

### Appendix 3

#### *Critical Appraisal Checklist for a Questionnaire Study*

	Blair and Blair (2007)	Caballero et al (2017)	Desjardin (2005)	Elfenbein (1994)	Gilliver et al (2013)	Meibos et al (2016)
Research question and study design						
Was a Q the most appropriate method?	Y, but maybe qual interviews	Y, but maybe qual interviews	Y	Y, but maybe qual interviews	Y, but maybe qual interviews	Y
Validity and reliability						
Have claims for validity been made, and are they justified? (Is there evidence that the instrument measures what it sets out to measure?)	Y Q was reviewed by 2 audios. Revised questions were reviewed by the parent infant co-ordinator and were modified. (easier to understand)	Y A bilingual professional with expertise in audio reviewed the Q for accuracy of translation into Spanish. Structured interviews with 7 people to determine face validity.	Y Principal component analysis was used	N No info on how Q was validated.	N No info on how Q was validated	Y Piloted with 15 paediatric audios for content validity and reviewed by a paediatric audio for clarity
Have claims for reliability been made, and are they justified? (Is there	Y. Q was piloted on 3 parents	N Used SPSS to analyse data but unsure if internal	Y Cronbach's alpha to measure	N No information on reliability of Q	N No information on reliability of Q	N No information on reliability of Q

evidence that the questionnaire provides stable responses over time and between researchers?)		consistency of test items was measured	internal consistency			
<b>Format</b>						
Are example questions provided?	Y	Y	Y	Y	Y	Y
Did the questions make sense, and could the participants in the sample understand them? Were any questions ambiguous or overly complicated?	Y Y  N	Y Unclear  N	Y Unclear  N	Y Unclear  Y, some double barrelled qns	Y Unclear  N	Y Unclear  N
<b>Piloting</b>						
Are details given about the piloting undertaken	Y	Y	N	N	N The Q was based on the issues that were raised by parents in a previous discussion group.	N
Was the questionnaire adequately piloted	Y	Y	N	N	N	N

in terms of the method and means of administration, on people who were representative of the study population?						
Sampling						
Was the sampling frame for the definitive study sufficiently large and representative?	Y (n = 31)	Y (n = 42)	N (n = 54), Representative of all mothers from middle to upper SES	Unsure, (n = 15) All parents were enrolled in an education prog so well informed.	N (n = 40) Authors mentioned in caveats that sample size may have been too small.	Unsure (n = 349) Large but not representative as most audios spent < 25% of their time providing Paed HA services
Distribution, administration, and response						
Was the method of distribution and administration reported	Y	Y	Y	Y	Y	Y
Were the response rates reported, including details of participants who were unsuitable for the research or	Somewhat	Somewhat	Response rates reported but no details on non-responders	Response rates reported but no details on non-responders	Response rates reported but no details on non-responders	Response rates reported but no details on non-responders

refused to take part?						
Have any potential response biases been discussed	N	N	N	N	N	N
Coding and analysis						
What sort of analysis was carried out and was this appropriate? (e.g. correct statistical tests for quantitative answers, qualitative analysis for open ended questions)	Descriptive stats	SPSS (version 23) analysis software to identify frequency and variance of responses.	Principal Component analysis and tests of internal consistency. Using a one-way MANCOVA, between group analyses of maternal perceptions of EI services and self-efficacy was measured.	Descriptive stats	Content analysis	Descriptive stats
Results						
Were all relevant data reported?	Y	Y	Y	Y	Y	Y
Are quantitative results definitive (significant), and are relevant non-significant results also reported?	Only descriptive stats were presented.	Only descriptive stats were presented.	Y Y	Only descriptive stats were presented.	N/A	Only descriptive stats were presented.

Have qualitative results been adequately interpreted (e.g. using an explicit theoretical framework), and have any quotes been properly justified and contextualised?	N/A	N/A	N/A	N/A	Y	N/A
Conclusions and discussion						
Have the researchers drawn an appropriate link between the data and their conclusions?	Y	Y	Y	Y	Y	Y
Have the findings been placed within the wider body of knowledge in the field (e.g. via a comprehensive literature review), and are any recommendations justified?	Y, recs given	Y, recs given	Y, recs given	Y, recs given	Y, recs given	Y, recs given

	Munoz, Roberts, Mullings et al (2012)	Munoz, Olson, Twohig et al (2015)	Munoz , Rusk, Nelson et al (2016)	Russ et al (2004)	Sjoblad et al (2001)
Research question and study design					
Was a Q the most appropriate method?	Y, but maybe qual interviews	Y	Y	N, but maybe qual interviews	Y
Validity and reliability					
Have claims for validity been made, and are they justified? (Is there evidence that the instrument measures what it sets out to measure?)	N No info on how Q was validated but Q was developed by audiologists Utah State EHDI program, an early interventionist and a parent of a child with hearing loss.	Y For content validity, published info about parent reported needs were reviewed prior to developing the questionnaire. To address face validity, 5 mothers completed the questionnaire after it was constructed for feedback.	Y For content validity, published info about parent reported needs were reviewed prior to developing the questionnaire. To address face validity, 5 mothers completed the questionnaire after it was constructed for feedback.	N No info on how Q was validated?	N No info on how Q was validated?
Have claims for reliability been made, and are they justified? (Is there evidence that the questionnaire provides stable	N No information on reliability of Q.	Y Internal consistency calculated using Cronbach's alpha for scales of the Questionnaire	Y Internal consistency calculated using Cronbach's alpha for scales of the Questionnaire	N No information on reliability of Q.	N No information on reliability of Q. Did talk about interrater reliability (20% of surveys were randomly selected for

responses over time and between researchers?)					interrater reliability for the open-ended items that were classified into categories by 2 raters)
<b>Format.</b>					
Are example questions provided?	Y	Y	Y	Y	Y
Did the questions make sense, and could the participants in the sample understand them? Were any questions ambiguous or overly complicated?	Y Unclear  N	Y Qns were modified for clarity after piloting  N	Y Qns were modified for clarity after piloting  N	Y Unclear	Y Unclear
<b>Piloting.</b>					
Are details given about the piloting undertaken	N	Y	Y	N	N
Was the questionnaire adequately piloted in terms of the method and means of administration, on people who were representative of the study population?	N	Y	Y	N	N
<b>Sampling</b>					

Was the sampling frame for the definitive study sufficiently large and representative?	N (n = 35) May not have been representative not all parents of CWHL are enrolled in EI	N (n = 37) Acknowledged sample was relatively small and homogenous	Y (n = 318)	Y (n = 82)	Y (n = 213)
Distribution, administration and response					
Was the method of distribution and administration reported	y	Y	Y	Y	Y
Were the response rates reported, including details of participants who were unsuitable for the research or refused to take part?	Somewhat	Discussed response rate but no characteristics of non-responders	Talks about response rate and why some participants were excluded.	Described characteristics of non-responders in a table	Talks about response rate and why some participants were excluded.
Have any potential response biases been discussed	N	N	N	N	N
Coding and analysis					
What sort of analysis was carried out and was this appropriate? (e.g. correct statistical tests for quantitative answers, qualitative analysis for open ended questions)	SPSS software to calculate descriptive stats, including frequencies, percentages, medians and interquartile ranges.	Descriptive stats. Cronbach's alpha for internal consistency. Cohen's d- for comparing mothers' v fathers' responses.	SPSS version 22 used. Descriptive stats and correlations used to determine associations b/n parent reported HA use and various demographics.	Quantitative analysis by 2 reviewers.	Content analysis for open ended qns. Multiple choice qns entered SAS data for analysis



			Multiple regression analysis used.		
<b>Results</b>					
Were all relevant data reported?	Y	Y	Y	Y	Y
Are quantitative results definitive (significant), and are relevant non-significant results also reported?	Only descriptive stats were presented.	Y Y	Y Y	N/A	N/A
Have qualitative results been adequately interpreted (e.g. using an explicit theoretical framework), and have any quotes been properly justified and contextualised?	N/A	N/A	N/A	Y Y	Y N
<b>Conclusions and discussion</b>					
Have the researchers drawn an appropriate link between the data and their conclusions?	Y	Y	Y	Y	Y
Have the findings been placed within the wider body of knowledge in the field	Y, recs given	Y, recs given	Y, recs given	Y, recs given	Y, recs given

(e.g. via a comprehensive literature review), and are any recommendations justified?					
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**Y**-Yes **N**-No **Qual**-Qualitative **Quan**-Quantitative **Q**-Questionnaire **Qns**-Questions **Recs**-Recommendations **Audios**-Audiologist/s  
**EI**-Early intervention