一、請閱讀以下摘要，並回答下列的問題。

1. 請使用中文說明此研究之目的? (5%)
2. 請使用中文說明此研究是如何進行? (5%)
3. 請使用中文說明研究結果(請使用數字佐證)如何回應初始的研究目的? (10%)

Abstract

Purpose: Cerebral/cortical visual impairment (CVI) is a leading cause of pediatric visual impairment and is frequently associated with abnormal ocular motility. Eye tracking has previously been used to characterize oculomotor function in CVI. The purpose of this study was to evaluate the utility of eye tracking in diagnosis, categorization, and prognostication of CVI.

Design: Prospective longitudinal study.

Participants: Thirty-nine children with CVI and 41 age-matched controls.

Methods: Children with CVI underwent 4 eye tracking sessions over 1 year, and age-matched controls completed 1 eye tracking session. Fixations and saccades were labeled by the eye tracking software and used to compute 9 oculomotor features. In children with CVI, unsupervised data-driven clustering analysis using these 9 features was performed to identify 3 CVI eye tracking oculomotor groups. Clinical and demographic characteristics of eye tracking oculomotor groups were compared.

Main Outcome Measures: (1) Area under the curve (AUC) for eye tracking oculomotor features in classifying patients with CVI and controls; (2) differences between 3 CVI eye tracking oculomotor groups on clinical and demographic characteristics; and (3) change in visual acuity (VA) over 1 year in 3 CVI eye tracking oculomotor groups.

Results: Six oculomotor features (fixation and saccade latency, frequency, and off-screen proportion) had an AUC ≥ 0.90 in classifying children with CVI and controls ($P < 0.0001$). Cerebral/cortical visual impairment eye tracking oculomotor groups had significantly different VA ($P < 0.0001$) and change in VA over 1 year (P ¼ 0.049). Patients in group B, who had the greatest improvement in VA, were younger and had higher rates of term hypoxic ischemic encephalopathy.

Conclusions: Eye tracking measures of oculomotor function accurately distinguish between children with CVI and age-matched controls. Clustering analysis revealed 3 CVI eye tracking oculomotor groups with prognostic significance. Eye tracking shows promise as an objective, quantitative measure of oculomotor function in CVI that may in future be useful in both clinical practice (for longitudinal assessment, prognostication, and guiding individualized interventions) and research (as an outcome measure or method to stratify patients in clinical trials).

二、問題(請以中文回答)

1. What are the obstacles to enacting occupation-based practice? (10%)
2. Please describe Wilding' s study and Loh et al.' s study. (10%)

Introduction

Occupational therapy is defined as 'the therapeutic use of everyday life occupations … for the purpose of enhancing or enabling participation'. Under-standing the transaction among the client, occupation and context, and the importance of occupation for health and wellbeing is considered essential for occupation-based practice. Despite the emphasis on occupation-based practice in the Occupational Therapy Practice Framework-4, occupational therapists report barriers to enacting occupation-based practice such as time, space, materials, and setting expectations. A significant barrier is the domination of discourses that privilege biomedical knowledge and an understanding of health as an absence of illness. Coupled with the business model of healthcare, productivity standards, and billing regulations, these discourses may lead occupational therapists to experience ethical tensions; that is, to be good therapists in the eyes of other healthcare professionals and to meet expected requirements, occupational therapists may narrow their scope of practice to focus on impairments and neglect the occupational needs of their clients. This disconnection from occupation-based practice and acceptance of dominant ideas may lead to occupational alienation and contribute to hegemony.

見背面

Hegemony is defined as the success of the dominant classes to have their view of the world and reality accepted by others as common sense. It is linked to oppression through ideological domination; people uncritically consent to versions of reality, even though these versions run against their best interests. Hegemony does not rely on force but rather persuasion or passive acceptance. When experienced in healthcare settings, hegemony has been described as the dominance exerted by a medical group, over different healthcare professions, including nursing, and occupational therapy.

In occupational therapy, Wilding explored the idea of hegemony in an acute care setting in Australia. Using action research methodology, fifteen therapists engaged in individual and group interviews as co-researchers. Through this process, the co-researchers recognised their own 'self-limiting and overly conforming behavior'. Their unconscious, passive compliance with others' expectations led them to practice in ways they did not necessarily value or agree with. For example, the co-researchers reported that they often focused on the medical diagnosis rather than occupational concerns and productivity over meaningful, client-centered intervention. Ultimately, Wilding concluded that these hegemonic practices contributed to occupational therapy being 'an invisible and subservient profession'. The hegemony described by Wilding was also noted by Loh et al., who examined the barriers to the growth of occupational therapy in rehabilitation in Malaysia. They identified hegemony as a 'suppressor' of occupational therapy that created occupational injustices, hindering the growth and value of occupational therapy. Both studies highlight 'hegemonic blind spots' of the profession.

These studies highlight the impact of hegemony within medical settings outside of the United States but do not address the experience for occupational therapists working in mental health settings where risk-averse and biomedical ideologies govern practice. Though the challenges of carrying out occupation-based and justice-oriented practice in mental health settings is well documented, little attention has been paid to the ways occupational therapists experience and respond to hegemony. Acknowledging Wilding' s charge to address hegemony in different settings and locations, the aim of this paper is to describe how occupational therapists experienced and managed hegemony in an acute mental health setting in the United States.

三、請閱讀以下某篇文獻的內文，並回答下列的問題。

1. 請說明與此二段落相關的主要發現。(10%)
2. 請說明研究結果能否支持「自閉症類群障礙個案具有社會認知損傷」，並解釋原因。(10%)

Autism is conceptualised clinically, and in scientific research, by core deficits in social communication, inter-action and emotional reciprocity, deficits in non-verbal communicative behaviours used for social interaction and an absence of interest in peers (APA, 2013). In theory, this should translate into poor information transfer with others. These results, however, are the first empirical evidence that suggest the difficulties in autistic communication are apparent only when interacting with non-autistic people, and are alleviated when interacting with autistic people. This is evidenced by our finding that autistic and non-autistic people do not significantly differ in how accurately they recall information from peers of the same neurotype but that selective difficulties occur when autistic and non-autistic people are sharing information. This occurs along-side significantly lower rapport within mixed groups.

These results challenge traditional assumptions of autistic social impairment. The findings are inconsistent with the social-cognitive deficit narrative of autism. We found a selective breakdown of information transfer and rapport occurred in mixed autistic–non-autistic interactions, indicating that the diagnostic status of an interlocutor plays a critical role in both the quality and enjoyment of and interaction, for both autistic and non-autistic people. The quality of transfer of information within all autistic chains did not differ from information transfer in all non-autistic chains, indicating that autistic peoples' abilities to share information and build rapport do not significantly differ from their non-autistic counterparts.

接次頁

四、請閱讀以下摘要，並用中文回答下列問題：

1. 根據摘要中的 Evidence synthesis 結果，請說明目前 AI 在復健領域的研究主要集中在哪些復健領域、醫療階段，以及主要技術整合工具？（10%）
2. 摘要的 Conclusions 指出，儘管 AI 在復健領域的進展迅速，但要真正落實到臨床實務仍面臨許多關鍵問題。請說明目前 AI 復健研究在方法上有哪些主要缺點？（10%）

Abstract

Introduction: Artificial intelligence (AI) is revolutionizing many fields of science, including medicine, by enhancing diagnostic, therapeutic, and decision-making processes. However, understanding how AI can be truly useful in everyday clinical practice remains challenging. This living review systematically investigates current clinical applications of AI in the rehabilitation field, clarifies key concepts, and identifies knowledge gaps.

Evidence acquisition: PubMed, Scopus, WOS/Embase, and PEDro were systematically searched from December 1, 2014, to December 1, 2024. Retrieved articles were independently screened by two reviewers, with a third reviewer resolving any disagreements. Extracted data (including bibliometric, clinical, and AI-related variables) were synthesized into a synoptic table using a semi-automated Python pipeline. Reporting adhered to PRISMA guidelines, and the review protocol was registered in the PROSPERO database (CRD420250622434).

Evidence synthesis: Of 4193 records identified, 240 studies applying AI for rehabilitative purposes met the inclusion criteria. Most studies focused on neurological (57.9%) and orthopedic (22.7%) rehabilitation, particularly involving stroke, Parkinson's disease, and amputation, with research activity mainly concentrated in China (24.6%) and the USA (16.7%). AI has been tested across all stages of the medical process, with a slight predominance in intervention (23.8%), followed by prognosis (17.5%), assessment (16.7%), diagnosis (12.9%), and monitoring (12.5%). It was frequently integrated with wearable sensors, robotic systems, and digital technologies, especially inertial measurement units, surface EMG, mobile apps and EEG. Most AI studies in rehabilitation used raw (37.9%) or tabular data (27.5%), with multimodal inputs in only 11.3%. Over half lacked a comparator (50.8%). Supervised learning (70.8%) and classical machine learning (43.8%) predominated, while external validation (5.8%) and explainability (10.2%) were rarely applied.

Conclusions: AI applications in rehabilitation are rapidly expanding, particularly in neurological and orthopedic fields where data-driven and technology-assisted approaches prevail. While this progress is promising, current evidence remains largely based on supervised learning with small, single-type datasets, limited external validation, and scarce explainability, critical issues that must be addressed to enable reliable translation into clinical practice.

五、請依據以下論文摘要，用中文回答問題。

1. 翻譯此題目。（5%）
2. 此系統回顧納入論文的篩選條件為何？（5%）
3. 納入分析的論文，主要包含哪些介入內容？（5%）
4. 文中指出具有較佳成效的介入特性為何？（5%）

Effectiveness of Occupational Therapy Interventions in Health Promotion and Primary Prevention for Adults: A Systematic Review

Abstract

Importance: As populations age, promoting health span has become a public health priority. Occupational therapy is well positioned to contribute through health promotion and primary prevention, yet its effectiveness remains underexplored.

Objective: To examine the effectiveness of occupational therapy interventions in health promotion and primary prevention for adults, as measured by health-related outcomes such as occupational performance, quality of life (QoL), well-being, and participation.

Data Sources: The PubMed, CINAHL, Cochrane Library, ProQuest, and Wiley Online Library databases were searched in

見背面

February 2025.

Study Selection and Data Collection: Following Preferred Reporting Items for Systematic reviews and Meta-Analyses 2020 guidelines, eligible studies were randomized controlled trials (RCTs) of interventions led by or aligned with occupational therapy in adult health promotion or primary prevention. Risk of bias was assessed using the Joanna Briggs Institute (2024) checklist. Data were narratively synthesized because of heterogeneity.

Findings: Twelve RCTs (2020–2024) were included, covering diverse populations and settings. Interventions included workplace health promotion, home modifications, telerehabilitation, exergaming, and environmental or behavioral strategies. Positive effects were noted in fall reduction, coping, physical performance, and health-related QoL. Interventions rooted in occupational frameworks and delivered by trained occupational therapy practitioners showed greater effectiveness. Variability in intensity and delivery limited comparability.

Conclusions and Relevance: Occupational therapy interventions can support adult health promotion and disease prevention when contextual, person-centered, and occupation-based. Further research should address younger adults, leisure occupations, and intervention intensity. These findings support integrating occupational therapy into public health strategies to enhance health span and reduce reliance on reactive care.