Review of early language screening suitable for children in Wales from birth to 5 years (summary)

The purpose of the research has been to review existing screening tools and provide evidence to inform the development of a screening approach suitable for the population of Wales.

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Contents

Background

Early speech, language and communication difficulties can have a long-term impact into adulthood with effects reported on literacy, social and emotional wellbeing and employment. By identifying children who are at risk of language difficulties early in life it is possible for them to receive intervention in a timely manner to prevent any potential wider effects. Up to two thirds of children identified with speech, language and communication needs require support to make progress and there is evidence that intervention for speech, language and communication difficulties is effective. The challenge is knowing when and how to identify the children who need and will benefit from this intervention.

Research aims and methodology

The aim of this research was to conduct a review of what is known to work in terms of early language screening, in terms of content, age relevancy, administration and analysis to inform the specification for the development of a screening tool suitable for the population of Wales.

The work carried out was based around four objectives.

1. Objective 1: review current evidence regarding the advantages and disadvantages of early language screening in universal and targeted populations. Provide a set of recommendations: should screening take place at all? If so, what should be screened, by whom and at what age(s)?
2. Objective 2: assess, critique and summarise the English and Welsh language screening/ identification tools currently available to assess children's language ability and progress.
3. Objective 3: assess, critique and summarise what makes an effective screening/ identification tool. Factors including validity, reliability, specificity

and bi/multilingualism will need to be considered.

4. Objective 4: provide a set of recommendations on the important components for an English and Welsh All Wales early language screening/ identification tool.

To address these objectives, three rapid scoping reviews were conducted.

1. A review of available screening tools in the English language, which aimed to build on the evidence base of previous systematic reviews and identify additional tools.
2. A review of tools available for use with bilingual or multilingual populations.
3. A review of tools available for use in Welsh. Three searches were conducted across five databases, initially in English. Search terms were then translated into Welsh and a Welsh-language journal was also searched for relevant articles.

Main findings

A total of almost 6000 records were identified and screened for eligibility at title, abstract and full-text level. This resulted in the final inclusion of 11 studies in the English Language Screening Tools Review, 16 in the Bilingualism Review and eight in the Welsh Language Review. In addition, as part of the Bilingualism and Welsh Reviews, study findings were condensed and summarised thematically into important considerations and recommendations for screening children who are bilingual and/or Welsh speakers.

Using previous systematic reviews and work reported in the Child Talk study (Roulstone et al. 2015) together with the 11 tools identified from the rapid scoping review of screening tools in English, 107 tools were identified that could potentially be used as a screening tool for language difficulties. Of these, 64 tools were excluded for reasons including being suitable for use only by a

Speech and Language Therapist, only measuring a specific aspect of communication and being an intervention rather than a screening tool. A total of 43 tools remained and reviewed with regards to their validity, reliability, useability, impact and cost to determine their value as a screening tool. Following this process, nine English medium tools remained to be included for detailed discussion. Of the 16 tools identified from the Bilingualism review and the eight tools identified from the Welsh language review, two were identified as having potential for use with Welsh-English bilingual children, one of which was already included from the English medium screening tools, bringing the total number of tools for consideration to ten.

The final included tools are as follows: Ages and Stages Questionnaire, Brigance Preschool Screen, Early Language Identification Measure, Language Environment Analysis Developmental Snapshot, Language Link, MacArthur Bates Communicative Developmental Inventories, Nuffield Early Language Intervention Language Screen, Schedule of Growing Skills, UK Bilingual Assessment Tool and WellComm (Early Years). Some tools rely on parent report whilst others are designed to be completed by a health or education professional following observation of the child. There is no one single tool which reaches the threshold for scientific measures whilst also screening for the recommended communication skills spanning from age 15 months to 4 years 11 months for use in Wales. This is true for both children from English speaking backgrounds and those from bilingual or multilingual homes.

Recommendations

Should screening take place?

Recommendation 1: a systemic or preventative approach to screening may be more beneficial than a single screen for language difficulties and should be adopted in preference to a single screen at one point in time.

Recommendation 2: key developmental communication milestones can be used in the screening of early language development

Recommendation 3: known risk factors should be combined with monitoring of language skills and/or dynamic assessment to enhance screening. This would require active child participation, in a modification of an assessment that is both fluid and responsive to the child's ability.

Recommendation 4: parents are able to provide reliable information about their child's current level of communicative functioning from age 2 years. Parents should be involved in discussions about their child's development and any concerns they have about it. This will culminate in shared decision making regarding further action.

Which screening tools should be used?

Recommendation 5: only those tools where data are available to make a judgement regarding their robustness should be used.

Recommendation 6: where these data are not available, it is possible to make a plan to acquire the evidence needed to determine suitability. This is vital given the recognition that many tools available in use do not have the required data but have face validity amongst the workforce.

Recommendation 7: while no one tool is currently suitable to be used across the age range, consideration should be given to whether there is value in developing such a tool. This would assist in the confidence of practitioners in using the tool and the reliability with which it is administered.

What makes an effective screening tool?

Recommendation 8: screening tools should be evaluated based on their utility which includes validity, reliability, impact, acceptability, cost and diagnostic power. For reliability, a measure of 0.6 to 0.7 is considered acceptable with scores of 0.8 and above being good. Sensitivity and specificity scores of 0.8 have been recommended as a measure of a robust tool (Law et al., 1998).

What are the important components for an English and Welsh All Wales early language screening/identification tool?

Recommendation 9: information about children's language background and exposure to each of their languages should be collected as this is crucial to the screening process for bilingual children.

Recommendation 10: bilingual and multilingual children should be assessed in all of their languages in order to obtain an accurate picture of their language development.

Recommendation 11: the use of standardised assessments with bilingual and multilingual children should be considered with care, and interpretation of results must take into account the potential for cultural and linguistic bias.

Recommendation 12: normative data for monolingual children should not be used as a comparison for bilingual children's language development.

Recommendation 13: measurements of vocabulary in bilingual and multilingual children should not be used as they may fail to accurately represent their competence in either language, and are likely to be inappropriate when compared to monolingual normative data.

Recommendation 14: parents should be consulted about their child's speech and language development (in all languages where applicable) and any concerns they may have should be discussed.

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Views expressed in this report are those of the researchers and not necessarily those of the Welsh Government.

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