all healthcare costs which is 0,4 % of gross domestic product (GDP) between 2016 - 2018 (Sedlak et al., 2021).

Direct Access

Traditionally patients with MSK conditions are referred by general practitioners (GP) to physiotherapists which usually results in a delay in care. Recently, in some countries a new healthcare pathway to access physiotherapy services as the first contact was developed. Direct access (DA) to physiotherapy is an organizational model, where patients have the possibility to self refer, to directly seek physiotherapist and is available and well accepted in several countries including the Netherlands, United Kingdom, Australia, Brazil and most of USA (Piscitelli et al., 2018). However, there are variations in how direct access service is being utilized in practice (National assocciation of primary care, 2015).

The professional workforce delivering first contact in DA healthcare model are physiotherapists with extended skills who assess and manage patients with MSK conditions (Ojha et al., 2014). Direct access increases the professional responsibility of physiotherapists and requires additional knowledge (Vignaud et al., 2023). The essential part of the physiotherapeutic assessment at first contact is to make sure that the patient is an appropriate candidate for physical therapy (Finucane et al., 2020).

Evidence show that the effects of DA are promising: reduction of workload for GP, reduction in costs for the patient and the healthcare system, and improvement in healthcare indicators e.g. quality of life and disability (Ojha et al., 2014).

Medical Screening

As an essential part of this process, the therapist should screen for medical diseases and detect signs and sympthoms of a non-MSK disease or a disease

which can mimic a MSK dysfunction (Goodman et al., 2018). Detecting warning signs - red flags requires therapists‘ vigilance and advanced clinical reasoning skills. Considering evidence supporting red flags and the patients individual profile the therapist determines his level of concern and decides on clinical action. The patient can be treated, treated and referred or only referred (Finucane et al., 2020).

Historically, red flags were used to define serious pathologies, but it is still not clear which red flags should be considered. There is a lack of evidence which red flags are informative, especially when used in isolation (Finucane et al., 2020).

Furthermore, the need for screening also create factors such as visceral pain mechanism, side effects of medication and comorbidities. Even without direct access, screening is necessary if the patient is unresponsive on treatment, the therapist experienced an unexpected outcome or the patient might not report symptoms or concern because of fear or discomfort (Goodman et al., 2018).

The aim of this study was to investigate the effects and impact of self-referal options and access to physiotherapy without referal from a doctor on patients, physiotherapists and healtcare system.

Methods

A literature search in the PubMed and CINAHL databases between November 2023 and March 2024 was conducted to identify studies evaluating direct access services in physiotherapy primary care settings. The review included open access to full texts of randomized controlled trials and qualitative studies published since 2018. We searched using the search string of keywords or their combinations in English language, “direct access”, “physiotherapy”, “red flags”. To be eligible for inclusion, studies had to evaluate primary care, and direct access services to physiotherapy for adults with musculoskeletal conditions in terms of clinical outcomes (pain, functional disability) and/or socio-economic factors (patient satisfaction, healthcare costs). We excluded texts in other languages than English, letters, protocols and studies that were not fully available.

This review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) 2020 statement (Page, et al., 2021).

Results

The review was done by a physiotherapist who attained recognized education qualification including medical screening which meets the educational requirements for first contact practitioners.

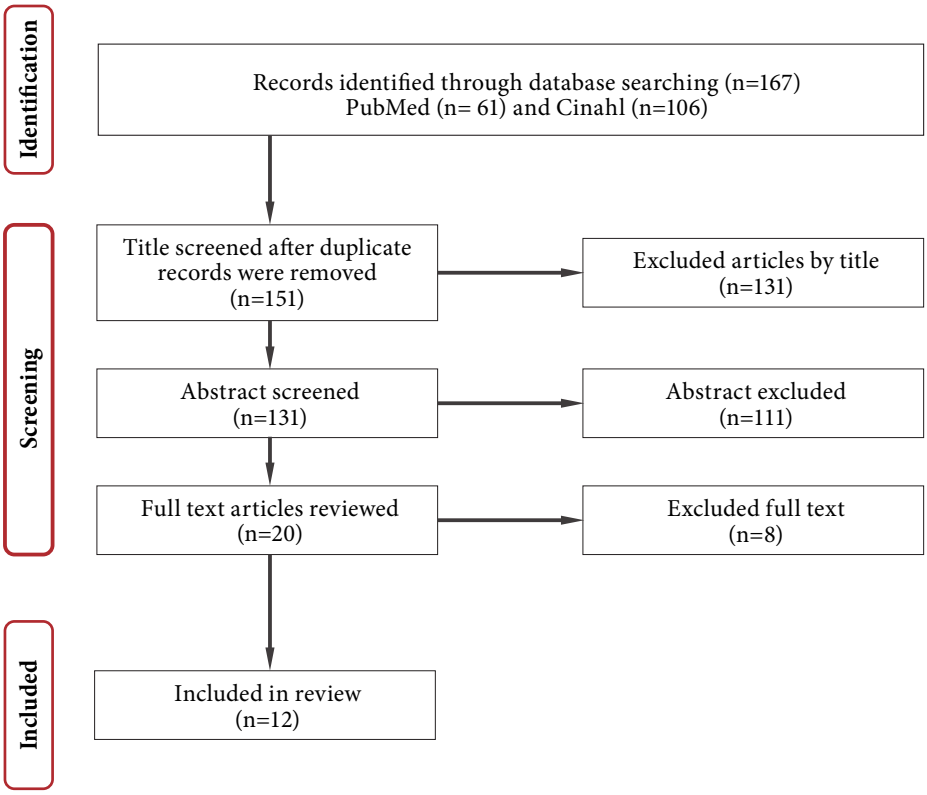

Figure 1: PRISMA flow diagram.

A total of 167 articles were initially retrieved through the literature research in PubMed and CINAHL databases. After duplicates had been removed 151 titles were screened. Subsequently, 151 abstracts of articles were assessed for eligibility of which 20 articles were selected for full text review. Twelve articles were subjected to analysis in this study. The main reason for exclusion were articles evaluating conditions in healthcare systems where the direct access service to physiotherapy has not yet been implemented in their healthcare system. The flow diagram of literature search is outlined in figure 1.

With the exception of two randomized controlled studies, three included studies were qualitative by design and seven were systematic reviews. They all investigated community in primary care settings, and direct access to physiotherapist-led service for MSK conditions. Characteristics of the 12 studies are presented in Table 2.

Table 2: Characteristics of included studies.

First author (year)	*Study design*	*Aims of the study*	*Findings*
Gallotti et al. (2023)	Systematic review	To compare the effectiveness, safety, and the accuracy of DA compared to the physician-led model of care for the management of patients with musculoskeletal disorders.	DA had a high referral accuracy and a reduction in the rate of return visits; DA is a safe, less expensive, reliable triage and management model of care that results in higher levels of satisfaction for patients compared to the traditional medical model.
Downie et al. (2019)	Qualitative study	To evaluate the DA service presenting the first 2 years of data.	Referrals to orthopedics were substantially reduced; the extended scope physiotherapists asked for a GP review in 1% of patients.
Alshareef et al. (2023)	Qualitative study	To identify factors associated with patients' decisions to access physical therapy through self-referral or provider-referral.	Self-referral patients were aware that their plan benefits included reduced cost for self-referral and felt confident in selecting DA, they also had negative beliefs about the effectiveness of pharmacological treatments and surgery, and previously had positive direct or indirect experiences with physical therapy.
Babatunde et al. (2020)	Systematic review	To synthesize evidence regarding outcomes of DA; to describe current models of DA; to determine characteristics of the patients using DA.	Lower health care utilization (imaging procedures, medicament prescriptions), lower off-work time; Regarding outcomes there was not a large difference between DA or GP-led care; Patients were younger, slightly more educated and with better socio-economic status.
Piscitelli et al. (2018)	Systematic review	To explore the evidence regarding feasibility, costs, safety and patient satisfaction in DA compared to other organizational healthcare models.	DA showed less physiotherapy treatments, visits to physicians, imaging performed and drug consumption, patients were more satisfied with DA service.
Harvey-Sullivan et al. (2024)	Systematic review	To explore the impact of DA and self-referral pathway on inequalities in healthcare use.	Self-referral pathways risk widening inequalities in healthcare use.
Cattrysse et al. (2024)	Systematic review	To identify, appraise, and synthesize existing literature to assess the impact of DA for patients presenting with various MSK disorders with focus on outcomes from the perspectives of the patient, the provider, and society.	From the patients' perspective there was no effect on pain, but they described better quality of life and functioning. Providers detected higher treatment compliance. There was a reduced waiting time, lower health costs.
Ho-Henriksson et al. (2022)	Randomized controlled pragmatic trial	To determine whether physiotherapists as primary assessors in primary care are cost-effective alternative compared to GP-led care.	Findings suggest that physiotherapists-led care might reduce healthcare costs, it seems to lead to fewer physician consultations and radiography.

First author (year)	Study design	Aims of the study	Findings
Igwesi-Chidobe et al. (2021)	Qualitative study	To understand the experiences of patients, GPs, physiotherapist and clinical commissioners on DA.	DA is acceptable to all healthcare professionals and patients, but there is necessary to ensure effective communication among healthcare professionals and patients and to clarify the scope of physiotherapists. DA can free GPs to focus on more complex health conditions.
Gagnon et al. (2020)	Randomized controlled trial	To evaluate the effects of DA on clinical outcomes in patients with MSK disorders compared to those in the usual care group.	Patients with MSK disorders in DA had better clinical outcomes (lower levels of pain), had fewer return visits to usual care service.
Hon et al. (2021)	Systematic review and meta-analyses	To compare evidence regarding costs and clinical outcomes between direct access and physician-first systems in US civilian health services.	DA to physical therapy is more cost-effective, the results show fewer visits than physician-first access and patients described greater functional improvement.
Demont et al. (2019)	Systematic review	To appraise the evidence of the impact of DA in terms of efficacy, health care costs, patients' satisfaction and compliance.	DA to physiotherapy seems a promising model to improve efficiency of care and reduce costs.

Discussion

The purpose of this study was to investigate whether physiotherapy profession could contribute to decreasing the burden of chronic MSK conditions on health care system. Physical therapists are one of the healthcare professionals that are most assessed for managing pain and disability related to MSK conditions (Alsharref et al., 2023).

In almost half of EU countries and most of the US patients can use direct access to physiotherapy services, which is also known as self-referral directly to a first contact practitioner without seeing a GP (Demont et al., 2019; Babatunde et al., 2020; Ho-Henriksson et al., 2022; Harvey-Sullivan et al., 2024). Several studies have suggested positive effects of DA model of care on cost-effectiveness, clinical outcomes (e.g. patient's satisfaction, pain intensity, quality of life) and safety. Direct access is less expensive in terms of medication and imaging procedures use and due to fewer visits, it reduces waiting and off-work time (Piscitelli et al., 2018; Babatunde et al., 2020; Hon et al., 2020; Ho-Henriksson et al., 2022; Gallotti et al., 2023; Cattrysse et al., 2024). However, Cattrysse et al. (2024) reported that DA did not reduce pain intensity compared to Gagnon et al. (2020) who reported a significantly decrease in pain intensity. There is evidence that DA contributes to improving clinical outcomes such as quality of life, disability and patient satisfaction (Piscitelli et al., 2018; Catrrysse et al., 2024). Furthermore, DA is promising approach to decrease GPs work load, since some studies suggest reduced physician consultations (Downie et al., 2019), fewer referrals to orthopedics and return visits (Gagnon et al., 2020; Gallotti et al., 2023).

However, the existing evidence should be interpreted with caution when ensuring effective implementation of DA into practice (Igwesi-Chadobe et al., 2021). The DA model of care tends to cause inequality in health care use, suggesting that it depends on age, gender, ethnicity, and education level of the patients. White, younger, educated women, from less deprived backgrounds tend more likely to self-refer (Harvey-Sullivan et al., 2024). Additionally, Igwesi-Chidobe et al. (2021) reports poor public awareness about DA pathway and the scope of physiotherapy which indicates that there is a need to improve multidisciplinary communication, patient awareness, and public health literacy.

A systematic review by Lin et al. (2018) identifies eleven recommendations for best care for MSK disorders from high-quality clinical practice guidelines as follows: care should be patient-centered, practitioners should screen patients for serious pathology and red flags, physical assessment for spinal pain should include neurological screening test and the patient progress evaluated with validated measures. Furthermore, they recommend patient education, addressing physical activity in patient management, discouraging radiological imaging unless serious diseases are detected and manual therapy in combination with other approaches should be therapists` first choice strategy to manage patients with MSK disorders.

Direct access model is safe (Gallotti et al., 2023) and shows rare risk for adverse effects in the whole physiotherapy practice not just related to MSK conditions (Piscitelli et al., 2018).

Regardless of all the benefits of DA a lot of countries in Europe including Slovenia still do not adopt this model. Nevertheless, the physiotherapists community in Slovenia is increasing its role and competence and offer postgraduate program. In addition, some physiotherapists have already achieved international musculoskeletal certification acquiring advanced knowledge and skills following the International Federation of Orthopedic Manipulative Physical Therapy standards. Existing evidence from a cross-sectional study by Souter et al. (2019) suggests that post-professional specialization is a mainstay for developing advanced clinical, decision making, and reasoning skills level.

According to our knowledge, this is the first study in Slovenia that reports the importance of screening for red flags and serious diseases in physiotherapy management of MSK disorders and furthermore, suggests how physiotherapists can contribute to health care efficiency and utilization.

This review has some limitations. First, the research was performed only in two databases, and some relevant article may not have been included. Second, most of the included studies were conducted in countries (e.g. United Kingdom, USA) where DA is already adopted and screening process is an essential part of each physiotherapy assessment. However, their health care systems were initially facing same problems as in Slovenia.

Conclusion

Activity and participation limitations caused by chronic MSK conditions can aggravate other diseases, cause poor mental health and reduce quality of life which is why the need for better-targeted care and improved efficiency in the management of MSK conditions is growing. There is evidence which support that healthcare system could benefit from physiotherapists with advanced knowledge and skills including screening for red flags or serious diseases. The results of this study suggest that it is time to rethink the role of Slovenian physiotherapists and to design high quality studies to promote their profession and as such to ensure patients basic right to appropriate, safe, and quality treatment.

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