Preparing for adulthood: a systematic review of life skill programs for youth with physical disabilities

Kingsnorth S, Healy H, Macarthur C

CRD summary
The review concluded that multi-component interventions may have a short-term impact on the skill base of developing young people with physical disabilities. The findings should be interpreted with caution given the methodological limitations of the studies and the potential for bias in the review methods.

Authors’ objectives
To evaluate the effectiveness of life skill programs emphasising independent functioning in preparation for adulthood among young people with physical disabilities.

Searching
HealthSTAR, MEDLINE, EMBASE, CINAHL, PsycINFO and ERIC databases were searched for papers published between 1985 and 2006. Search terms were reported. No language restrictions were applied.

Study selection
Comparative studies evaluating the effectiveness of programs promoting the development of life skills for participants aged 12 to 21 years and with a primary diagnosis of physical disability were eligible for inclusion. Physical disability included both acquired and congenital disabilities affecting functional ability. Definitions for life skills and physical disabilities were derived from those of the World Health Organisation (details reported) and those of the International Classification of Functioning, Disability and Health. Included studies had to report at least one quantifiable outcome measure.

Interventions were multi-component and included problem solving, experiential learning, personal relationships, role play, positive reinforcement, peer-based mentorship and occupational and independent living skills. Settings included classroom, community, residential or wilderness settings. Duration of programmes varied from two weeks to five months. Comparison groups included young people who did not participate in programme or waiting list control; pre-post intervention comparisons were also included. Mean age ranged from 14 to 19 years. Participants had cranio-facial disfigurements, visual impairments, chronic illness or a mixture of physical disabilities (details reported). A variety of assessment scales were used; further details were reported. Some studies also reported qualitative data provided by parents or program leaders. All the included studies were conducted in the USA or Canada.

Two reviewers independently selected studies from full papers and resolved disagreements through discussion. Three reviewers reviewed the final list of included studies.

Assessment of study quality
The authors did not state that they assessed validity.

Data extraction
Effect sizes including means and standard deviations and p values were extracted where available. Data were extracted by one reviewer and checked for accuracy by a second reviewer.

Methods of synthesis
The studies were combined in a narrative synthesis. Additional descriptive information was presented in tables. Conclusions relating to the effectiveness of interventions were made by consensus based on extracted data.

Results of the review
Six studies (n=105) were included in the review: two randomised controlled trials (RCTs, n=46), two observational cohorts (n=34) and two single group pre-post test design studies (n=25).
Five studies demonstrated significant changes in targeted life skills. One RCT (n=20) reported significant improvements in the intervention group at the end of the program relative to comparison group for psycho-social adjustment (p<0.01), empowerment (p<0.01) and levels of personal accomplishment (p<0.01). However, no significant differences between groups were found for the Disability-Related Self-Efficacy Scale. Qualitative reports by parents and coaches supported the findings (data not reported). However, one RCT (n=23) reported no significant differences between groups in terms of social and assertiveness skills, self-criticism and helplessness.

Two small observational cohort studies (n=34) reported significant improvements in a range of outcomes for the intervention group in comparison with control groups. Two small single group pre-post test studies (n=22) also reported significant improvements at the end of the intervention programs. (Further details were reported in the review)

**Authors' conclusions**
The findings suggested that multi-component interventions may have a short-term impact on the skill base of developing adolescents and young adults with physical disabilities. However, the included studies all demonstrated methodological limitations.

**CRD commentary**
Inclusion criteria were well defined and several relevant sources were searched for studies. Efforts were made to reduce language bias, No efforts were made to locate unpublished studies, so there was potential for publication bias. Methods to reduce the potential for reviewer error and bias were used for the selection of studies and extraction of data. The validity of studies was not assessed systematically, thus it was difficult to determine the reliability of the evidence presented. However, authors appropriately discussed methodological limitations of the included studies. Characteristics of the included studies were presented in tables. Given the differences between studies in terms of interventions, participants, outcomes and design, a narrative synthesis was appropriate. Sample sizes in the included studies were small. The authors appropriately stated that the strength of conclusions regarding effectiveness of programs were limited as some studies used a pre-post design instead of an actual control treatment group. The authors’ conclusions should be interpreted with caution given the methodological limitations of the studies and the potential for bias in the review methods.

**Implications of the review for practice and research**
**Practice:** The authors did not state any implications for practice.

**Research:** The authors stated that further research using large RCTs was needed to evaluate whether multi-component interventions ensured that young people with disabilities had the necessary life skills for facing long-term challenges successfully.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.