

CODING MANUAL v. 2.1

Initial screening completed – articles searched in ASHAWire, PubMed, and PsycInfo for peer review, year (2020), English-language, Title & Abstract include stammer/stutter/clutter, titles screened to not be overtly unrelated (clutter hoarding; stutter priapism)

- Much REPRESENT information can be found in the abstract, participants/methods sections, and via a CTRL+F search in the results and discussion sections. This should not require deeply reading each article, although you should still be thorough/thoughtful.
 - All information will be input to the REDCap instrument derived from the original REPRESENT coding scheme.
 - Some articles may refer to other texts for expanded information about participants or studies. Demographic information is occasionally presented in supplemental tables, which is acceptable to include if easily linked in the article. Otherwise, **ONLY** extract info based on what is provided within the primary research article that you have been assigned to code. You should **NOT** consider other publications or studies when coding, even if the authors cite or direct the reader to related work.
 - **Extract participant info only for participant groups recruited and comprised (partially, or fully) of people who stutter or clutter.** Authors may additionally report information regarding others (e.g., teachers, caregivers, siblings, and typically developing control groups such as people who do not stutter), but these groups are not the target population of interest. In other words, for all instances of “participants” elsewhere in the manual, below, you should only code groups comprised of at least some number of people who stutter. People who have recovered or grown out of stuttering can count as people who stutter for our purposes. NOTE: A study should be excluded if it incidentally includes a group of people who stutter but that group was not specifically recruited, unless the stuttering sub-group is examined in primary research questions.
 - If discrepancies emerge between what is given in tables, abstracts, and other sections of the manuscript, prioritize reporting what is provided in tables first, followed by what is given in Participants/Methods sections second.
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CODING IN REDCAP: notes and clarifications for each item

Note: Article ID is fixed and cannot be changed.

Upload the article file (in PDF format) when prompted at the top of the REDCap survey before moving on to the following questions (secondary/reliability coders do not upload article PDFs). To keep naming of files consistent, use the APA in-text (short) citation format with no punctuation. Examples include:

stark et al 2016.pdf

romanoff and barton 2012.pdf

banner 2020.pdf

Article Info and Inclusion Criteria

Ideally, most of this section can be determined quickly from the abstract and first page of any given article. Note: if the study violates any of the following inclusion criteria, once you have confirmed your selection **go ahead and scroll to the bottom of the page to change “Form Status” to “Unverified” and move on to the next study.**

Coder 1 Initials

(two-letter initials of person extracting data from this study)

* must provide value

This is you! Put your initials in here.

Date in which data was extracted from study

* must provide value

M-D-Y

Select “Today” to autofill today’s date. If you work on coding one article across more than one day, this field should represent the first day of extraction.

Journal

* must provide value

Select the journal from the drop-down list.

If your article is not from one of these given journals, select “other” and add the appropriate article in the pop-up field.

Article author(s)

(please use APA 7 full citation formatting, e.g. "Stark, T., Banner, B., & Coulson, P.")

Confirm (or add if not already input) full author information with APA 7 formatting.

List all institutions given as author affiliations.

Separated by semi-colons, such as: "NYU; Michigan St. University; Children's Hospital of Philadelphia"

Publications typically give author affiliations. List all institutions given as author affiliations. Highest-level affiliations only are reported – for example, only report *Vanderbilt*, not *Vanderbilt – Hearing and Speech Sciences Department*. Abbreviations are acceptable where common and clear (e.g., UT-Austin). Include affiliations for all authors, separate by semi-colons.

Article Title



Pragmatic language skills among coworkers in

Confirm (or add if not already completed) full title information with APA 7 formatting.

Year in which study was published and paginated

* must provide value

- 2018
- 2020
- 2022
- other year (*study to be excluded*)

Select year of publication. This should be derived from the final published and paginated version of the study. If the article is not published in 2018, 2020, or 2022, select “other” and stop coding after the next field is completed.

Please confirm that the study does not violate the following exclusion criteria.

Select any that apply.

* must provide value

- the study meets all inclusion criteria
- no human participants
- people who stutter/clutter not specifically recruited
- not an empirical study (e.g., meta-analysis, review, tutorial, etc.)
- other exclusion (e.g., study is not peer-reviewed)

Our study targets recruited human participants who stutter or clutter and studies adding empirical data (new research on participants rather than meta-analyses, reviews, tutorials, etc.). Select the appropriate choice(s). Other exclusions may apply given the diversity of studies from our search – some articles may be overtly inappropriate for reasons not anticipated. Also select “other” if the study was not published in the target year (2020, 2018, or 2022).

THIS STUDY DOES NOT MEET INCLUSION CRITERIA.

IF YOU ARE SURE THIS IS CORRECT, STOP YOUR DATA EXTRACTION HERE.

SKIP DOWN TO THE BOTTOM OF THIS SURVEY, SELECT “UNVERIFIED,” AND FEEL FREE TO MOVE ON TO ANOTHER STUDY.

THANK YOU.

After completing the above items, you should only get this warning if the study is to be excluded from our project. As mentioned above, if the study does not meet inclusion criteria, you can double check your selections thus far, make additional notes, and then skip to mark the study as “unverified” [the yellow option] at the bottom of the REDCap survey, leaving all other entries blank.

Participant Info & Demographics

Information for these items is also most likely to be found in the abstract and method sections but may require some additional investigation.

Generally, we aim to capture information on **all participants who stutter or clutter** initially recruited for a study, however this may vary depending on the study design and some participants may ultimately be lost to attrition or excluded from analyses for other reasons. If there is ambiguity, **extract data for the group of stuttering/cluttering participants that is most clearly described and consistently use that group for all questions below**. Some articles report slightly different numbers in different sections, and there may be discrepancies between what is presented in the abstract, the methods, tables, or elsewhere. If presented with discrepancies, report what is given in tables, as this is most likely to be where demographic information is given with most detail. Otherwise, report what is given in the participants section of the methods.

Note that for some studies, demographic information may be provided for individuals or groups *other than the study sample*. In other words, authors may provide gender/sex or race/ethnicity data for individuals who play a supportive role in a study but who do not make up the sample that is analyzed with respect to research questions. Examples can include teachers, parents, laboratory assistants, raters/coders, actors or confederates who participate in the study design or contribute stimuli such as vocal recordings, or any others who provided support for the study design.

Studies involving hereditary data may include information in a pedigree figure. You are NOT expected to report information that is exclusively provided in a pedigree figure; for example, do NOT report participants' sex based exclusively on a pedigree figure; we will consider an author to have reported sex/gender only if it is tabulated elsewhere in a table or the body of the paper.

Note as well that some articles will report on more than one experiment. In these cases, report the total number of unique participants across both studies. If authors do not indicate whether samples represent unique, overlapping, or partially overlapping participants, code as though participants across all studies included in the report are unique.

What broad age groups are included in this study? <small>* must provide value</small>	<input type="checkbox"/> preschool-age children (ages 0-5)
	<input type="checkbox"/> school-age children (ages 5-13)
	<input type="checkbox"/> adolescents (ages 13-18)
	<input type="checkbox"/> adult (18+)

Select the appropriate age group(s) for participants. Note that these groups are slightly overlapping; for example, a study may have 3- to 5-year-old participants. Code this example as preschool-age only. If a study is exactly between two groups (e.g., 5-year-old participants only), go with the younger age group.

Was this study designed to limit participant inclusion in any way based on sex, gender, race, or ethnicity?

For example, did the study exclusively recruit individuals assigned female at birth, or exclusively recruit African American children, etc.?

(select all that apply, or "none of the above")

** must provide value*

- sex and/or gender
- race and/or ethnicity
- socioeconomic status
- none of the above

It is helpful for us to know if a study was intentionally limited by some demographic feature according to the authors' purpose, research questions, and/or methods. Select the appropriate option if there are a priori exclusion criteria that limit the recruitment of participants *in any way* by sex, gender, race, ethnicity, or socioeconomic status (e.g., limiting inclusion to one or a few groups, excluding one or more groups).

Socioeconomic status generally refers to limited recruitment by income, qualification for school lunch, or low-SES geographic catchment areas.

Select "None of the above" if inclusion/exclusion in the study was not limited by sex, gender, race, ethnicity, or SES. Note that we will only indicate that studies intentionally limited recruitment if the authors state that this is the case – for example, a participant sample that is 100% male (e.g., no women recruited) would still correctly be coded as "none of the above" if gender/sex was not given as an exclusion criterion for the study.

What is the total number of participants?



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Indicate the number of **participants who stutter or clutter** that is described in the article with the most detail, typically the final *n* that is utilized throughout the study. If discrepancies emerge between what is given in tables, abstracts, and other sections of the manuscript, prioritize reporting what is provided in tables first, followed by what is given in Participants/Methods sections second.

Were participants people who stutter or clutter, or a combination?

Excluding participants who were typically developing comparison, i.e. people who do not stutter or clutter.

- all (non-control) participants were people who stutter
- all (non-control) participants were people who clutter
- study included a mix of cluttering and stuttering participants

Indicate whether this study addressed stuttering, cluttering, or a mix of both.

Any additional notes about participants?

Other details about participant groups should be added here. Were any number of participants explicitly recruited as covert stutters? Recovered stutters? High-risk versus low-risk stutters? Etc.

This item is not required for all studies, but please note any special sub-groups of stuttering or cluttering that may have been of interest. For example, if the study explicitly recruited for people with apparently recovered or covert stuttering; or re-emergent stuttering; etc. Anything not covered in the previous item might be worth mentioning.

Select the country from which participants were recruited.

Note: select "multiple countries" (bottom of the list) if participants were recruited from more than one country.

Select "online or not clear" (bottom of list) if recruitment was conducted online *with no further detail provided*, or if recruitment country was otherwise unclear.

* must provide value

This drop-down box is a list of countries. Choose the best fit for the study's participants. If recruitment is not specified in the article but all authors are affiliated with institutions in the same country, select that country. If participants were recruited from (or authors were affiliated with) multiple countries, select "multiple countries" near the bottom of the list. If a study was explicitly conducted online across multiple countries or was otherwise unclear, select "online or not clear" from the bottom of the list.

What specific detail (if any) is provided about geographic area(s) of recruitment?

If any additional specificity is provided for location of participant recruitment or catchment area above and beyond the information collected above, please note it here with as much detail as possible up to the city/town level. Examples could include provinces/territories/states (e.g., "Ontario, Canada" or "Illinois"), counties (e.g., "Davidson county, TN"), or towns (e.g., "Cambridge, UK).

Do not include more narrow details, such as specific clinics or school systems.

Leave this blank if no additional information is provided.

Was any amount of recruitment conducted through large stuttering/cluttering self-help or support group networks?

Select 'yes' if recruitment was conducted via NSA or other widespread support group meetings, listservs, or word-of mouth.

* must provide value

Yes

No

It is helpful for us to know how much recruitment (particularly among adult participants) is conducted through support or self-help groups and communities. Look for any distribution of surveys or recruitment flyers through NSA listservs, at conferences, at support meetings, among Camp SAY or Camp Live/Dream/Speak parents, etc. etc.

If any amount of recruitment is conducted in the above way, select 'yes'. Otherwise, select 'no'. Note that large clinics and *therapy* groups do not qualify for "yes" unless there is also involvement with a support organization or camp.

What is the gender reported for participants?

	Males/men/boys reported	Females/women/girls reported	Gender-neutral, non-conforming or non-binary reported	Gender not disclosed or given
# of participants	19	6	0	2

Input participants to this matrix as they are identified by gender.

Note that **sex** should refer to “biological” sex or sex as “assigned at birth,” and is typically categorized as either male, female, or intersex based on a person’s biological makeup (i.e., sex chromosomes and/or genitalia). **Gender** refers to a person’s socially enacted role and/or self-chosen identity and does not necessarily follow from a person’s sex. Gender is not a strictly binary concept; gendered terms include boy, girl, man, woman, father, daughter, etc.

Based on prior research showing differentiation of sex and gender as sparse in the literature, even if a study uses the word “sex” or a “male/female” binary to describe participants, **we will assume this information to reflect adult participants’ preferred gender identity for the vast majority of studies, unless reported otherwise. We will likewise assume that caregivers are reporting preferred gender identity on behalf of children; we recognize that this may not necessarily be a valid assumption, but the issue is beyond the scope of this particular study and coding scheme.**

In other words, you should record whatever sex/gender information is provided as a best fit for this matrix, although we cannot usually be certain whether the information summarized truly reflects *sex* or *gender* as defined here, due to common failure to operationalize and consistently utilize terms. This assumption should also increase inter-coder reliability. If appropriate, make a mental note for a later question that asks about distinct use of terms.

“Gender-neutral, non-conforming, or non-binary reported” refers to alternative gender identities that do not clearly align with majority masculine/feminine constructs; this may also include such terms as “agender,” “genderfluid,” and “genderqueer.” Please list all alternative terms used by participants in the subsequent pop-up entry box.

“Gender not reported” should include a count of any participants who did not disclose gender or whose information was otherwise not given in the research report. One notable exception is a case where authors provide only one sex/gender category, implying that all other participants belong to another category (e.g., “45% participants were female” implies that 55% were male). To best reflect the representation in coded studies, in such cases you should assume the authors intended to report sex/gender with a binary. Make a note of this practice in the “other limitations” box below.

Otherwise, you **do** want to be sure that any participants not identified under another gender category are counted under “gender not reported” such that this matrix adds up to your total # of participants. A reminder calculator (and subsequent error message) is intended to help with this.

Note that transgender individuals should be classified by their chosen identity, e.g., “trans woman” or “transfeminine” should be counted under “females/women/girls reported,” and “trans man” or “transmasculine” should be counted under “males/men/boys reported.” In some cases, sex AND gender information will be provided (e.g., “participant was a transgender man, assigned female at birth”). You should only tabulate participants’ *gender* data here.

Note: here and for all participant number fields, you can leave the field blank and it will automatically record a zero. Also, if percentages (rather than raw numbers) are reported, please convert to raw numbers and round to the nearest whole number. This may, in some instances, result in raw counts that do not sum to the reported total n, due to researcher error, imprecision in reporting, or other factors that are out of our control. Please follow these rules for derivation of raw counts even in such instances. We will summarize any such challenges encountered in deriving information of interest in our reports.

Does the article include language that explicitly frames *gender* (identity) as distinct from *sex* (biology) in description of participants?

Indicated with language such as:

- "sex assigned at birth"
- "trans-" or "transgender"
- "cis-" or "cisgender"
- "...identifies as [male/female/etc.]"
- nonbinary or nonconforming gender descriptives

- Yes, the article includes language that overtly signifies "gender" as distinct from "sex"
- No, language does not clearly and unambiguously signify "gender" as distinct from "sex"

reset

Although we were unable to summarize sex and gender distributions as desired, and may be unable to reliably assess whether researchers are purposefully using sex/gender terms and concepts, we hope to identify the few cases where researchers have *clearly and explicitly* utilized language that underscores gender as a distinct concept, reflecting identity and role, from biological sex. We anticipate that this will be most often done in cases where both gender *and* sex information is provided, although perhaps not always.

Choose “yes” if the authors use language that *overtly* frames *gender* as a concept distinct from *sex* through the use of language specifying that participants “identify as [male/female/etc.]” or with descriptive terms like “sex assigned at birth,” “transgender,” or “cisgender.” Also select “yes” if alternative gender categories are provided such as “nonbinary” or “nonconforming.” Choose yes if authors otherwise explicitly define gender compared with sex. Provide some detail in the pop-up field.

If used, outmoded terminology such as “transsexual” or “male to female” would also be appropriate for “yes” in underscoring gender as a distinct concept from sex.

Choose “no” in all other cases. Even in publications where authors are consistently and/or appropriately using sex/gender terms (for example, describing the “gender” of participants as “boys” and “girls”), still select “no” if no further distinction or definition is explicitly given.

Is race or ethnicity reported for participants?

Any indication of reporting racial categories here, whether or not combined with ethnicity, would qualify as a 'yes.'

Yes No

* must provide value reset

<u>Racial Category</u>	<u># of Participants</u>
American Indian or Alaska Native	<input type="text"/>
Asian	<input type="text"/>
Black or African American	<input type="text"/>
Hispanic or Latino(a)(x)	<input type="text"/>
Native Hawaiian or Other Pacific Islander	<input type="text"/>
White	<input type="text"/>
Other	<input type="text"/>
More than one race	<input type="text"/>
Participant declined to report	<input type="text"/>

If at least some participant info is given by racial or ethnic identity, select “yes.” For children, parent race/ethnicity may be used as a proxy for child participants’ race/ethnicity. If “yes” is selected, a pop-up matrix will allow numbers to be input as found in the study. Options here roughly follow the NIH categories and are most appropriate for research conducted in the United States; if a study reports race with a slightly different category name but with the same generally or historically accepted meaning (e.g., “Caucasian” instead of “White”, or “Native American” instead of “American Indian”), use that number instead. If there is not a good fit for the given category (e.g., “Mexican American”), count those participants under “Other.”

Note that we have included “Hispanic or Latino(a)(x)” as a racial category, although it is often considered a separate construct (ethnicity) in the US. In the event that race/ethnicity data is given separately, you may need to indicate “other” categories (e.g., “White Non-Hispanic” versus “White Hispanic”).

If participants have identified as multi-racial (as a separate category) or if they identify with more than one race, add them in “more than one race” and do not count them under other race identities here. Participants should only be counted once for any given race/ethnicity.

For studies conducted outside of the United States, racial/ethnic construction may differ considerably. If there is reporting of mixed-race data similar to the NIH framework, go ahead and use the parallel categories here. Otherwise, it is best to use “Other.” For example, if a study is conducted in Japan and specifies that all participants were Japanese, count them as “Other Japanese” rather than “Asian.”

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Unlike our gender matrix, you do NOT need to infer “declined to report” here, and the matrix total may not equal your total # of participants. However, any explicit reporting of omitted data (“not available”... “not reported”... “not given”) can be included here.

What measures of socioeconomic status (SES) are reported, if any?
 * must provide value

- a composite index (e.g., Hollingshead Four-Factor Index of SES)
- income
- qualification for government aid or school lunch
- education (includes parental/maternal education)
- geography/postcode
- other
- SES was not reported in any way

Select all measures of SES that were reported. Select “SES was not reported in any way” if there were no measures of SES reported. Note that any amount of data reported about participants is adequate here, including group means or proportions. On the other hand, simply having stated that “groups were matched by SES” is *not* adequate. Something must be given about the participants.

What language(s) were participants identified as speaking?

- English
- Spanish
- other language(s)
- multiple languages (unspecified)
- no information about spoken language given

If any language information is provided or implied, select all that apply here. Do not select a language just because a study is conducted in a given country unless there is some implication in the text that participants spoke that language.

An example: select “English” if participants were described as “English-speaking,” “native English speakers,” or “English-Spanish bilingual speakers” [in this latter case you would also select “Spanish”], but not simply because a study was conducted at Vanderbilt.

Other limitations or concerns regarding the participant sample in this study?

Expand

Any other issues or limitations, either directly mentioned in the study or from your review of the abstract and methods, can be entered into this open field.

Analyses

These items are most likely to be found in the method and/or results section.

Analyses	
<p>Is sex or gender considered in the study's statistical and/or qualitative analyses?</p> <p><i>(e.g., between-group differences by gender)</i></p>	<input type="radio"/> Yes <input checked="" type="radio"/> No
<p>Is race or ethnicity considered in the study's statistical and/or qualitative analyses?</p> <p><i>(e.g., between-group differences among racial groups)</i></p>	<input type="radio"/> Yes <input checked="" type="radio"/> No

It is one thing to report sex/gender/race/ethnicity, but another to consider such factors in analysis and interpretation of data. These questions ask whether demographic variables are considered in study analyses. Note that analyses can be statistical/quantitative or descriptive/qualitative, depending on study design.

Select “yes” if sex/gender or race/ethnicity are in any way (with or without justification and/or focused interpretation) considered (i.e., included in the analytic plan or results). For example, authors may include the demographic variables of interest in statistical tests or models as a (quasi)independent variable, moderator, or covariate; run analyses in groups defined by demographic variables; summarize findings relevant to descriptive aims or research questions according to demographic subgroups, participant demographic characteristics, etc. Comparison of treatment and control groups on demographic variables (which could occur in either the methods section or the demographics table of a clinical trial, e.g., “groups were matched on biological sex” in the methods section, “ $p > .5$ ” in a demographics table; or a statement in the methods section that “groups were comparable on sex/gender”) is also sufficient.

Select “no” if there is no apparent analysis of sex/gender or race/ethnicity in the study. Note that an article may describe participants by sex/gender/race/ethnicity (usually in the participants section or elsewhere, such as a table, within the Methods section) but not run any analyses or report any results with consideration of such variables, in which case you should select “no.”

Strictly follow the above guidelines, even in cases where recruitment is limited in some way by sex/gender/race/ethnicity as coded above, because limited recruitment by some demographic variable does not necessarily imply or preclude analysis by related variables. Consider the following examples:

- A study may focus on under-represented minority groups, excluding White participants by design and in accord with research questions, but still run analyses that consider race/ethnicity of the included groups (e.g., comparing Black and Native American participant groups). In these cases, select “yes” for the corresponding item.
- Alternatively, a study may focus on or be quite thoughtful regarding demographic variables, but not technically meet the above criteria for considering any such variables in analyses. For example, if authors conduct a study and run analyses focused on a sample of pre- and post-menopausal females and compare traits of such subgroups of females, select “no” because sex/gender is not the focus of

these analyses (that is, even though participants are restricted by sex, the variable considered in analyses comparing these non-equivalent groups is actually pre- vs post-menopausal status rather than sex/gender).

Discussion

These items are most likely to be found in the discussion section.

Discussion	
Is sex or gender mentioned in the study's discussion section? <i>(can include implications of findings, limitations of study, suggestions for future study, etc.)</i>	<input checked="" type="radio"/> Yes <input type="radio"/> No reset
Is race or ethnicity mentioned in the study's discussion section? <i>(can include implications of findings, limitations of study, suggestions for future study, etc.)</i>	<input type="radio"/> Yes <input checked="" type="radio"/> No reset

For each of these items, any text in the article's discussion section involving sex/gender or race/ethnicity as relates to the primary research questions should result in selecting "yes." Discussion topics can include direct implications of findings, mention as a limitation of the study, relevant references to other literature, a suggestion for future research, or other speculation related to sex/gender/race/ethnicity.

Select "no" if there is no mention in any form of sex/gender or race/ethnicity in the discussion section.

Wrap-up

What elements of <u>best describe</u> this study? <i>(select all that apply based on primary outcome variables and main focus of the study)</i> <small>* must provide value</small>	<input type="checkbox"/> epidemiological or prevalence research <input type="checkbox"/> treatment study <i>(broad category, can include exploratory, efficacy, comparison, or RCT studies looking at differential outcomes)</i> <input type="checkbox"/> genetics / hereditary research <input type="checkbox"/> neuro-imaging <i>(MRI, other brain structure imaging, <u>exclude EEG</u>)</i> <input type="checkbox"/> speech-language interactions <input type="checkbox"/> cognitive/emotional interactions <i>(includes temperament, emotion, executive functions)</i> <input type="checkbox"/> social/emotional impact of stuttering <i>(includes bullying, professional impact, attitudes, other QoL)</i> <input type="checkbox"/> persistence vs. recovery research <input type="checkbox"/> multicultural and/or multilingual issues <input type="checkbox"/> pharmacological research <input type="checkbox"/> motor control features <input type="checkbox"/> counseling techniques <input type="checkbox"/> perception <i>(includes auditory processing, self-monitoring, reaction time)</i> <input type="checkbox"/> other
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Add some information about the nature of the research here. Select all that apply based on the core research questions (primary aims or dependent variables). If a study includes a major research focus that is not listed here, select "other" and enter detail into the pop-up field.

Other comments about diversity and representation in this study?

None.

Expand

This last item is an open text field to add any additional comments, concerns, or observations about this study that might be useful for the research team.

Form Status

Complete?



Complete ▾

Finish extraction by selecting “**Complete**” from the final drop-down list. If you intend to save and come back to an unfinished extraction for an article, select “Incomplete” instead.

“**Unverified**” should be used for studies not meeting inclusion criteria.