

CHECKLIST FOR PAPERS USING THE ALSPAC RESOURCE: v40, 11th August 2025

All ALSPAC papers (including monographs and book chapters) must be sent to the ALSPAC Executive for approval *prior* to journal submission. Please note that if there are any significant changes to the paper after Executive approval, re-approval must be sought. **We expect to process all papers within two weeks of receipt.** We read all papers to check confidentiality is protected and to ensure that the paper will not bring the study into disrepute. We also provide advice and feedback to authors where we feel this may be helpful. Below is a checklist of requirements for ALSPAC papers along with accompanying notes either explaining these requirements and/or containing appropriate text to insert. We understand that it may be difficult to adhere to some of the points below for papers resulting from genetics consortia and other specialised publications, therefore please tick N/A where necessary. Please send the completed checklist and your manuscript to alspac-exec@bris.ac.uk prior to journal submission and allow sufficient time for processing.

Name of corresponding author: ALSPAC Data Buddy (if applicable):

Title of paper:

Type of paper: Peer review ☐ Working paper ☐ Other ☐
Please describe:

Proposal/B number:

Funding body:

	Yes	No	N/A
1. I agree to making this paper open access via a compliant journal or some other repository [see footnote 1]			
2. I have included ALSPAC as a keyword where appropriate [see footnote 2]. (If this paper includes an author from the University of Bristol, I will ensure that they will add ALSPAC as a 'structured keyword' when they enter this publication into PURE [see footnote 3])			
3. I have included a) an accurate description of the original cohort numbers [see footnote 4]; b) the correct references to the cohort(s) [see footnote 5] and c) information regarding the subsample used in the present study			
4. For papers using questionnaire or clinic data gathered from 2014 onwards, I have included a citation to REDCap [see footnote 6]			
5. I have included reference to the ALSPAC data dictionary and variable search tool [see footnote 7]			
6. I have included an accurate description for ethical approval and obtaining consent(s) [see footnote 8]			
7. For projects using linked health and/or education records , I have included the appropriate statements [see footnote 9]			
8. I have included an accurate acknowledgements sections [see footnote 10]			
9. I have included an accurate funding section [see footnote 11]; please note the specific requirements for child genomewide genotyping data and individual primary exposure and outcome variables			
10. I have not used the term statistical significance [see footnote 12] (optional)			
11. I have included all supplementary materials			
12. I will return any derived variables and accompanying documentation [see footnote 13]			
13. I will send a copy of the final submitted manuscript and any revised versions			

	Yes	No	N/A
14. I have not used cell counts smaller than n=5 [see footnote 14]			
15. I will let the Executive know when the paper is accepted for publication			
16. I will send through an electronic copy of the final paper			
17. I will advise the ALSPAC Communications team (alspac-media@bristol.ac.uk) in advance of any press release, video or media activity planned and tag @CO90s on Twitter [see footnote 15]			
18. I will provide a short scientific summary of this paper if required by the Executive [see footnote 16]			
19. I have provided a lay summary with this submission [see footnote 17]			
20. I have made the project code/scripts available [see footnote 18] If yes, please provide the URL:			
21. I have included a data availability statement [see footnote 19]			
21. I have used data from ALSPAC only ☐ -OR- I have used data from ALSPAC <i>and</i> other sources ☐			

Signature:

Date:

FOOTNOTES

1. Open Access

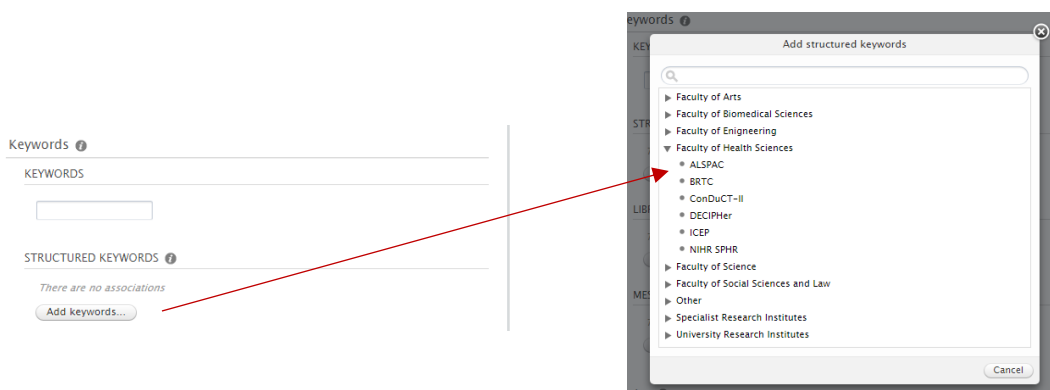
ALSPAC fully supports Wellcome and the RCUK policies on open access. This means that we expect all papers using ALSPAC data to be made available through open access publication or through other means. Please refer to the ALSPAC access policy for further details: <http://www.bristol.ac.uk/alspac/researchers/data-access/>.

2. Keywords

We appreciate that not all publications allow keywords and in certain circumstances this point cannot be adhered to, such as papers publishing data from consortia which may not allow individual studies to be cited in keywords. However, we encourage ALSPAC to be included as a keyword wherever possible.

3. Add ALSPAC as a structured keyword in PURE (UoB authors only)

University of Bristol authors must update PURE (the University's research information system and institutional repository) when a paper is submitted, accepted and published. As part of the PURE entry there is a keywords section (see figure below). Authors are requested to click on the 'Add Keywords' button under 'Structured keywords', click on the arrow next to 'Faculty of Health Sciences' and then click on 'ALSPAC'.



4. Description of original cohort numbers

The following 3 paragraphs provide a detailed description of the original cohort numbers in terms of 1) pregnancies and individual children (G1) enrolled, 2) unique women (G0 mothers) and 3) G0 partners. Please use what you need to describe the cohort from which your study sample is drawn, we recommend the sentences in bold at a minimum. Please note, these numbers may differ to those previously published or that you may have used previously – this is due to updates to both G0 mother and G1 sample descriptions in 2022 followed by a further G1 update in 2025. The numbers will also differ slightly to the datasets you have been provided due to the removal of the 4 triplet/quadruplet pregnancies (3 of the resulting 13 children did not survive to 1 year of age).

Pregnant women resident in Avon, UK with expected dates of delivery between 1st April 1991 and 31st December 1992 were invited to take part in the study. 20,248 pregnancies have been identified as being eligible and the initial number of pregnancies enrolled was 14,541. Of the initial pregnancies, there was a total of 14,676 fetuses, resulting in 14,062 live births and 13,988 children who were alive at 1 year of age. When the oldest children were approximately 7 years of age, an attempt was made to bolster the initial sample with eligible cases who had failed to join the study originally. As a result, when considering variables collected from the age of seven onwards (and potentially abstracted from obstetric notes) there are data available for more than the 14,541 pregnancies mentioned above: The number of new pregnancies not in the initial sample (known as Phase I enrolment) that are currently represented in the released data and reflecting enrolment status at the age of 24 is 906, resulting in an additional 913 children being enrolled (456, 262 and 195 recruited during Phases II, III and IV respectively). The phases of enrolment are described in more detail in the cohort profile paper and its update (see footnote 5 below). The total sample size for analyses using any data collected after the age of seven is therefore 15,447 pregnancies, resulting in 15,658 fetuses. Of these 14,901 children were alive at 1 year of age.

*Of the original 14,541 initial pregnancies, 338 were from a woman who had already enrolled with a previous pregnancy, meaning **14,203 unique mothers were initially enrolled in the study**. As a result of the additional phases of recruitment, a further 630 women who did not enrol originally have provided data since their child was 7 years of age. This provides a total of **14,833 unique women (G0 mothers)** enrolled in ALSPAC as of September 2021.*

*G0 partners were invited to complete questionnaires by the mothers at the start of the study and they were not formally enrolled at that time. **12,113 G0 partners have been in contact with the study** by providing data and/or formally enrolling when this started in 2010. **3,807 G0 partners are currently enrolled**.*

5. References to the cohort

The following **two** references must **always** be cited where the study is first described in the methods (regardless of which cohorts you are reporting on):

Boyd A, Golding J, Macleod J, Lawlor DA, Fraser A, Henderson J, Molloy L, Ness A, Ring S, Davey Smith G. Cohort Profile: The 'Children of the 90s'; the index offspring of The Avon Longitudinal Study of Parents and Children (ALSPAC). International Journal of Epidemiology 2013; 42: 111-127.

Fraser A, Macdonald-Wallis C, Tilling K, Boyd A, Golding J, Davey Smith G, Henderson J, Macleod J, Molloy L, Ness A, Ring S, Nelson SM, Lawlor DA. Cohort Profile: The Avon Longitudinal Study of Parents and Children: ALSPAC mothers cohort. International Journal of Epidemiology 2013; 42:97-110.

- If your paper includes any data collected from **G0 partners** the following reference should also be cited:

Northstone K, Ben Shlomo Y, Teyhan A *et al.* The Avon Longitudinal Study of Parents and children ALSPAC G0 Partners: A cohort profile [version 1; peer review: awaiting peer review]. Wellcome Open Res 2023, 8:37 (<https://doi.org/10.12688/wellcomeopenres.18782.1>)

- If your paper includes any data collected from **G1 between the age of 18 years and 24 years**, the following reference should also be cited:

Northstone K, Lewcock M, Groom A, Boyd A, Macleod J, Timpson NJ, Wells N. The Avon Longitudinal Study of Parents and Children (ALSPAC): an updated on the enrolled sample of index children in 2019. Wellcome Open research 2019; 4:51 (<https://doi.org/10.12688/wellcomeopenres.15132.1>)

- If your paper reports on **G0 mothers only**, the following reference should also be cited:

Major-Smith D, Heron J, Fraser A *et al.* The Avon Longitudinal Study of Parents and Children (ALSPAC): a 2022 update on the enrolled sample of mothers and the associated baseline data. Wellcome Open research 2022, 7:283 (<https://doi.org/10.12688/wellcomeopenres.18564.1>)

- If your paper includes data collected on **G2 (the Children of the Children)** the following reference should also be cited:

Lawlor DA, Lewcock M, Jones LR, Rollings C, Yip V, Smith D, Pearson RM, Johnson L, Millard LAC, Patel N, Skinner A, Tilling A. The second generation of the Avon Longitudinal Study of Parents and Children (ALSPAC-G2): a cohort profile. Wellcome Open Res 2019; 4: 36 (doi: <https://doi.org/10.12688/wellcomeopenres.15087.1>).

6. Reference to REDCap

For papers using data gathered from participants at 22 years and onwards, you should also include a citation to REDCap, as the tool that ALSPAC have used to collect the data through questionnaires and in clinics. Please include the following statement with the associated reference:

"Study data were collected and managed using REDCap electronic data capture tools hosted at the University of Bristol.¹ REDCap (Research Electronic Data Capture) is a secure, web-based software platform designed to support data capture for research studies."

¹PA Harris, R Taylor, R Thielke, J Payne, N Gonzalez, JG. Conde, Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform.* 2009 Apr;42(2):377-81.

7. Data dictionary

We ask that you include the following statement as part of your methods section:

"Please note that the study website contains details of all the data that is available through a fully searchable data dictionary and variable search tool" and reference the following webpage:

<http://www.bristol.ac.uk/alspac/researchers/our-data/>

8. Ethical approval and informed consent

ALSPAC has its own Ethics and Law Committee that reviews all proposals for new data collection and approves policies for data handling and analysis. Proposals for new data collection are also approved by the Local Research Ethics Committees (LRECs).

The following statement describes this and must be included in all papers:

"Ethical approval for the study was obtained from the ALSPAC Ethics and Law Committee and the Local Research Ethics Committees. Informed consent for the use of all data collected was obtained from participants following the recommendations of the ALSPAC Ethics and Law Committee at the time. Participants can contact the study team at any time to retrospectively withdraw consent for their data to be used. Study participation is voluntary and during all data collection sweeps, information was provided on the intended use of data."*

*insert here any relevant details as listed on the website

Please note that some journals are now requesting precise details on the ethics committee/institutional review board(s) that approved aspects of the study when submitting your paper. You may choose the ethic approvals relevant to your paper from the following webpage (or simply refer to the webpage in your submission): <http://www.bristol.ac.uk/alspac/researchers/research-ethics/>

In addition, journals are now regularly asking for details about informed consent. Please include the following statements as appropriate:

Questionnaires: *"The completion of a questionnaire, either on paper or online, was considered to be written consent from participants to use their data for research purposes"*.

General face to face assessments: *“For the majority of tests undertaken during face to face visits, verbal consent was obtained from participants (both parents and children as appropriate) prior to the start of any data collection. However, some tests required the completion of a written consent form.”*

Biological samples: *“Biological samples are collected in accordance with the Human Tissue Act (2004). Specific Research Ethics Committee approval is sought for the consenting process at each collection sweep. Written consent, including permission for future use, is obtained from adult participants or from the parents of children as appropriate. Ethical approval for future use is covered by ALSPAC's Research Tissue Bank approval. All historical consents to hold biological samples have been reviewed as part of the Tissue Bank approval process. Participants can contact the study team at any time to retrospectively withdraw consent for use of their samples.”*

Please contact the Executive at alspac-exec@bristol.ac.uk if further details are required.

9. Linked health and/or education records

For any papers reporting on data obtained on G1 (the study children) from **linked health and/or education records**, the following statement must be included in the methods section:

“At age 18, study children were sent 'fair processing' materials describing ALSPAC's intended use of their health and administrative records and were given clear means to consent or object via a written form. Data were not extracted for participants who objected, or who were not sent fair processing materials”

Additional to this, the following sentence must be included alongside the ethics statements above in any publication using ALSPAC linked **health** records:

“Ethical approval for the study was obtained from the ALSPAC Law and Ethics committee and local research ethics committees (NHS Haydock REC: 10/H1010/70).”

The linkage team will advise on any further publication requirements applicable to your project (alspac-linkage@bristol.ac.uk).

10. Acknowledgements section

The following standard acknowledgements section should be included in all publications as is or in a modified form to fit the journal requirements for all papers:

“We are extremely grateful to all the families who took part in this study, the midwives for their help in recruiting them, and the whole ALSPAC team, which includes data collection staff, data and administrations staff, technical managers and the technical staff with the Bristol Bioresource Laboratory, based within the University of Bristol.”

Please note that where authors have had significant help from a specific member of study staff, or where staff have themselves generated contributing data, this staff member should be acknowledged by name. For example:

“The authors thank <insert appropriate name(s)> from ALSPAC and/or the Bristol Bioresource Laboratories at the University of Bristol for their expert input and guidance in this work”.

11. Funding section

We have standard wording that must be included in all publications to acknowledge our core funding:

“The UK Medical Research Council and Wellcome (Grant ref: MR/Z505924/1) and the University of Bristol provide core support for ALSPAC. This publication is the work of the authors and <INSERT NAMES> will serve as guarantors for the contents of this paper.”

If you receive any funding direct from Wellcome then you must include the following statement in addition to the above:

“This research was funded in whole, or in part, by the Wellcome Trust [Grant number]. For the purpose of Open Access, the author has applied a CC BY public copyright licence to any Author Accepted Manuscript version arising from this submission.”

In addition, you are expected to acknowledge the grant(s) which supported the collection of the **primary exposure(s) and outcome(s)** used in your study and any other grants in the checklist, which are pertinent to your study. The following sentences should be included with the above section:

“A comprehensive list of grants funding is available on the ALSPAC website (<http://www.bristol.ac.uk/alspac/external/documents/grant-acknowledgements.pdf>); This research was specifically funded by <INSERT DETAILS FOR SPECIFIC PROJECT(S) WHERE APPROPRIATE, including grant number(s)>.”

We have provided a table of grants for data collected since 2006 here; <http://www.bristol.ac.uk/alspac/external/documents/grant-acknowledgements.pdf>. Please consult this and ensure all grants are appropriately acknowledged. If you can't find the specific grant for the data you have used in this table then it is unlikely there is one so please just use the generic statement above.

If your paper uses child genomewide genotyping data, please also include the following sentence in the funding section:

“Genomewide genotyping data was generated by Sample Logistics and Genotyping Facilities at Wellcome Sanger Institute and LabCorp (Laboratory Corporation of America) using support from 23andMe.”

12. Statistical significance

We discourage the use of the term “statistical significance” and encourage authors to describe the observed effect sizes and the strength of the evidence that supports these effect size estimates. For a detailed justification see: Sterne JAC, Davey Smith G. Sifting the evidence—what's wrong with significance tests? British Medical Journal 2001; 322; 226-231.

13. Final dataset of derived variables

By derived variables we mean new variables that have been derived using at least two existing variables (rather than simple recodes), or other variables that do not currently exist in the ALSPAC resource that will be of use to other researchers. Derived variables will be archived by ALSPAC and will ultimately be made available to future data users and thus appropriate documentation detailing the derivation must also be provided. This will be followed up on approval of your manuscript where appropriate.

14. Small cells counts

If any tables contain cell counts less than 5 (including zero), we ask you to consider collapsing categories if possible. If this is not possible, then please replace the cell count with '<5'. If a cell contains zero, then please include a footnote to indicate “this may include zero”. Please note, this also implies to any imputed data. Please also ensure that exact cell sizes <5 cannot be recovered from other information provided in the manuscript: for example, by subtracting cell counts from any remaining categories of a variable from the total

sample size. Furthermore, please also ensure that any percentages are dealt with in a similar manner when exact numbers can easily be inferred from information in the table.

15. Media coverage of ALSPAC publications

Where appropriate we encourage media coverage of ALSPAC papers to raise the study's profile. We are also keen to show study families that the study is producing interesting and valuable findings. We always refer to the study as 'the Children of the 90s health study' in the press – which is how participants know and refer to us. Please contact the ALSPAC Comms team (alspac-media@bristol.ac.uk) in advance, if you know there is going to be a press release, any social media or video about your paper or if you plan to give any press interviews. We also would appreciate being tagged on Twitter: please use @CO90s in your tweets.

16. Short scientific summary of the paper

We may ask you to prepare a short summary of your paper that we can include with reports to our funders.

17. Lay summary of the paper

We anticipate a lay summary to be between 150-250 words and to be in the format of an extended abstract written for lay readers, avoiding all technical and terms and unnecessary jargon. Providing a lay summary will assist our communications team in publicising your work. We may also circulate the summary to ALSPAC staff and our participants.

18. Making code openly available

We fully support the sharing of all code created to manipulate and analyse ALSPAC data. We recommend Github or equivalent for ongoing work and the Open Science Framework for appropriately versioned finalised code. Please include #ALSPAC to facilitate searching by other users. We request that participant IDs are redacted to minimise risk of disclosure.

19. Data availability statement

In our endeavour to support open research practices, please include the following statement on data availability in your methods or other appropriate section.

"The informed consent obtained from ALSPAC (Avon Longitudinal Study of Parents and Children) participants does not allow the data to be made available through any third party maintained public repository. Supporting data are available from ALSPAC on request under the approved proposal number, B####. Full instructions for applying for data access can be found here: <http://www.bristol.ac.uk/alspac/researchers/access/>. The ALSPAC study website contains details of all available data (<http://www.bristol.ac.uk/alspac/researchers/our-data/>)."