

Interventions to promote physical activity in people with intellectual disability.

An overview based on a literature review.

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Conducting a literature review - What for?

för ges

Research network User-oriented care: Promotion of health in the context of chronic diseases and care dependency (för ges)

[https://www.uni-bielefeld.de/\(en\)/gesundhw/ag6/projekte/foerges.html](https://www.uni-bielefeld.de/(en)/gesundhw/ag6/projekte/foerges.html)

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Context of research project för ges 3

Objective:

- to develop and test an intervention promoting physical activity related health competence and self-efficacy in people with intellectual disability
- **First Step: What is the state of the art? - Literature Review**



What we know!

People with intellectual disability (PWID)

- IQ 70 or below (DSM V & ICD10)
- reduced communicative and cognitive abilities, reduced reading and writing skills and reduced self-perception [Emerson & Hatton 2014]
- is a vulnerable group in terms of health
e.g. experienced earlier age-related health problems such as musculoskeletal deformities and reduced walking ability than general population
(risk factor: physical inactivity is very high)
- lack of awareness of unhealthy lifestyles and limited access to health programs associated [Hasseler 2014]

But, what we also know!

- promotion of healthier lifestyles improve the overall health of PWID and reduce health inequalities
[Willems et al., 2018]
- A positive effect of physical activity on prevention and health preservation has been proven
[Bergström et al., 2013; van Schijndel-Speet et al., 2017]

Scoping Review

Leading research question:

„What is the state of the art in interventions to promote physical activities addressing daily life situations for people with intellectual disabilities?“

Aim:

- a) Orientation on the status of research literature
- b) to obtain a toolbox for own development

6 databases (e.g. Eric, PubMed) were searched for interventions published in the last 20 years (1998 – 2018, October 11th).

Scoping Review

Leading research question:

„What is the state of the art in interventions to promote physical

ac dis	Target group	Activity and health related behavior	Mobility	Antonym
Aim a) b)	intellectual* disab* or learning disab* or mental* deficien* or mental* disab* or mental* handicap* or developmental disab* or intellectual handicap* or mental* retard* or mental* subnormal* or down syndrome	physical activit* or physical action* or (habitual/physical) exercis* or exertion or "Physical fitness" evtl. Health* behav* or behav* change*	Move*or mobil*or agilit*or flexibil*	physical inactivity or immov* or immob*

published in the last 20 years (1998 – 2018, October 11th).

Scoping Review

Exclusion criteria:

- sports/activity programs e.g. football training
- measurement of physical activity
- Describing physical activity (like barriers but no intervention)
- Medical/genetic examinations in connections with physical activity
- Testing instruments like pedometer

Inclusion criteria:

Interventions and programs with the aim of promoting physical activities in daily life

Include if studies aim for example strategies for integrating physical activity in daily routines, sustainability, lifestyle changes, etc.

<https://pub.uni-bielefeld.de/record/2939511> & Nutsch et al. (will be submitted for publishing soon)

What we found!

- 12 interventions in 19 studies

What we found!

1. Steps to Your Health (e.g. McDermott et al. 2012)
2. Healthy Lifestyle Change Program (Bazzano et al. 2009)
3. "Hälsofrämjande gruppbostad" (Stockholm Intervention) (e.g. Bergström et al. 2014)
4. Take 5 (e.g. Harris et al. 2017)
5. Promoting Health through Physical Activity Knowledge and Skills (Bodde et al. 2012)
6. Intervention described in Chow et al. 2016
7. Comparison of two approaches (light-moderate intensity lifestyle PA vs. moderate-vigorous intensity Exercise Intervention) (Lante et al. 2014)
8. Intervention described in Yilmaz et al. (2014)
9. Walk well (e.g. Matthews et al. 2016)
10. Intervention described in Pérez-Cruzado and Cuesta-Vargas (2016)
11. Menu-Choice (Dixon-Ibarra et al. 2017)
12. Health Matters Program (Marks et al. 2013)

What we found – barriers to be overcome

All studies describe barriers, in summary there are

- “1) **limited options and choices** for leisure in the community for people with ID,
- 2) **limited financial resources** required for services like transportation and staff,
- 3) **staffing ratios** that precluded the adults with ID from having the support that they required to engage in an activity,
- 4) **limited financial resources** of people with ID required for program/facility fees and transportation, and
- 5) **unclear policy guidelines** for residential and day program service provision.”

[Stanish et al. 2008]

How the interventions work – an overview

- **Varying setting,:**
 - Like disability service agencies (n=4), community residences (n=3), gyms (n=2), outdoor in local parks (n=2) or vocational training institutions (n=1)
- **different people provided** the interventions
 - mainly health professionals or exercise educators,
 - Staff members
 - Researchers to participants
 - one intervention is mainly provided by peer mentors
- **or be addressed**
 - People themselves, staff, friends and families

How the interventions work – an overview

- Half of the interventions use incorporate educations sessions
 - But varying numbers and contents - all target group-orientated
 - Diet is found in 5 of 6
- Interventions are mostly group sessions
integrate discussions and interactive or participatory activities, such as role-play activities
- but also one-to-one, using individual preference and experiencing activities:
 - Walk Well program: Various meetings between a walking advisor and the participants are conducted. In the first meeting, the Walk Well program is introduced and benefits of walking are discussed. Additionally, the participants receive an individualized 6-week program. In the second meeting, participants review the progress towards achieving their goals. This meeting incorporates physical activity consultation components to encourage behavior change and to reinforce knowledge about physical activity.

Some selected components

- Menu-Choice intervention: The Visual Activity Calendars allow participants to post pictures of activity across the week and to check their activity goals.
- Two to four home visits and a grocery visit are offered to participants to establish an individual exercise program and to identify healthy nutritional choices (Step to your Health program)

Some selected components

- The Health Matters program incorporates a ‘Train-the-Trainer Workshop for staff’ which consists of five modules.
For example: In module 1, the staff review the importance of health, physical activity and nutrition for individuals with intellectual disability. In module 4, the staff design a program tailored to the needs of the individuals with intellectual disabilities. e.g. Step to your health program unique intervention component.
- Above that one intervention developed an educational program for family members.
4 sessions for the families about the principles of healthy eating, in other intervention participants with intellectual disability are supported for healthy lifestyles including physical activity [intervention described in Yilmaz et al. 2014].

What we found – evaluation problems

- motion sensors (accelerometers and pedometers) valid data
[Temple et al., 2017]
But: low compliance rate in PWID
[Brooker et al. 2015]
- “Several **methodological problems**, such as small sample size, short intervention duration, lack of follow-up and loss of participants during the intervention resulting in incomplete outcome data.”
[Willems et al. 2018]
- “the **RCT** is the gold standard to evaluate lifestyle change interventions ... previous research shows high drop-out rates and large amount of incomplete data in lifestyle change RCTs for people with ID, which may limit the generalizability of the results
[Willems et al. 2017]

Challenges for research

Missing information means a loss of important knowledge (examples):

- One third did not mention a theory basis
- 8 interventions did not describe adjustments or modification
those are highly informative to discuss successful strategies
- Half of the interventions do not report on the assessment of adherence or fidelity, neither how motivation is kept high
- the intensity level of physical activity is often not described in detail or how it is controlled to physical fitness of participants

Importance for a collegial exchange of this topic and a transparent and detailed description of interventions (e.g., additional material on the interventions, electronic additional material or websites).

But we also see...

- Varying approaches
- facing various challenges in different contexts
- many “tools” for a toolbox
- health-related resources of PWID are taken into account in different ways (mainly supporters)
- most complex interventions is developed by Bergström et al.

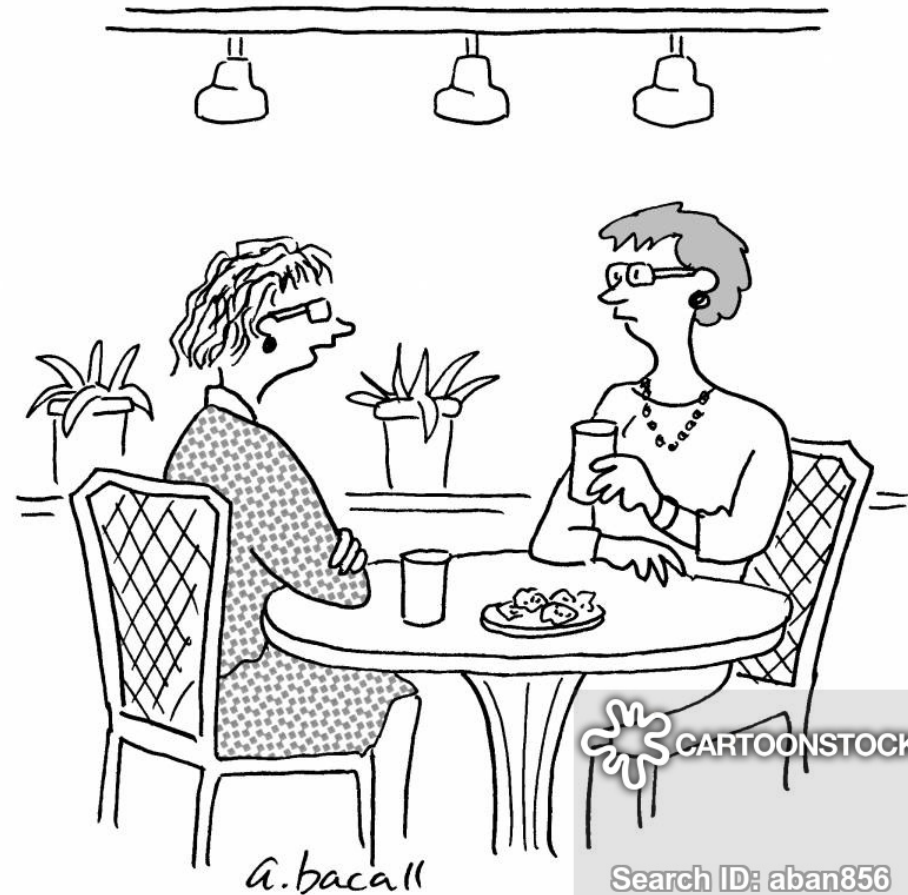
Thanks for your attention.

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"I started a serious workout program yesterday. So far I missed only one session."