



# WellSpring

Sharing physical activity knowledge

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## How inclusive are we?

A look at the effectiveness of physical activity interventions for disadvantaged groups

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### Introduction

It has been consistently reported that insufficient physical activity is a global pandemic,<sup>1,2</sup> due to its prevalence, global reach, and health effects.<sup>3</sup> Therefore, physical activity needs to be promoted and addressed to control non-communicable diseases.<sup>4</sup> Compared to those who are more affluent, individuals from socio-economically disadvantaged groups are far less likely to achieve recommended levels of physical activity and, consequently, are more likely to experience poor health outcomes.<sup>5,6</sup> In addition, policies and programs that do not consider the physical activity needs of disadvantaged groups may not be successful at increasing overall physical activity and may, in fact, widen health inequities.<sup>7,8</sup>

To improve physical activity and health outcomes among disadvantaged groups, it is important that evidence-based programs and policies which support engagement in physical activity are implemented in practice. Therefore, our team examined the effectiveness of interventions for increasing physical activity among disadvantaged populations and the characteristics that were associated with effective interventions. This will assist practitioners and decision-makers to design and implement effective interventions for disadvantaged groups.

### Examining the literature

We conducted a “review of reviews” to evaluate the effectiveness of interventions for increasing physical activity among individuals who are socio-economically disadvantaged. These individuals were described as low socio-economic status, low income, low education, or from areas defined as socio-economically disadvantaged (often characterized by low income levels).<sup>6,9</sup> We summarized published findings of systematic reviews that examined the effectiveness of physical activity interventions relating to

### S U M M A R Y

Although policies and programs to support physical activity exist, they may not be accessed or utilized by individuals from socio-economically disadvantaged groups.

This WellSpring highlights effective evidence-based approaches that can assist practitioners and decision-makers when designing and implementing physical activity policies and programs to reach these disadvantaged groups.

preschool children (0-4 years), primary school children (5-12 years), adolescents (13-17 years), adults (18-64 years), and older adults (65 years and over). Following a systematic search of the literature and a screening process to identify suitable reviews, we selected 17 reviews for synthesis.<sup>9</sup>

## Evidence and recommendations by age group

### Preschool-aged children (0-4 years)

Parent-focused, family-based interventions in community settings, such as playgroups and kindergarten classes, showed some evidence of increasing young children's engagement in physical activity. This should be considered emerging evidence, since the quality of existing studies is weak. The following features of parent-focused interventions were found to be effective and should be incorporated into the design of programs and/or policies:

- offer group sessions;
- include high levels of parental engagement;
- use behavioural strategies such as goal setting and self-monitoring of progress;
- focus on parental skill-building in facilitating active play with and for their child;
- link parents to other community resources and programs. Let parents know what already exists (e.g., parks or support programs) to support them and their children to be physically active.



*Supporting parents' engagement with their young children is key for physical activity effectiveness.*

At the same time, many studies reported poor parental attendance and adherence to programs. Practitioners should consider the following strategies when seeking to engage parents in physical activity programs:

- target recruitment to disadvantaged parents;<sup>10</sup>
- partner with respected community stakeholders and organizations;
- utilize well-trained staff who are ethnically, linguistically, and culturally matched to the population of interest;
- use multiple advertising channels; and
- provide culturally-tailored content.<sup>11</sup>

### Children (5-12 years)

School-based interventions were considered effective in improving physical activity among children from socio-economically disadvantaged groups. Several features were associated with effective school-based interventions, which practitioners and decision-makers should consider incorporating into their school-based programs and policies:

- embed physical activity sessions into the school curriculum and class timetabling (e.g., four 45-minute physical activity lessons per week; workbooks including assignments for children and parents to perform in class and at home);
- support extracurricular activities (e.g., encouragement of physical activity outside of school hours, attendance at local sports clubs, accessible school sports activities offered daily during out-of-school hours);

- encourage school leadership to undertake self-assessments of their physical activity-related policies, facilities, and programs; and
- include teachers, parents, and students in physical activity education.

Practitioners can also advocate to ensure that school-based physical activity interventions are implemented in schools, as a study in the United States showed only 46% of districts followed physical education mandates.<sup>12</sup> Unfortunately, evidence relating to the effectiveness of physical activity interventions for children in community-based settings (e.g., sport clubs) is scarce.

### Adolescents (13-17 years)

Only a small number of studies have focused on adolescents from socio-economically disadvantaged groups and few were effective at improving physical activity. Based on the available findings, practitioners can include the following promising strategies:

- involve adolescents in the development and delivery of physical activity interventions (empowerment and engagement) and involve family;<sup>13,14</sup>
- include peer leadership and training of adolescents to lead physical activity or educational sessions for their peers; and
- focus on engaging adolescents in physical activity, including community-based interventions (e.g., fitness centres, sporting clubs).

### Adults (18-64 years)

Evidence was mixed for the effectiveness of physical activity interventions among adults and long-term outcomes were seldom reported. Interventions with a group-based component were found to be more effective than individual-focused interventions.

Practitioners and decision-makers should include group-based components when designing programs for adult participation, such as:

- group education meetings,
- group physical activity sessions, or
- a combination of individual and group physical activity, facilitated by a trained educator or health practitioner.

The importance of group interventions likely lies in the social support mechanisms provided by group settings. Group programs should encourage social support among participants by allowing participants to interact with others, share ideas, discuss goals, address barriers to physical activity, and identify sources of support.

*For adults, group-based interventions were found to be more effective than individual-focused.*



## Older adults (65 years and older)

Few studies have examined the effectiveness of interventions among older adults from socio-economically disadvantaged groups. Based on the limited available evidence, we cautiously recommend the following:

- print material tailored for older adults; and
- provide group exercise programs that incorporate self-monitoring through devices such as pedometers.<sup>15</sup>

Given that few studies have been conducted with older adults, future research is needed to understand the effectiveness of interventions for improving physical activity among older adults from socio-economically disadvantaged population groups.



## Overall summary of evidence and recommendations

We found that the strength of evidence for effective physical activity interventions varied depending on the age group examined. Among preschool and school-aged children, there was evidence of intervention effectiveness. However, few studies have focused on adolescents and interventions were generally not effective. Among adults, findings were mixed and thus inconclusive. Findings were also inconclusive for older adults as few studies have focussed on this age group.

Across all age groups, interventions that were more intensive (e.g., more contacts over a longer time) were more successful at improving engagement in physical activity than less intensive interventions. However, because few studies examined long-term outcomes, there is uncertainty about whether the changes in physical activity from intensive interventions are sustained over time. In addition, 41% of the included reviews focused on obesity prevention (along with physical activity outcomes).<sup>13,16-21</sup>

## Key recommendations

- Practitioners and decision-makers should consider the additional barriers to physical activity experienced by people who are disadvantaged. This may mean that more intensive support is needed to engage them in physical activity. For these interventions to be sustainable in practice, a process of initial intensity and tapering off or peer-leadership and support may be required.
- A focus on obesity prevention and treatment could discourage some people from engaging in physical activity.<sup>22</sup> Practitioners and decision-makers should consider the broad range of benefits of physical activity, beyond weight management, including social support, community connectedness, and mental wellbeing, and design physical activity programs and policies accordingly.

To learn more about the findings and access the study, visit:

<https://ijbnpa.biomedcentral.com/articles/10.1186/s12966-018-0676-2>

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