



Can we improve how we measure children's attitudes about disability?

This research summary was written by PenCRU and members of the PenCRU Family Faculty

Key findings

- One way researchers try to measure attitudes to something is using questionnaires. The responses are used to produce a score indicating the strength of people's attitudes about that issue.
- We tested one of the commonly recommended questionnaires designed to measure children's attitudes about disabled people in a large survey with over 1800 children.
- Attitudes are assessed in three areas: people's knowledge and beliefs about an issue, their feelings about that issue, and how people say they would behave around the issue.
- This study recommended shorter questionnaires that will be more precise to measures of 'children's feelings about disabled people' and 'children's intention to behave with disabled people'. We were unable to recommend a robust scale for measuring children's 'beliefs about disabled people'.
- The revised questionnaire and scales can be used to examine whether education programmes are effective in improving children's attitudes towards disability.

Who did the study and why?

This study was part of a project examining children's attitudes about disability. The work was led by Megan, a PhD student with the Peninsula Cerebra Research Unit (PenCRU) at the University of Exeter Medical School.

The research was supported by the National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care (CLAHRC) for the South West Peninsula – known as PenCLAHRC.

The idea came from members of the PenCRU Family Faculty. Parent carers experienced negative attitudes towards disability as a major barrier to leading ordinary lives. The aim of the survey was to explore ways in which children's attitudes towards disability could potentially be improved.

Background

People's attitudes towards disabled people have three components: (1) what they believe they know about disabled people; (2) their feelings about disabled people; and (3) how they say they intend to behave with disabled people.

Attitudes are difficult to measure. One of the common ways researchers try to measure attitudes is using questionnaires. One of the commonly recommended questionnaires is the Chedoke-McMaster Attitudes Towards Children with Handicaps scale. This questionnaire provides 36 statements, and for each on people are asked to indicate whether they strongly agree, agree, can't decide, disagree, or strongly disagree. Responses to each question are scored (from 1 to 5), and then added together to indicate the strength of people's attitudes.

There are 12 questions relating to each of the three components of attitudes described above. Some researchers keep measurements of the three scales separate; others add them together.

We used the Chedoke-McMaster Attitudes Towards Children with Handicaps questionnaire [in a large survey of schools](#). In this study, we examined how trustworthy the scores were for measuring children's attitudes to disability.

What did we do?

The questionnaire was developed in Canada in the 1980s with primary school children. Some of the wording had to be modified for UK English, to be appropriate for teenagers, and/or because words such as 'handicapped' are not commonly used anymore. The questions were adapted in consultation with a group of young people.

Subsequently, 1881 children aged 7-16 years in 20 mainstream schools in Devon (South West England) took part in the survey. Only responses from children who said they were not disabled were included in the analysis.

We used a series of statistical tests to assess whether the measurement was likely to be precise and reliable. We could also use this approach to examine any patterns of responses by respondents' ages and sex.

As we had so many participants, we split their responses into two batches. This meant we could run the statistical tests on one batch, and make changes we thought could improve the scale. Then we could use the second batch to see if the refinements worked with separate responses.

What did we find?

The analysis using the modified questionnaire suggested that responses to all 36 items should not be added to create a single score. This is because they are not all measuring the same thing. So we looked more closely at the three scales for measuring the components of attitudes (beliefs, feelings, and intention to behave).

This suggested the 3 scales could be made more precise by leaving out some of the questions, and changing the way responses were scored.

Our recommendations following the statistical analysis were for two slightly shorter scales for measuring (1) how children feel about disabled people, and (2) how they say they will behave with disabled people. Each revised scale has only 8 rather than the original 12 questions.

Both of these scales were unaffected by age group or sex of people completing the questionnaire. This is important as researchers often find a difference in attitudes between boys and girls, and between age groups. Using the revised scales we can be more certain this difference is real.

We were unable to find a way to modify the scale measuring 'beliefs about disabled people' to be a precise and reliable scale. The questions could be revised or changed and then retested.

Limitations of the research

The fact that we modified the original questionnaire could have affected the way people responded to the questions.

The area of South West England where the survey was conducted is not ethnically diverse as most people identify themselves as 'White British'. This means we can't be sure how the questionnaire performs in more ethnically diverse groups.

What's next?

This work informed how we analysed the findings when we used the questionnaire to identify [some things that influence children's attitudes about disability](#).

The revised scales for measuring 'feelings about disabled people' and 'intention to behave with disabled people' can be considered precise and robust to use in future research.

These questionnaires can be used to examine whether education programmes are effective in improving children's attitudes.

editor decided whether the research had been properly conducted and whether it was important enough to publish.

Who reviewed our research to make sure it was conducted well?

The survey is published in a journal called [Disability and Rehabilitation](#).

Before the journal accepted the paper to be published, an independent reviewer and the

If you would like to read the full version of the paper, please contact Megan Armstrong at

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- The team that carried out the survey are Megan Armstrong (PhD researcher with PenCRU), Chris Morris (Senior Research Fellow in Child Health), Mark Tarrant (Senior Lecturer in Psychology applied to Health), Charles Abraham (Professor of Psychology Applied to Health) and Mike Horton (Director of the Psychometric Laboratory for Health Sciences, University of Leeds).
- Apart from Mike Horton all the research team were all part of the Peninsula Cerebra Research Unit and/or the NIHR Collaboration for Leadership in Applied Health Research and Care of the South West Peninsula (PenCLAHRC) at the University of Exeter Medical School.
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