NIHR | Policy Research Unit Children and Families

Executive Summary

Measuring child development at the 2-2½ year health and development review: A review of available tools, stakeholder priorities, and learning to support successful implementation of a tool for routine health care use.

Background

Every child in England should be offered a health and development review at age 2-2½ years as part of the Department for Health and Social Care (DHSC)'s Healthy Child Programme. A measure of child development called the Ages & Stages Questionnaire (ASQ®; 3rd Edition), is used routinely to collect population-level data for monitoring trends and disparities at this review. The Ages & Stages Questionnaire: Socio-emotional (ASQ®:SE) is sometimes used in addition to ASQ®-3, to measure children's socio-emotional development. However, there are known barriers to the ASQ®-3 meeting its intended function as a population measure of child development in England. For example, there is considerable regional variation in how ASQ®-3 is used, and issues around national collation of data have raised questions about how far we can compare ASQ®-3 scores between local areas. As the DHSC license use of the tool from Brookes, the developers, there is cost attached to its use. Additionally, providers have been calling for a digital version of ASQ®-3. Currently we understand that ASQ®-3 is used to inform a health visitor's professional judgement about whether to refer a child for individual support. As the ASQ®-3 has not been validated as an assessment tool in a UK population, we do not have population norms. This means it is not possible to determine the implications of using specific cut-offs within the ASQ®-3 to identify children with delay and what service pathways and support might best follow identification of different levels of developmental delay at 2-2½ years of age.

Aims & Objectives

We investigated alternative tools to the one currently used in the 2-2½ year review in England, and on identifying tools which measure multiple domains of child development in children aged 2 to 3 years. We also investigated parents, carers and professionals' priorities and needs for the tool used to measure child development in the 2-2½ year review, in addition to identifying barriers and facilitators of successful ASQ implementation.

Research Questions

1. What does recent evidence say about the most appropriate (reliable, valid, feasible, cost-effective) tools (including ASQ®-3 and ASQ®:SE) for measuring broad indicators (all-domains) of child development for children aged 2-2½ years?
2. What are the views and policy and delivery priorities among key stakeholders for assessing child development at this age (parents, practitioners, and policy colleagues at DHSC)?
3. Which tools are most promising (if any) as an alternative to ASQ®, based on evidence of reliability, validity, stakeholder priorities, and feasibility of implementation in England?

Methods

We carried out: (1) a rapid systematic review of the literature from 2012-present to identify any new tools for use at the 2-2½ year health and developmental review. We considered tools with additional versions for use before ages 2-2½ which could be used flexibly and repeatedly to measure child development over time (2) 15 focus groups with 63 key stakeholders across five local areas in England (parents, health visiting professionals, local authority colleagues and policy colleagues at DHSC) to identify key priorities for measuring child development at the 2-2½ year health and developmental review. This part of the study

October 2023

ucl.ac.uk/children-policy-research
ich.cpru@ucl.ac.uk

This study/project is funded by the National Institute for Health and Care Research (NIHR) Policy Research Programme. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Care.

UCL

generated findings relevant to workforce and skill mix, but we have not made recommendations in these areas.

Tools identified in the rapid review were evaluated according to feasibility of implementation in the 2-2½ year health and developmental review, psychometric properties, and validity. We analysed focus group data thematically.

Results

The rapid review identified six potential tools that could be used at the 2-2½ year health and developmental review; three tools that were developed for individual-level assessment of children:

- The ASQ®-3
- The Parents' Evaluation of Developmental Status tools (PEDS-R and PEDS:DM)
- The Warner Initial Developmental Evaluation of Adaptive and Functional Skills (WIDEA-FS)

And three tools developed only as population measures of child development:

- The Caregiver Reported Early Development Instruments (CREDI) Short and Long Form (SF, LF)
- The Global Scales for Early Development (GSED) Short and Long Form (SF, LF)
- The WHO Indicators of Infant and Young Child Development (IYCD)

ASQ®-3 and CREDI LF appear most feasible for use at the 2-2½ year health and developmental review as they can be completed without extensive training, including by a parent, and are relatively brief. The ASQ®-3 and CREDI LF also have the advantage of producing domain-specific scores (unlike CREDI SF or GSED). ASQ®-3 and CREDI also have evidenced validity against other reference tests. Whilst the ASQ®-3 is associated with licencing costs, the CREDI is free to use. Our review was not able to locate any evidence evaluating the accuracy of these tools' use in a UK setting. The non-UK evidence in our review suggests that ASQ®-3 is only moderately able to detect true mild developmental delay but that it is better at detecting severe developmental delay amongst at-risk populations. As CREDI was designed as a population-level measure, it is not known how well it performs as a tool for individual-level assessment.

Summary: we identified two feasible tools for collecting population level data on child development at the 2-2½ year health and developmental review (ASQ®-3 and CREDI LF) but with limited or no data on the accuracy of these tools for individual assessment.

Stakeholder priorities

1. Just a part of the puzzle: Implementation of the tool

Having a conversation about health and wellbeing across the family system was the principal priority for both parents and health visiting professionals. The tool was perceived to be most useful as a conversation starter rather than a tick-list. Parents, health visitors, and nursery nurses felt that a group review format made it harder for parents and practitioners to engage in this holistic conversation, and practitioners reported that whether the tool is used as a conversation-starter or as a rigid tick-list depends on the experience and confidence level of the practitioner. In addition, parents and practitioners felt strongly that a parent-reported digital tool should enhance and not replace the in-person review.

We also heard that direct observation of the child by a professional is a priority among parents and health visiting professionals, and that professionals view the parent-reported ASQ®-3 as a way of understanding how the parent sees the child and how much help the parent needs to be able to support their child's development. Focus groups revealed a widespread lack of clarity around the purpose of the 2-2½ year health and developmental review, which led to parents having unrealistic expectations and/or feeling disappointed. As parents didn't understand why the ASQ®-3 questions ask what they ask, they worried about what ASQ®-3 scores meant for their child and what level and type of intervention they should expect as a result of the review. Professionals emphasised the need to promote the purpose and benefits of the child development tool and the Healthy Child Programme to improve attendance and manage parents' expectations.

October 2023

ucl.ac.uk/children-policy-research
ich.cpru@ucl.ac.uk

This study/project is funded by the National Institute for Health and Care Research (NIHR) Policy Research Programme. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Care.

2. Dual use: Data versus Individual assessment

All but two of the 24 health visiting professionals seemed unaware of ASQ®-3's intended function to provide population-level data and viewed the ASQ®-3's primary function as an individual assessment tool. Parents also wished for clarity on this point. Parents and professionals demonstrated interest in having access to regional and national-level data on child development. Policy colleagues at DHSC wanted a tool that serves both purposes. They acknowledged the dual purpose may be difficult to achieve in practice but cautioned against separating population-level data collection from the broader developmental review.

3. Barriers to universal reach

Parents and professionals suggested aspects of the tool which could be improved. Parents, professionals, and DHSC policy colleagues raised concerns about the extent to which the ASQ®-3 is appropriate for use with children from minority ethnic groups. Parents of children with disabilities valued the 2-2½ year health and developmental review but felt overlooked and neglected by the health visiting service. Whilst they did not see the ASQ®-3 as appropriate for their children, they felt that their children should be included in the population-level picture of child development and had suggestions for inclusion.

Conclusions

Implications of these findings

Our findings suggest that a tool to measure child development at the 2-2½ year health and developmental review might best be embedded within an in-person holistic review of child and wider family health which includes the parent, as is currently the case in England. Consideration should be given to the experience and support of the practitioner using the tool within the health and developmental review. The impact of group reviews and digital tools should be studied carefully before implementation to ascertain that these modes do not undermine the ways in which the tool and health visiting are theorised to work [1]. The most suitable tool will have both clinical utility for individual assessment and simultaneously collect population level data. ASQ®-3 and CREDI LF appear feasible to implement in the 2-2½ year health and developmental review and are likely suitable population-level measures but there is insufficient evidence on how either tool works for individual assessment of children in an English setting (despite ASQ®-3 already being used in this way in England).

Our results suggest that evidence is needed on ASQ®-3 and CREDI in a UK setting, to establish population distributions of child development in this population and to establish the most appropriate cut-offs to trigger extra support and/or referrals. Commissioning analyses of CREDI data from the Children of the 2020s birth cohort study and investigating opportunities in the other planned birth cohort study in England[1] might be an efficient way to start further research on CREDI and/or ASQ®-3. Although CREDI has the advantage of being free to use, the health visiting infrastructure is under strain; implementing a new tool has potential to exacerbate strain on the service, undermine morale and lead to patchy up-take.

The low sensitivity of ASQ®-3 for detecting mild to moderate developmental delay may reflect known difficulties in identifying meaningful developmental delay before the age of four years. It is likely that any tool which is feasible to implement in the 2-2½ year health and developmental review will encounter this problem. The Early Language Identification Measure (ELiM a tool to measure speech and language also used in the 2-2½ year health and developmental review) has been evaluated as a package with professional judgement. The same approach would be useful in further research on ASQ®-3 and CREDI, across different skill mix staff. A lack of clarity on the purpose of the tool sometimes led to anxiety and frustration in parents and professionals. Although there is NHS England training for health visiting professionals on the purpose, benefit and use of ASQ®-3 at the 2-2½ year health and developmental review, we did not see evidence in our focus groups that either parents or professionals understood the key purpose of the ASQ®-3 as a population measure or that parents understood what they might expect as a result of the ASQ®-3 being completed for their child.

[1] Early Life Cohort Feasibility Study https://cls.ucl.ac.uk/cls-studies/early-life-cohort-feasibility-study/

October 2023

ucl.ac.uk/children-policy-research
ich.cpru@ucl.ac.uk

This study/project is funded by the National Institute for Health and Care Research (NIHR) Policy Research Programme. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Care.

NIHR | Policy Research Unit Children and Families

Limitations

Due to the rapid nature of our systematic review, it is possible but unlikely that we missed any highly relevant and feasible tools. We were only able to review published material but know that there is in-progress work on CREDI, and this is likely the case for other tools too. We recruited our professional and parent participants from across England but had difficulty recruiting parents of children with a disability (only four recruited) and foster or kinship carers (zero recruited). Our core findings from the focus groups (63 participants) are very consistent with the previous review on this topic from 2014 and other qualitative research [2], which increases our confidence about generalisability.

Authors

Dr Jo Lysons

Rocío Méndez Pineda

German Alarcon

Dr Maria Raisa Jessica Aquino

Hannah Cann

Professor Pasco Fearon

Professor Sally Kendall

Jennifer Kirman

Dr Jenny Woodman

October 2023

ucl.ac.uk/children-policy-research

ich.cpru@ucl.ac.uk

This study/project is funded by the National Institute for Health and Care Research (NIHR) Policy Research Programme. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Care.

UCL

References

1 King E, Gadsby E, Bell M, *et al.* Health visiting in the UK in light of the COVID-19 pandemic experience (RReHOPE): a realist review protocol. *BMJ*. 2023;13. doi: 10.1136/bmjopen-2022-068544.

2 McKean C, Watson, R, Charlton J, *et al.* 'Making the most of together time': development of a Health Visitor–led intervention to support children's early language and communication development at the 2–2½-year-old review. *Pilot Feasibility Stud*. 2022;8. doi: https://doi.org/10.1186/s40814-022-00978-5

October 2023

ucl.ac.uk/children-policy-research
ich.cpru@ucl.ac.uk

This study/project is funded by the National Institute for Health and Care Research (NIHR) Policy Research Programme. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Care.