# Exploring the direct and indirect role of physical activity on employment among individuals with disabilities: A scoping review

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# Background

* Employment is an important rehabilitation goal for persons with disabilities.
* Persons with disabilities face unique challenges in terms of lower rate of employment compared to their peers without disabilities.
* Health conditions (i.e., mobility limitation, fatigue, obesity, pain, depression) could add further barriers in terms of employment propensity.
* Exercise is thought to contribute to better health-related outcomes. But little is known about whether exercise is associated with employment and work-related outcomes.

## Research question

* What is the direct or indirect role of exercise in employment among individuals with disabilities?

## What does exercise mean?

* Exercise is a sub-classification of physical activity that is planned, structured, repetitive and aims to improve or maintain not only physical fitness but also mental health.

# Methods

* Protocol was registered with the Open Science Framework: <http://osf.io/cqxmv>

Study design

* quantitative, qualitative or mixed methods design clinicians

Outcomes

* Employment rate, occupational performance, work competence, productivity at work.

Participants

* Persons with physical disability from different age groups

# Results

## Key findings

* In a total of 2796 hits, 23 papers met the inclusion criteria
* A total of 3243 participants included in the studies : youth and adults 65%, youth 22% and adolescents 13%
* Gender distribution was 57% men vs. 43% woman
* The most common type of disabilities were cerebral palsy, spina bifida, spinal cord injury, muscular dystrophy, and neuromuscular conditions.
* A wide variety of self-reported outcome measures and objective tests were used.

## Direct association between exercise and employment

7 studies examined associations between sporting/exercise modalities and employment.

* Athletes with disabilities increased their chance to employment 2.4 time more compared to non-athletes with disabilities.
* Participation in wheelchair rugby, and basketball mitigated mobility impairments and was associated with 4% increase in likelihood of employment.
* A positive relationship was found between physical fitness (aerobic, anaerobic and muscular endurance) and gainful employment in persons with spinal cord injuries

## Indirect associations between exercise and work-related outcomes

16 studies reported on physical fitness, social functioning (participation), self –efficacy as a result of exercise, sports or recreational activities.

Occupational performance

* Physical independence, mobility, self-care skills, transportation

Physical fitness

* Aerobic and anaerobic fitness, agility, muscle strength/endurance, flexibility, weight management

Psychological well-being

* Self-efficacy, sense of belongings, sense of accomplishments

# Strengths and limitations

* Exploring the direct and indirect role of exercise in employment.
* Heterogeneous populations and large volume of cross-sectional studies

# Conclusions

* Challenges in terms of increasing employment Chance for persons with disabilities is ongoing.
* Our finding shows that sporting and exercise modalities have direct and indirect roles on employment for persons with disabilities.
* Knowledge derived from this scoping review can assist vocational program professionals to consider sporting/ exercise to a greater extent, than in the past.
* Focusing on gender barriers, role of exercise in promoting employment for young girls with disabilities more positive outcomes in later years & employment
* Comparing economic costs incurred to increase funding for sporting/exercise and other care-costs for persons with disabilities.

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