An overview of research on increasing indices of happiness of people with severe/profound intellectual and multiple disabilities

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CRD summary
This review found that interventions were associated with improvements in indices of happiness in most, but not all, participants with severe/profound intellectual and multiple disabilities, but further research is required. Inadequate reporting of review methods and a reliance upon potentially-biased small observational studies mean that the authors’ conclusions about the effects of the interventions may not be reliable.

Authors’ objectives
To evaluate interventions aimed at increasing indices of happiness in people with severe/profound intellectual and multiple disabilities.

Searching
PsycINFO, ERIC and PubMed were searched from 1990 to 2004 using the reported search terms. Reference lists were screened.

Study selection
Study designs of evaluations included in the review
Inclusion criteria were not specified in terms of the study design.

Specific interventions included in the review
Studies that evaluated interventions aimed at increasing indices of happiness were eligible for inclusion. In the review, the interventions were classified into six categories: structured stimulation; microswitch-based stimulation; leisure activities and favourite work tasks or conditions; positive environmental or positive behaviour support programmes and mindful caregiving; favourite stimulation automatically delivered on exercise engagement; and snoezelen (an approach that provided stimulation through a variety of devices, for example spot lights and mirror balls, optic fibre sprays and vibrating pads, distributed within a special environment). The duration of the intervention sessions ranged from 2.5 to 40 minutes and the number of sessions ranged from 1 to 307.

Participants included in the review
Studies in people with severe/profound intellectual and multiple disabilities were eligible for inclusion. The primary studies included ambulatory and non-ambulatory patients aged (where reported) between 5 and 73 years. Most of the studies involved people with both intellectual and sensory impairments.

Outcomes assessed in the review
Studies that presented group or individual data on indices of happiness were eligible for inclusion. Details of the outcomes in the included studies were not reported.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

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

Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. For each study, the number of patients with a positive outcome was reported.

**Methods of synthesis**

*How were the studies combined?*

The studies were grouped by type of intervention and study characteristics were tabulated. In addition, selected studies were described in more detail in the text. The proportion of patients reported as showing positive results was presented for each type of intervention.

*How were differences between studies investigated?*

Some differences between the studies discussed in the text.

**Results of the review**

Twenty-three case reports or case series were included in the review (n=130). The review reported that 24 studies were included; one study that evaluated two different interventions was counted as two separate studies.

Post-intervention findings.

Positive outcomes were reported post-intervention for 23 of 29 participants who received structured stimulation (8 studies); for 5 or 6 (depending on whether the number was those who were clinically or statistically significantly improved) of 6 participants who received microswitch-based stimulation (3 studies); for 21 of 26 participants who received leisure activities and favourite work tasks or conditions (3 studies); for all 4 participants who received positive behaviour support programmes or mindful caregiving (2 studies); and for 6 of 7 participants who received favourite stimulation automatically delivered on exercise engagement (3 studies). The authors stated that there were mixed findings for studies of snoezelen: group findings were reported as positive in one study (n=8) and negative in the other study (n=8). They also stated that there were ‘satisfactory’ findings for positive environmental programmes (one study with 20 participants reported positive group findings post-intervention).

Follow-up findings.

Positive outcomes were reported at follow-up for all 3 participants who received structured stimulation, 2 of 3 participants who received microswitch-based stimulation, and 13 of 20 participants who received positive environmental or positive behaviour support programmes.

**Authors’ conclusions**

Improvements in indices of happiness were reported in most, but not all, participants receiving the interventions.

**CRD commentary**

The review question was broadly defined in terms of the intervention, participants and outcomes. Several relevant sources were searched, but no attempts to minimise publication bias by searching for unpublished studies were reported. It was not clear whether language restrictions were imposed on the search, so the potential for language bias cannot be evaluated. One in-press study (apparently by one of the authors of the review) was also included and this meant that the specified search dates (1999 to 2004) were not strictly adhered to. The methods used to select studies and extract the data were not described, thus it is not known whether any efforts were made to reduce errors and bias. Given the identification of only case reports and case series, a narrative synthesis of the studies was appropriate. The reporting of methods used in individual studies to measure happiness would have aided an assessment of the validity of the actual methods used. Results data were also omitted, which means that it is not possible for readers to verify findings reported in the review. Only selected studies were described in the text, but methods used to select studies for this more detailed reporting were not presented; this raises the possibility of reporting bias.

A lack of reporting of review methods, the reliance upon potentially-biased small observational studies, and incomplete reporting of results data mean that the authors’ conclusions about the effects of the interventions may not be reliable.
Recommendations for further research appear appropriate in view of the paucity of data identified.

Nine of the included studies appeared to have been conducted by the authors of this review.

**Implications of the review for practice and research**

Practice: The authors did not state any implications for practice.

Research: The authors stated that further and longer term research is required. There is also a need to develop new measures, including electrophysiological ones and an increased range of behavioural indices, to assess mood (happiness). Interventions should be compared and the perceptions of staff, service agencies and parents evaluated.

**Bibliographic details**

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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.