CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Ghada Albluwi
Paper Title:	Promoting early language development in the Arab world and Sustainable Development Goals 3, 4, 10 and 17
Author:	Ghada Khattab, Alshaimaa Gaber Salah Abdelwahab , Khalid Al-Shdifat, Zakiyah Alsiddiqi, Caroline Floccia, Edith Kouba Hreich, Cristina McKean, Camille Moitel Messarra, Thair Odeh, Anastasia Trebacz
Web Link:	Promoting early language development in the Arab world and Sustainable Development Goals 3, 4, 10 and 17 - PubMed
Appraisal Date:	4 December 2024

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: • *if the result is precise enough to make a decision* • *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11. How valuable is the research?	☒Yes ☐ No ☐ Can't Tell

CONSIDER: • *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)* • *if the researchers have discussed whether or how the findings can be transferred to other populations*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*	
Positive/Methodologically sound	**Negative/Relatively poor methodology**
• Multi-country and Diverse Sample: The study includes participants from multiple countries across the Arab world (Egypt, Jordan, Lebanon, and Palestine), which enhances the generalizability of the findings to a broader Arabic-speaking population. • Use of Standardized Tools: The study uses well-established tools : The Communicative Development Inventory (CDI) • Good sample size (1074).	• Limited Detail on Data Collection Process: specific details on how data were collected (such as how parents were recruited, the duration of data collection, and the exact procedures followed during data administration) are not fully outlined • The article mentions stratified sampling using census data in Palestine and Jordan, but the method is not fully described for Egypt and Lebanon, leaving these details unclear. • The article does not explicitly mention whether sample size calculation was performed.

CASP Checklist:
For case control studies

Reviewer Name:	Asma'a Al Nababteh
Paper Title:	Risk Factors of Delayed Language Development among Preschool Children Attending Assiut University Hospitals
Author:	HALA H. ABOUFADDAN, M.D. and SABRA M. AHMED, M.D.
Web Link:	Risk Factors of Delayed Language Development among Preschool Children Attending Assiut University Hospitals
Appraisal Date:	17 Dec. 24

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results of the study valid?

1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *An issue can be 'focused' In terms of* • *the population studied* • *whether the study tried to detect a beneficial or harmful effect* • *the risk factors studied*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *is a case control study an appropriate way of answering the question under the circumstances* • *did it address the study question*	
3. Were the cases recruited in an acceptable way?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise validity of the findings* • *are the cases defined precisely* • *were the cases representative of a defined population (geographically and/or temporally)* • *was there an established reliable system for selecting all the cases* • *are they incident or prevalent* • *is there something special about the cases* • *is the time frame of the study relevant to disease/exposure* • *was there a sufficient number of cases selected* • *was there a power calculation*	
4. Were the controls selected in an acceptable way?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings* • *were the controls representative of the defined population (geographically and/or temporally)* • *was there something special about the controls* • *was the non-response high, could non-respondents be different in any way* • *are they matched, population based or randomly selected* • *was there a sufficient number of controls selected*	
5. Was the exposure accurately measured to minimise bias?	☐ Yes ☐ No ☒ Can't Tell

CONSIDER: *We are looking for measurement, recall or classification bias* • *was the exposure clearly defined and accurately measured* • *did the authors use subjective or objective measurements* • *do the measures truly reflect what they are supposed to measure (have they been validated)* • *were the measurement methods similar in the cases and controls* • *did the study incorporate blinding where feasible* • *is the temporal relation correct (does the exposure of interest precede the outcome)*	
6. a) Aside from the exposure, did the groups have similar characteristics?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *List the ones you think might be important, that the author may have missed* • *genetic* • *environmental* • *socio-economic*	
6 b) Have the authors taken account of the potential confounding factors in the design and/or in their analysis?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *restriction in design, and techniques e.g. modelling, stratified-, regression-, or sensitivity analysis to correct, control or adjust for confounding factors*	
Section B: What are the results?	
7. Was the treatment effect large?	☐Yes ☐ No ☒ Can't Tell
CONSIDER: • *what are the bottom-line results* • *is the analysis appropriate to the design* • *how strong is the association between exposure and outcome (look at the odds ratio)* • *are the results adjusted for confounding, and might confounding still explain the association* • *has adjustment made a big difference to the OR*	
8. Was the estimate of the treatment effect precise?	☒Yes ☐ No ☐ Can't Tell

CONSIDER: • *size of the p-value* • *size of the confidence intervals* • *have the authors considered all the important variables* • *how was the effect of subjects refusing to participate evaluated*	
9. Do you believe the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *big effect is hard to ignore!* • *can it be due to chance, bias, or confounding* • *are the design and methods of this study sufficiently flawed to make the results unreliable* • *consider Bradford Hills criteria (e.g. time sequence, does-response gradient, strength, biological plausibility)*	
Section C: Will the results help locally?	
10. Can the results be applied to your patients/the population of interest?	☐Yes ☒ No ☐ Can't Tell
CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern* • *if your local setting is likely to differ much from that of the study* • *can you quantify the local benefits and harms*	
11. Do the results of this study fit with other available evidence?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *all the available evidence from RCT's Systematic Reviews, Cohort Studies, and Case Control Studies as well, for consistency*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*	
Positive/Methodologically sound	**Negative/Relatively poor methodology** **Unknowns**
• The case-control design is appropriate for identifying associations between risk factors and delayed language development (DLD). • Sample size calculation was done • Clear inclusion and exclusion criteria • A standardized interview-based questionnaire was used	• While the study addresses key risk factors, it does not specify how potential confounders (e.g., parental mental health, home environment, screen time) were controlled. • The study does not specify whether a standardized tool or assessment method was used to confirm DLD diagnosis in cases or normal development in controls • The study does not clarify if data collectors were blinded to case/control status, which could introduce interviewer bias. • Single centre data collection, which affects the generalizability of the results

CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Ghada Alharfi Albluwi
Paper Title:	Prevalence and Factors Associated with Developmental Delays among Preschool Children in Saudi Arabia
Author:	Mokhtar Shatla Reda A Goweda
Web Link:	https://jhiphalexu.journals.ekb.eg/article_79318_def91e46fc4ad861c15d1738aaf5f177.pdf
Appraisal Date:	10-DEC-2024

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the result is precise enough to make a decision* • *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☐Yes ☒ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☐Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☐Yes ☒ No ☐ Can't Tell

CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11.How valuable is the research?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)* • *if the researchers have discussed whether or how the findings can be transferred to other populations*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*	
Positive/Methodologically sound	**Negative/Relatively poor methodology Unknowns**
• Clear Aim: Well-defined goal to assess developmental delays and risk factors. • Validated Tool: Use of the ASQ-3 for developmental assessment. • Appropriate Sample Size: Large sample (948 children) for reliable results. • Ethical Considerations: Adherence to ethical protocols, including informed consent.	• No efforts to control for confounders (e.g., environmental factors) that could affect the relationship between risk factors and developmental delays. • The study was conducted in only one city in Saudi Arabia, limiting its generalizability to other regions. • The process of randomly selecting the clinics was not described in detail, raising questions about the sampling method's rigor. • Risk factors were not stratified according to the type of delay, which made it difficult to identify specific risk factors for language delay.

CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Asmaa Alnababteh
Paper Title:	Identification of communication disorders among Egyptian Arabic-speaking nursery schools' children
Author:	Heba Gad-Allah Samar Abd-Elraouf Tamer Abou-Elsaad Mahassen Abd-Elwahed
Web Link:	Identification of communication disorders among Egyptian Arabic-speaking nursery schools' children - ScienceDirect
Appraisal Date:	18 Dec. 24

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☐ Yes ☐ No ☒ Can't Tell

CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the result is precise enough to make a decision* • *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☐Yes ☒ No ☐ Can't Tell

CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11.How valuable is the research?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)* • *if the researchers have discussed whether or how the findings can be transferred to other populations*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*	
Positive/Methodologically sound	**Negative/Relatively poor methodology**
• Sample size calculation was done. • Multistage stratified random sample. • Conducting a pilot study with 10% of the sample helped identify and address issues in the questionnaire. • Including both caregivers and teachers provided a holistic view of communication disorders, capturing data from individuals closely interacting with the children.	• Lack of details about nursery environments (e.g., facilities, class sizes, teaching quality). • The study is limited to Dakahlia Governorate, which may restrict the generalizability of findings • Limitations of the Instrument used to classify children as having delay or normally developed lack of validation in population.

CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Asmaa al Nbabteh
Paper Title:	Effect of parent interaction on language development in children
Author:	Rasha Farouk Safwat, Aya R. Sheikhany
Web Link:	Effect of parent interaction on language development in children | The Egyptian Journal of Otolaryngology | Full Text
Appraisal Date:	17 Dec. 24

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?

1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☐ Yes ☐ No ☒ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen*	

• *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☐ Yes ☐ No ☒ Can't Tell
CONSIDER: • *if the result is precise enough to make a decision* • *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.*	

• *your local setting is likely to differ much from that of the study*	
11.How valuable is the research?	☐Yes ☐ No ☒ Can't Tell
CONSIDER: • *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)* • *if the researchers have discussed whether or how the findings can be transferred to other populations*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*	
Positive/Methodologically sound	**Negative/Relatively poor methodology**
• The study addresses an important issue by examining how parent–child interactions influence language development, which has significant clinical and educational value. • Children with hearing impairments, psychiatric, neurological, developmental disorders, severe medical conditions, or any known medical causes of speech delay were excluded. • he SES scale developed by El-Gilanny et al. is a validated tool that was used to measure parental socioeconomic status.	• Parent–child interactions were measured using a **self-reported questionnaire**, which may introduce bias • The study was conducted in a **single hospital** • While SES was analyzed, other potential confounders (e.g., parental mental health, home literacy environment, sibling influence) were not fully explored. • Although parental knowledge about language development was measured, the study lacks detailed insights into **specific gaps** in knowledge and how these gaps relate to their behavior. • Sample size calculation was not done • Unclear sampling strategies • The study used correlation analysis to explore associations but did not apply multiple logistic regression to control for potential risk factors.

CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Ghada Alharfi Albluwi
Paper Title:	Prevalence and etiology of communication disorders in children attending Alexandria University Children's Hospital, Egypt
Author:	Bayoumi A. Ghariba, Manal M. El Bannab, Mona Khalila, Mai M. Abou Heikal
Web Link:	https://journals.lww.com/ajpp/fulltext/2017/30010/prevalence_and_etiology_of_communication_disorders.3.aspx
Appraisal Date:	5-12-2024

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☐ Yes ☒ No ☐ Can't Tell

CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☐ Yes ☐ No ☒ Can't Tell
CONSIDER: • *if the result is precise enough to make a decision* • *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11.How valuable is the research?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)* • *if the researchers have discussed whether or how the findings can be transferred to other populations*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*	
Positive/Methodologically sound	**Negative/Relatively poor methodology** **Unknowns**
• The study's objective is clearly stated: to estimate the prevalence and determine the etiologies of communication disorders in children. • A cross-sectional study design is suitable for the goal of estimating prevalence. • Valid tool used: NHS-Lothian Guidelines for Referral to Speech and Language Therapy for classifying children with communication delays	• The hospital-based design may limit generalizability to the wider population. • The study's reliance on parental reports may introduce reporting bias. • No sample size calculation • Minimal control of confounders

Referencing recommendation:

CASP recommends using the Harvard style referencing, which is an author/date method. Sources are cited within the body of your assignment by giving the name of the author(s) followed by the date of publication. All other details about the publication are given in the list of references or bibliography at the end.

Example:

Critical Appraisal Skills Programme (2024). CASP (insert name of checklist i.e. cross sectional Checklist.) [online] Available at: insert URL. Accessed: insert date accessed.

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CASP Checklist:
For case control studies

Reviewer Name:	Ghada Albluwi
Paper Title:	Screen time and speech and language delay in children aged 12–48 months in UAE: a case–control study
Author:	Salwa Salem Al Hosani, Ebtihal Ahmed Darwish, Sona Ayanikalath, Ruqaya Saeed AlMazroei, Radwha Saeed AlMaashari and Amer Tareq Wedyan.
Web Link:	Screen time and speech and language delay in children aged 12–48 months in UAE: a case–control study | Middle East Current Psychiatry | Full Text
Appraisal Date:	4 December 2024

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results of the study valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *An issue can be 'focused' In terms of* • *the population studied* • *whether the study tried to detect a beneficial or harmful effect* • *the risk factors studied*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *is a case control study an appropriate way of answering the question under the circumstances* • *did it address the study question*	
3. Were the cases recruited in an acceptable way?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise validity of the findings* • *are the cases defined precisely* • *were the cases representative of a defined population (geographically and/or temporally)* • *was there an established reliable system for selecting all the cases* • *are they incident or prevalent* • *is there something special about the cases* • *is the time frame of the study relevant to disease/exposure* • *was there a sufficient number of cases selected* • *was there a power calculation*	
4. Were the controls selected in an acceptable way?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings* • *were the controls representative of the defined population (geographically and/or temporally)* • *was there something special about the controls* • *was the non-response high, could non-respondents be different in any way* • *are they matched, population based or randomly selected*	

• *was there a sufficient number of controls selected*	
5. Was the exposure accurately measured to minimise bias? Child exposed to media and age of onset was self-reported by parents, which introduces the possibility of recall bias.	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: *We are looking for measurement, recall or classification bias* • *was the exposure clearly defined and accurately measured* • *did the authors use subjective or objective measurements* • *do the measures truly reflect what they are supposed to measure (have they been validated)* • *were the measurement methods similar in the cases and controls* • *did the study incorporate blinding where feasible* • *is the temporal relation correct (does the exposure of interest precede the outcome)*	
6. a) Aside from the exposure, did the groups have similar characteristics?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *List the ones you think might be important, that the author may have missed* • *genetic* • *environmental* • *socio-economic*	
6 b) Have the authors taken account of the potential confounding factors in the design and/or in their analysis?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *restriction in design, and techniques e.g. modelling, stratified-, regression-, or sensitivity analysis to correct, control or adjust for confounding factors*	
Section B: What are the results?	
7. Was the treatment effect large?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *what are the bottom-line results* • *is the analysis appropriate to the design* • *how strong is the association between exposure and outcome (look at the odds ratio)* • *are the results adjusted for confounding, and might confounding still explain the association*	

• *has adjustment made a big difference to the OR*	
8. Was the estimate of the treatment effect precise? Note: The effect of subjects refusing to participate was no evaluated	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *size of the p-value* • *size of the confidence intervals* • *have the authors considered all the important variables* • *how was the effect of subjects refusing to participate evaluated*	
9. Do you believe the results? I am somewhat sceptical of the results due to limitations in how the exposure was measured. Using self-reported data from parents, especially collected by physicians, can lead to social desirability bias, as parents might provide answers they believe are expected rather than accurate ones. Additionally, relying solely on recall is challenging and prone to inaccuracies. A more objective method, such as analyzing device usage history, would have provided stronger evidence. However, since the findings align with those of other published research, they seem plausible, and I am inclined to believe them despite the methodological concerns.	☐ Yes ☐ No ☒ Can't Tell
CONSIDER: • *big effect is hard to ignore!* • *can it be due to chance, bias, or confounding* • *are the design and methods of this study sufficiently flawed to make the results unreliable* • *consider Bradford Hills criteria (e.g. time sequence, does-response gradient, strength, biological plausibility)*	
Section C: Will the results help locally?	
10. Can the results be applied to your patients/the population of interest?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern* • *if your local setting is likely to differ much from that of the study* • *can you quantify the local benefits and harms*	
11. Do the results of this study fit with other available evidence?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: • *all the available evidence from RCT's Systematic Reviews, Cohort Studies, and Case Control Studies as well, for consistency*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*	
Positive/Methodologically sound	**Negative/Relatively poor methodology**
• The case-control design is appropriate for exploring associations between screen time and speech and language delay. • The study focuses on a well-defined outcome (speech and language delay) • The study used multivariable regression to adjust for demographic variables such as age, gender, and socioeconomic status, helping to control for potential confounders and isolate the effect of screen time on speech and language delay. • The researchers likely matched the case and control groups on key variables	• Sample size was not calculated • Reliance on Parental Recall (Recall Bias) • Unspecified Data Collection Location: The city where data collection took place was not mentioned • The study did not provide clear information on how data collection was conducted or the number of clinics involved.

CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Ghada Albluwi
Paper Title:	Impact of bilingualism on language development in 46 Egyptian children
Author:	Rasha Sami
Web Link:	Impact of bilingualism on language development in 46 Egyptian children | The Egyptian Journal of Otolaryngology | Full Text
Appraisal Date:	4 December 2024

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☐Yes ☒ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☐Yes ☒ No ☐ Can't Tell

CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *if the result is precise enough to make a decision* • *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☐ Yes ☒ No ☐ Can't Tell

CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11.How valuable is the research?	☐Yes ☒ No ☐ Can't Tell
CONSIDER: • *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)* • *if the researchers have discussed whether or how the findings can be transferred to other populations*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*	
Positive/Methodologically sound	**Negative/Relatively poor methodology**
• The study was conducted at a single American international school, ensuring a relatively homogeneous sample with similar socio-economic and educational backgrounds, reducing the influence of these factors on language development. • Use of Standardized Assessment Tools • Supportive Testing Environment: The assessments were administered in a quiet, comfortable, and familiar environment.	• Limited Generalizability**:** The study was conducted in a single school • Small Sample Size**:** With only 46 children (no sample size calculation was done). • The inclusion criteria for this study required children to have typical language development, with no history of speech or language delays, and to have average school performance, as indicated by their school reports. However, this design limits the study's ability to assess the impact of bilingualism on speech delays, as it excludes children who might have language delays. • The study lacked important details, such as the method of selecting the children, the duration of data collection, and the qualifications of the assessors who administered the language assessments

Referencing recommendation:

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Example:

Critical Appraisal Skills Programme (2024). CASP (insert name of checklist i.e. cross sectional Checklist.) [online] Available at: insert URL. Accessed: insert date accessed.

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CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Ghada Alharfi Albluwi
Paper Title:	Impact of screen exposure on language development among toddlers and pre-schoolers in Nineveh province
Author:	Zainab Waleed Aziz , Elham K. Aljammas , Luma I.K. Al-Allaf
Web Link:	https://mmsl.actavia.cz/artkey/mms-202303-0007_impact-of-screen-exposure-on-language-development-among-toddlers-and-preschoolers-in-nineveh-province.php
Appraisal Date:	5-12-2024

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☐ Yes ☒ No ☐ Can't Tell

CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *if the result is precise enough to make a decision* • *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☐ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☐ Yes ☒ No ☐ Can't Tell

CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11.How valuable is the research?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)* • *if the researchers have discussed whether or how the findings can be transferred to other populations*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*	
Positive/Methodologically sound	**Negative/Relatively poor methodology** **Unknowns**
• Clear research question and objectives. • Dividing participants into toddlers (12-36 months) and preschoolers (37-60 months) allowed for age-specific analysis. • Speech and language delay was made by a linguistic specialist.	• Sampling method (whether it was random or convenience sampling) is not described. • Data were collected using a parent interview questionnaire, which is subject to recall bias. • Other potential confounders, such as socioeconomic status or pre-existing developmental conditions, were not fully controlled or discussed. • Spearman correlation was listed as a method but not clearly applied or reported, raising questions about its relevance or application. • No sample size calculation was done

CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Ghada Salameh Al Bluwi
Paper Title:	Screening and determinant of suspected developmental delays among Egyptian preschool-aged children: a cross-sectional national community-based study
Author:	Ammal M. Metwally, Ali M. Abdallah, Ebtissam M. Salah El-Din, Dina Abu Zeid, Zeinab Khadr, Ghada A. Elshaarawy, Alshaimaa A. Elkhatib, Amal Elsaied, Engy A. Ashaat, Nahed A. Elghareeb, Mohamed H. Abdou, Asmaa M. Fathy, Sherif E. Eldeeb, Mohamed AbdAllah, Muhammed Al-tohamy Soliman, Rokia AbdElshafy S. El Banna, Abdelrahman K. Hassanein, Thanaa M. Rabah, Mohamed Abdelrahman and Sara F. Sallam
Web Link:	Screening and determinant of suspected developmental delays among Egyptian preschool-aged children: a cross-sectional national community-based study - PubMed
Appraisal Date:	10 December 2024

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☒Yes ☐ No ☐ Can't Tell
CONSIDER:	

Look for measurement or classification bias: • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the result is precise enough to make a decision* • *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☒Yes ☐ No ☐ Can't Tell

CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11. How valuable is the research?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)* • *if the researchers have discussed whether or how the findings can be transferred to other populations*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*

Positive/Methodologically sound	**Negative/Relatively poor methodology**
• Large, representative sample from 8 diverse Egyptian governorates. • Multistage cluster sampling ensures diverse socio-economic and geographic representation. • Two-step screening process (R-PDQ followed by DDST-II) focuses resources on children needing further evaluation. • High-quality training for surveyors and nurses enhances data reliability. • Large sample size (21,316 children) increases statistical power. • Use of validated tools (R-PDQ, DDST-II) ensures reliable screening. • Clear statistical approach (multivariate logistic regression) improves validity of findings.	• Lack of Environmental and Genetic Factor Analysis: Environmental and genetic factors contributing to developmental delays were not examined or included in the analysis. • Moderate Sensitivity and Specificity of Initial Screening: The first screening test's moderate sensitivity and specificity may affect efficiency, though the second screening step and specialist confirmation aimed to address this. • No Evaluation of False Negatives: Children who were deemed normal on the R-PDQ were not evaluated for potential false negatives, which could lead to missed cases.

Referencing recommendation:

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Example:

Critical Appraisal Skills Programme (2024). CASP (insert name of checklist i.e. cross sectional Checklist.) [online] Available at: insert URL. Accessed: insert date accessed.

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CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Ghada Albluwi
Paper Title:	Screening for language delay in the United Arab Emirates
Author:	**V. Eapen, T. Zoubeidi and F. Yunis**
Web Link:	Screening for language delay in the United Arab Emirates - PubMed
Appraisal Date:	19 Dec 2024

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☐Yes ☐ No ☒ Can't Tell
CONSIDER: • *if the result is precise enough to make a decision* • *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒Yes ☐ No ☐ Can't Tell

CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11. How valuable is the research?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)*	

- *if the researchers have discussed whether or how the findings can be transferred to other populations*

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*

Positive/Methodologically sound	**Negative/Relatively poor methodology**
• The study utilized a multistage representative random sample of UAE national households. • High Response Rate (95.6%). • The study employed the Denver Developmental Screening Test (DDST), validated in Arabic. • Comprehensive Data Collection • The use of stepwise multiple logistic regression to identify key predictors of language delay strengthens the analysis by controlling for confounding variables.	• Lack of Gold Standard Validation: The language screening procedure by Westerlund and Sundelin has not been tested against a gold standard, which could limit the validity of findings. • Limited Age Range. • Reliance on parental reports for psychosocial stressors and family history may introduce bias or inaccuracies. • The sample size is not explicitly justified in the study.

CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Ghada Albluwi
Paper Title:	Maha H Alakeely, Howaida Alabbasi, Lama Alohali, Aida Aldughaither
Author:	Ghada Khattab, Alshaimaa Gaber Salah Abdelwahab , Khalid Al-Shdifat, Zakiyah Alsiddiqi, Caroline Floccia, Edith Kouba Hreich, Cristina McKean, Camille Moitel Messarra, Thair Odeh, Anastasia Trebacz
Web Link:	https://pubmed.ncbi.nlm.nih.gov/35223233/
Appraisal Date:	18 December 2024

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied*	

• *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☐ Yes ☐ No ☒ Can't Tell
CONSIDER: • *if the result is precise enough to make a decision*	

• *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☐Yes ☒ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☐Yes ☒ No ☐ Can't Tell
CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11. How valuable is the research?	☒Yes ☐ No ☐ Can't Tell

CONSIDER:

- *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making*
- *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)*
- *if the researchers have discussed whether or how the findings can be transferred to other populations*

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*

Positive/Methodologically sound	**Negative/Relatively poor methodology**
• The study's clear focus on detecting early language delay allows for a direct investigation into the abilities of Saudi parents to recognize developmental issues. • A multicentre study • Content validity was done to the questionnaire.	• The sample is limited to parents attending primary health care centers, which may exclude families who do not seek regular healthcare services. • Lack of detailed information on the development, piloting, or validation of the questionnaire except for content validity. • No regression analysis was done to control confounders • No sample size calculation was done.

CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Ghada Alharfi Albluwi
Paper Title:	The association between screen media quantity, content, and context and language development
Author:	Haifa Alroqi, Ludovica Serratrice, Thea Cameron-Faulkner
Web Link:	https://pubmed.ncbi.nlm.nih.gov/35758141/
Appraisal Date:	11-Dec-24

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied*	

• *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER:	

• *if the result is precise enough to make a decision* • *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11. How valuable is the research?	☒Yes ☐ No ☐ Can't Tell

CONSIDER:

- *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making*
- *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)*
- *if the researchers have discussed whether or how the findings can be transferred to other populations*

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*

Positive/Methodologically sound	**Negative/Relatively poor methodology/ Unknowns**
• Comprehensive Data Collection: Utilizes multiple data sources (diary data, surveys, and content analysis) • Clear Scoring System: A detailed and consistent scoring system based on screen time, content type, and viewing context. • Focus on Content Quality: Differentiates between educational and non-educational content, considering language variety. • Incorporation of Family Context: Considers family socioeconomic status and reading practices at home, which are key factors influencing children's development. • Age-Appropriate Language Measures: Uses suitable tools (JACDI-WG and JACDI-WS) for assessing language outcomes in young children	• Small Sample Size: Sample size (n=85) may lack statistical power. • Recall Bias: Diary data may have introduced recall bias. • Content Classification Bias: Subjectivity in classifying educational vs. non-educational content could introduce bias. • Unmeasured Confounders: Parent-child interaction during media use was not measured. • No Sample Size Calculation: No formal sample size calculation was performed. • Limited Generalizability: Findings may not be applicable to populations outside Saudi Arabia.

CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Ghada Salameh AlBluwi
Paper Title:	Prevalence and Risk Factors of Primary Speech and Language Delay in Children Less than Seven Years of Age
Author:	Saeed HT, Abdulaziz B and AL-Daboon SJ
Web Link:	https://www.omicsonline.org/open-access/prevalence-and-risk-factors-of-primary-speech-and-language-delay-in-children-less-than-seven-years-of-age-2161-0711-1000608-101111.html
Appraisal Date:	11 Dec. 24

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☐ Yes ☒ No ☐ Can't Tell

CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☐ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the result is precise enough to make a decision* • *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☐ Yes ☒ No ☐ Can't Tell

CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11.How valuable is the research?	☐Yes ☒ No ☐ Can't Tell
CONSIDER: • *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)* • *if the researchers have discussed whether or how the findings can be transferred to other populations*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*	
Positive/Methodologically sound	**Negative/Relatively poor methodology/ Unknowns**
• Clear Focus: The study clearly defines its research question, focusing on speech and language delay in children under 7 years of age. • Appropriate Study Design: The cross-sectional design is suitable for determining prevalence and identifying associations in a specific population. • Standardized Measures: The use of the CDC developmental milestones ensures the reliability of the assessment of speech and language development.	• The study used children attending a pediatric psychiatry clinic, which may not be representative of the broader population. • The study does not include confidence intervals or effect sizes, which would help to better understand the strength and significance of the findings. • No sample size calculation: The study does not mention how the sample size was determined • Lack of detail in the methods section • No Section for Data Analysis

CASP Checklist:
For case control studies

Reviewer Name:	Ghada Alharfi Albluwi
Paper Title:	The Interaction of Social, Physical and Nutritive Factors in Triggering Early Developmental Language Delay in a Sample of Egyptian Children
Author:	**Ebtissam M Salah El-Din , Mona A Elabd , Maysa S Nassar , Ammal M Metwally , Ghada A Abdellatif , Thanaa M Rabah, Ashraf Shalaan , Sanaa Y Shaaban 4, Wafaa Kandeel , Lobna A El Etreby , Muhammad Al-Tohamy**
Web Link:	https://pmc.ncbi.nlm.nih.gov/articles/PMC6901873/
Appraisal Date:	11-Dec-24

Section A: Are the results of the study valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: *An issue can be 'focused' In terms of* • *the population studied* • *whether the study tried to detect a beneficial or harmful effect* • *the risk factors studied*	
2. Did the authors use an appropriate method to answer their question?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *is a case control study an appropriate way of answering the question under the circumstances* • *did it address the study question*	
3. Were the cases recruited in an acceptable way?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise validity of the findings* • *are the cases defined precisely* • *were the cases representative of a defined population (geographically and/or temporally)* • *was there an established reliable system for selecting all the cases* • *are they incident or prevalent* • *is there something special about the cases* • *is the time frame of the study relevant to disease/exposure* • *was there a sufficient number of cases selected* • *was there a power calculation*	
4. Were the controls selected in an acceptable way?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings* • *were the controls representative of the defined population (geographically and/or temporally)* • *was there something special about the controls* • *was the non-response high, could non-respondents be different in any way* • *are they matched, population based or randomly selected* • *was there a sufficient number of controls selected*	
5. Was the exposure accurately measured to minimise bias?	☒Yes ☐ No ☐ Can't Tell

CONSIDER: *We are looking for measurement, recall or classification bias* • *was the exposure clearly defined and accurately measured* • *did the authors use subjective or objective measurements* • *do the measures truly reflect what they are supposed to measure (have they been validated)* • *were the measurement methods similar in the cases and controls* • *did the study incorporate blinding where feasible* • *is the temporal relation correct (does the exposure of interest precede the outcome)*	
6. a) Aside from the exposure, did the groups have similar characteristics?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *List the ones you think might be important, that the author may have missed* • *genetic* • *environmental* • *socio-economic*	
6 b) Have the authors taken account of the potential confounding factors in the design and/or in their analysis?	☐Yes ☒ No ☐ Can't Tell
CONSIDER: • *restriction in design, and techniques e.g. modelling, stratified-, regression-, or sensitivity analysis to correct, control or adjust for confounding factors*	
Section B: What are the results?	
7. Was the treatment effect large?	☐Yes ☐ No ☒ Can't Tell
CONSIDER: • *what are the bottom-line results* • *is the analysis appropriate to the design* • *how strong is the association between exposure and outcome (look at the odds ratio)* • *are the results adjusted for confounding, and might confounding still explain the association* • *has adjustment made a big difference to the OR*	
8. Was the estimate of the treatment effect precise?	☐Yes ☐ No ☐ Can't Tell
CONSIDER: • *size of the p-value* • *size of the confidence intervals*	

• *have the authors considered all the important variables* • *how was the effect of subjects refusing to participate evaluated*	
9. Do you believe the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *big effect is hard to ignore!* • *can it be due to chance, bias, or confounding* • *are the design and methods of this study sufficiently flawed to make the results unreliable* • *consider Bradford Hills criteria (e.g. time sequence, does-response gradient, strength, biological plausibility)*	
Section C: Will the results help locally?	
10. Can the results be applied to your patients/the population of interest?	☐Yes ☒ No ☐ Can't Tell
CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern* • *if your local setting is likely to differ much from that of the study* • *can you quantify the local benefits and harms*	
11. Do the results of this study fit with other available evidence?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *all the available evidence from RCT's Systematic Reviews, Cohort Studies, and Case Control Studies as well, for consistency*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*	
Positive/Methodologically sound	**Negative/Relatively poor methodology** **Unknowns**
• Matching for Age and Sex: Ensured comparability between groups.	• Absence of a Clear Statistical Analysis Section: The lack of detailed statistical reporting limits the evaluation of associations and their significance. • Recall Bias: Data on obstetric complications and maternal medical history were obtained from mothers rather than medical records, which may introduce recall bias.

• Anthropometric Measurements: Used objective physical growth measurements, minimizing bias. • Focused Research Question. • Validated Assessment Tools (Bayley-III): Standardized and reliable tool for assessing language and motor development. • Sample Size Calculation was done.	• Uncertainty About Logistic Regression: It is unclear whether multiple logistic regression was performed to control for confounders. • Potential Residual Confounding: Factors like parental interaction or genetic predispositions may not have been fully considered or measured. • No Randomization: There is no mention of random selection of controls. • Clinic-Based Selection: Recruitment from clinics may exclude children with normal development who do not attend these clinics regularly, introducing selection bias. • Limited Generalizability: The focus on children from middle socioeconomic classes limits the generalizability of the findings to other socioeconomic groups.

CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Ghada Albluwi
Paper Title:	Effect of iron deficiency anemia on language development in preschool Egyptian children
Author:	Mervat A.M. Youssef, Eman S. Hassan, Dalia G. Yasien
Web Link:	https://pubmed.ncbi.nlm.nih.gov/32492615/
Appraisal Date:	19-20-2024

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied*	

• *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☐ Yes ☐ No ☒ Can't Tell
CONSIDER: • *if the result is precise enough to make a decision*	

• *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☐Yes ☒ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☐Yes ☒ No ☐ Can't Tell
CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11. How valuable is the research?	☒Yes ☐ No ☐ Can't Tell

CONSIDER:

- *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making*
- *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)*
- *if the researchers have discussed whether or how the findings can be transferred to other populations*

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*

Positive/Methodologically sound	**Negative/Relatively poor methodology**
• Multicentre Design • Well-defined Inclusion and Exclusion Criteria • Comprehensive Haematological Assessment • Standardized Cognitive and Language Assessments	• No Logistic Regression to Control for Confounders • Unclear Method of Data Collection • Ssample size calculation was not done • Absence of Environmental and Dietary Data

CASP Checklist:
For Descriptive/Cross-Sectional Studies

Reviewer Name:	Ghada Alharfi Albluwi
Paper Title:	Impact of screen exposure on language development among toddlers and pre-schoolers in Nineveh province
Author:	Zainab Waleed Aziz , Elham K. Aljammas , Luma I.K. Al-Allaf
Web Link:	https://mmsl.actavia.cz/artkey/mms-202303-0007_impact-of-screen-exposure-on-language-development-among-toddlers-and-preschoolers-in-nineveh-province.php
Appraisal Date:	5-12-2024

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Did the authors use an appropriate method to answer their question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a descriptive/cross-sectional study an appropriate way of answering the question* • *did it address the study question*	
3. Were the subjects recruited in an acceptable way?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: *We are looking for selection bias which might compromise the generalisability of the findings:* • *Was the sample representative of a defined population* • *Was everybody included who should have been included*	
4. Were the measures accurately measured to reduce bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)*	
5. Were the data collected in a way that addressed the research issue?	☐ Yes ☒ No ☐ Can't Tell

CONSIDER: • *if the setting for data collection was justified* • *if it is clear how data were collected (e.g., interview, questionnaire, chart review)* • *if the researcher has justified the methods chosen* • *if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted?)*	
6. Did the study have enough participants to minimise the play of chance?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *if the result is precise enough to make a decision* • *if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.*	
7. How are the results presented and what is the main result?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards* • *how large this size of result is and how meaningful it is* • *how you would sum up the bottom-line result of the trial in one sentence*	
8. Was the data analysis sufficiently rigorous?	☐ Yes ☒ No ☐ Can't Tell
CONSIDER: • *if there is an in-depth description of the analysis process* • *if sufficient data are presented to support the findings*	
9. Is there a clear statement of findings?	☐ Yes ☐ No ☐ Can't Tell
CONSIDER: • *if the findings are explicit* • *if there is adequate discussion of the evidence both for and against the researchers' arguments* • *if the researchers have discussed the credibility of their findings* • *if the findings are discussed in relation to the original research questions*	
10. Can the results be applied to the local population?	☐ Yes ☒ No ☐ Can't Tell

CONSIDER: • *the subjects covered in the study could be sufficiently different from your population to cause concern.* • *your local setting is likely to differ much from that of the study*	
11.How valuable is the research?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)* • *if the researchers have discussed whether or how the findings can be transferred to other populations*	

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*	
Positive/Methodologically sound	**Negative/Relatively poor methodology** **Unknowns**
• Clear research question and objectives. • Dividing participants into toddlers (12-36 months) and preschoolers (37-60 months) allowed for age-specific analysis. • Speech and language delay was made by a linguistic specialist.	• Sampling method (whether it was random or convenience sampling) is not described. • Data were collected using a parent interview questionnaire, which is subject to recall bias. • Other potential confounders, such as socioeconomic status or pre-existing developmental conditions, were not fully controlled or discussed. • Spearman correlation was listed as a method but not clearly applied or reported, raising questions about its relevance or application. • No sample size calculation was done

Referencing recommendation:

CASP recommends using the Harvard style referencing, which is an author/date method. Sources are cited within the body of your assignment by giving the name of the author(s) followed by the date of publication. All other details about the publication are given in the list of references or bibliography at the end.

Example:

Critical Appraisal Skills Programme (2024). CASP (insert name of checklist i.e. cross sectional Checklist.) [online] Available at: insert URL. Accessed: insert date accessed.

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