The Brief Early Skills and Support Index (BESSI)

Manual

A guide to completing and scoring the BESSI for Early Years staff and researchers.

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Background to the BESSI

The BESSI was commissioned by Frank Field, MP, in response to the Foundation Years Report of the Independent Review on Poverty and Life Chances (Field, 2010). Aside from its brevity, the BESSI is unique in that it assesses family factors as well as child factors that support school readiness. A pilot version of the BESSI was created following focus group discussions with teachers in the Wirral, who also provided feedback on a list of suggested questionnaire items. Reception teachers at 28 schools completed this 50-item questionnaire for 185 children. *Item response theory* was used to select 30 items for the final version of the questionnaire. Although originally designed for children in Reception year (i.e., 4.5- to 5.5-year-olds), the results of a validation study involving 1456 children (Hughes, Daly, Foley, White & Devine, 2015) indicate that the BESSI works equally well for children as young as 2.5 years. Thus, unlike most previous measures of school readiness, the BESSI can be used to measure children's adjustment throughout their time at nursery or preschool and in their first year of school.

The BESSI contains four subscales measuring Behavioural Adjustment, Language & Cognition, Daily Living Skills, and Family Support. The BESSI was originally designed to be completed by Early Years staff as a screen prior to using more intensive child assessments. It may also be completed by other informants, such as home-visiting volunteers. This manual provides details of how to score the questionnaire, which we hope will be helpful for researchers and practitioners working with young children. Definitions for statistical terms in *italics* are given at the end of the manual.

Purpose of the BESSI

The BESSI may be used several ways:

1. As a **screening tool** for teachers and Early Years practitioners to identify children who may require extra support in the Foundation Years.

2. As an **assessment tool** to provide a profile of individual children's strengths and weaknesses.

3. As a **research tool** to assess children's development in the early years.

4. As an **evaluation tool** to assess the effectiveness of interventions by comparing scores before and after the intervention programme.

The BESSI provides a concise measure of adjustment and school readiness, which may be particularly useful for those wishing to gather information about a large number of children. For example, the BESSI is a quick tool for screening a school cohort to identify those who might benefit from a comprehensive assessment using more in-depth measures of school readiness. To allow BESSI data from different groups of children to be compared directly, **it is vital that the questions are not changed in any way.**

Using the BESSI in Research

The BESSI consists of four subscales measuring Behavioural Adjustment, Language & Cognition, Daily Living Skills, and Family Support. You are welcome to use only some of these subscales (for example, if your focus is Family Support, you could use only the 6 items from that subscale). However, we ask that, for the sake of comparability across studies, you include *all* items within a subscale. Similarly, we ask that you **do not make any changes to the wording of the items or to the item anchors** (i.e., strongly agree, agree etc.).

If you are using the BESSI in your research study we ask that you include the following reference in any publications. We would also appreciate hearing about the results from your study (see contact details below).

Hughes, C., Daly, I., Foley, S., White, N. and Devine, R. T. (2015). Measuring the foundations of school readiness: Introducing a new questionnaire for teachers – The Brief Early Skills and Support Index (BESSI). *British Journal of Educational Psychology*, 85, 332-356.

The BESSI was completed for 1,456 2.5- to 5.5-year-olds in the North-West of England. Analyses with this sample indicated that the BESSI showed *measurement invariance* across age and gender. The BESSI was also completed on two occasions one month apart for an additional 258 children (aged 3.0 – to 5.5 years), and demonstrated good *intra-rater* and *test-retest reliability*. For further details about the development and validation of the BESSI please refer to Hughes et al (2015).

Structure of the BESSI

The BESSI questions are divided into four sub-scales as detailed below (see scoring guide on p.6 for further details).

Behavioural Adjustment (12 questions): 1, 3[R], 5[R], 8, 9, 13[R], 19[R], 20[R], 22, 23[R], 27, 29[R]
Language & Cognition (6 questions): 2, 15, 17, 21, 25, 30
Daily Living Skills (6 questions): 10, 12, 16[R], 18, 26[R], 28
Family Support (6 questions): 4, 6[R], 7, 11, 14, 24

[R] Indicates that the item needs to be reverse-scored.

Note that questions from the four subscales are interleaved. We ask that for the sake of consistency, if you only use one subscale of the BESSI that your intersperse these questions with other questions. In addition, to minimise problems with respondent bias (for example, respondents simply agreeing with all statements), the BESSI contains 20 positively-worded, and 10 negatively-worded statements. Positive statements outline a positive ability or attribute such that agreement with the item indicates competence or a lack of problems (e.g., "Regularly read to at home"). Negative statements outline a problem behaviour (e.g., "Has temper tantrums").

General Guidelines for Completing the BESSI

To allow data from different groups of children to be compared directly **it is vital that the questions are not changed in any way.**

- The BESSI should be completed to reflect the child's behaviour in the **past week.**

- The person completing the BESSI should provide an answer for **all** questions, and should only tick one box per statement.

- Children are not expected to show a complete absence of problems on the BESSI. The BESSI was designed to provide a profile of children's strengths and weaknesses in different areas and should not be viewed as a standard of behaviour/support that all children should achieve. It would be rare for even a 5-year-old child to show no problems at all on the BESSI. In particular, performance on the Language & Cognition and Daily Living Skills scales show age-related changes. That is, there are some behaviours included in these scales (e.g., 'can recognise his/her name in print') that we would expect many younger children to be unable to perform.

- If the BESSI is being used to examine the effects of a treatment or intervention programme, or as monitoring tool, the second or subsequent questionnaires should be completed **without** reference to any previous questionnaires.

Scoring the BESSI

Answers on the BESSI statements should be converted into binary (0 or 1) scores as shown in the scoring sheet at the end of this manual. Subscale scores can be created by taking the sum of these scores for all the statements within a subscale. Using this system, higher subscale scores indicate more problems. Scores on the Behavioural Adjustment subscale can range from 0 to 12, whereas scores on the other three scales range from 0 to 6.

Note that if there is any missing data on the BESSI questionnaire then scores should be pro-rated to adjust for this missing information (i.e., you should take the mean for the items that have been completed and multiply it by the number of items in that subscale). Subscale scores should not be computed if more than two items are missing from the Language & Cognition, Daily Living Skills, or Family Support scales, or if more than 4 items are missing from the Behavioural Adjustment scale.

We have also created a scoring spreadsheet for Foundation Stage staff wishing to use the BESSI for the children in their class, which can be downloaded from our website (http://www.cfr.cam.ac.uk/tests-questionnaires/bessi). Teachers can enter their ratings on the BESSI for their class into the spreadsheet and it will return subscale scores for each child, and indicate whether they show particular difficulty in any of the four BESSI subscales.

Norms for the BESSI

We currently do not have enough representative data from the BESSI to provide norms for boys and girls on the BESSI subscale scores. However, we have created a simple "traffic light" system to show how a given child's BESSI subscale scores compare with those of their peers in our validation sample of 1456 children from the Wirral. Using this system, it is possible to see whether a given child's scores would place them in the top 80% (Green), the lowest 20% (Amber) or the lowest 10% (Red) of children in their age bracket in the Wirral sample.

These cut-offs should be interpreted with caution, however, as we do not yet know whether scores from children in the North-West of England are representative of children's scores throughout the UK. As we collect more data with the BESSI questionnaire we will update these cut-off scores. Note, also that in our validation study boys showed higher levels of difficulties than girls so you might expect to see more boys than girls in the amber or red groups.

	Age Group								
	2.50-3.49 years			3.50-4.49 years			4.50-5.50 years		
Behavioural Adjustment	0-5	6-7	≥8	0-4	5-7	≥8	0-4	5-7	≥8
Language & Cognition	0-3	4	≥5	0-2	3	≥4	0-1	2	≥3
Daily Living Skills	0-2	3	≥4	0-1	2	≥3	0-1	2	≥3
Family Support	0-1	2	≥3	0-1	2	≥3	0-1	2	≥3

Contact Details

If you have any questions about the BESSI please visit our website: http://www.cfr.cam.ac.uk/tests-questionnaires/bessi or contact Professor Claire Hughes.

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The BESSI Team

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BESSI Scoring Guide

This guide demonstrates how to score the individual statements of the BESSI, and which subscale each statement belongs to. Further details about scoring the questionnaire can be found on page 4 of this manual.

	This child…	Strongly Agree	Agree	Disagree	Strongly Disagree
	1. Is good at waiting patiently when this is required (e.g., turn taking)	0	0	1	1
	2. Speaks clearly and is easily understood by adults	0	0	1	1
R	3. Has temper tantrums	1	1	0	0
	4. Often receives praise or encouragement from caregivers	0	0	1	1
R	5. Is easily distracted	1	1	0	0
R	6. Often appears sleepy or tired	1	1	0	0
	7. Is always punctual	0	0	1	1
	8. Is good at calming down when asked to do so	0	0	1	1
	9. Can play with lots of different children of his or her own age	0	0	1	1
	10. Is able to work independently on most tasks	0	0	1	1
	11. Rarely misses a day at school/nursery	0	0	1	1
	12. Is careful using scissors or other sharp objects	0	0	1	1
R	13. Responds poorly to reprimands (e.g., backchat, anger)	1	1	0	0
	14. Talks about fun, shared activities at home	0	0	1	1
	15. Enjoys identifying letters of the alphabet	0	0	1	1
R	16. Often appears aimless when asked to choose an activity	1	1	0	0
	17. Understands wh-questions (what, where, when, why?)	0	0	1	1
	18. Does not need help using a fork or spoon	0	0	1	1
R	19. Gets easily frustrated if a task is too difficult	1	1	0	0
R	20. Has trouble sitting still when required	1	1	0	0
	21. Can recognise his or her name in print	0	0	1	1
	22. Is usually happy to share with peers	0	0	1	1
R	23. Grabs other children's belongings	1	1	0	0
	24. Regularly read to at home	0	0	1	1
	25. Uses one-to-one correspondence to count up to 5 objects	0	0	1	1
R	26. Often needs help looking after his or her belongings	1	1	0	0
	27. Is respectful towards adults	0	0	1	1
	28. Is fully toilet trained	0	0	1	1
R	29. Often interrupts conversations inappropriately	1	1	0	0
	30. Enjoys songs and rhymes	0	0	1	1

Note. Items with an "R" beside them are reverse-scored so that for all items 1 indicates a problem.

Key to the BESSI Subscales
Behavioural Adjustment (12 items)
Language & Cognition (6 items)
Daily Living Skills (6 items)
Family Support (6 items)

Glossary of Statistical Terms

Below we have provided definitions of some of the statistical terms used in the manual.

Item response theory is a statistical approach that allows researchers to determine which questions on a questionnaire provide the most information about the construct (in this case children's development). Item response theory was used to help choose 30 questions from the longer questionnaire to become the final BESSI questions.

Measurement invariance analyses check whether: (i) a questionnaire measures the same underlying constructs (i.e., has the same subscales), and (ii) individual questions are rated in similar ways, in two or more groups. The BESSI showed measurement invariance across gender and age. This means that the questionnaire is unbiased and has the same four subscales for boys and girls, and across the three different age groups.

Intra-rater reliability is a way of seeing how consistent respondents have been in rating questions on a questionnaire. It checks whether a high rating on one question within a subscale corresponds with high ratings on the other questions within that subscale. Showing this consistency helps us know that the questionnaire is reliable.

Test-retest reliability assesses the degree of stability in respondents' ratings over a short period of time. To do this, respondents (in this case teachers) are asked to complete the same questionnaire about the same individual(s) on two separate occasions a short amount of time apart (usually a month). The degree of similarity between the two questionnaires can then be calculated to provide a measure of the stability of the questionnaire over a short time period.

References

Field, F. (2010). *The Foundation Years: Preventing poor children becoming poor adults*. London: HM Government. Retrieved from http://webarchive.nationalarchives.gov.uk/20110120090128/http://povertyreview.independent.gov.uk

Hughes, C., Daly, I., Foley, S., White, N. and Devine, R. T. (2015). Measuring the foundations of school readiness: Introducing a new questionnaire for teachers – The Brief Early Skills and Support Index (BESSI). *British Journal of Educational Psychology*, 85, 332-356.