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Original research paper

PARENTS' PERSPECTIVE IN THE EVALUATION OF A PARENTAL REPORT INVENTORY FOR THE ASSESSMENT OF CHILD COMMUNICATION DEVELOPMENT*

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ABSTRACT

Parents' reports are accepted in practice and can be a valid and reliable source of information in research on children's communicative development and any delays in this. Nevertheless, parents' reports may have important limitations that need to be considered: parental positive bias; parents' understanding of the child language comprehension; and parents' education and limited linguistic knowledge. In this paper, we take the stance that parents are most interested in an adequate assessment, and obtaining reliable input from them is certainly important. We amplify the voice of parents by synthesizing their experiences with a parental report inventory as a method based on the usage of the adapted version of the MacArthur-Bates Communicative Development Inventory. With that aim, we conducted a qualitative inductive thematic analysis of focus group discussions and additional open-ended validation questions. Six emerging themes and sub-themes were identified and presented with illustrative quotations. Results revealed that the adaptation of original CDIs to languages with radically different morpho-syntactic structures may produce items that are hard to recognize and understand without

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a context. We bring to light parent-specific difficulties in performing this task and provide a critical understanding of parents' reports as a method of language development assessment. We discuss potential solutions to parents' dilemmas that inevitably arise when reporting on their child's communication, as well as answers to researchers'/practitioners' dilemmas regarding the validity and reliability of parental reporting.

Key words:

communication development, child communication assessment, parents reports, parental involvement, and thematic analysis.

■ INTRODUCTION

Parents' reports have proven useful as a basis for rapid overall evaluation of a child's language, either for screening purposes in educational and clinical settings or in research studies focusing on correlates of language development (Dale, 1989). In pediatric clinical practice, parents' reports are widely used as a complementary method in medical diagnosis and history-taking to monitor the child population in the community and also in clinical assessment and intervention for children with developmental delays and disabilities (Miller *et al.*, 2017; Nordahl-Hansen *et al.*, 2014; Pless & Pless, 1995; Sachse & Von Suchodoletz, 2008). The use of parents' reports allows parents to be involved as collaborators in both assessment and intervention programs or research projects, which not only provides professionals with a wealth of relevant information about children but also increases parents' motivation for continued participation in their child's development monitoring process (Dale, 1996).

The MacArthur Communicative Development Inventories (MB-CDIs; Fenson *et al.*, 1993) is probably one of the most widely used parent reports in the area of child language and communication development today. After more than three decades of use and empirical testing and adaptation in over 100 languages and various cultures (CDI Advisory Board, 2015), this questionnaire has proven to be a useful tool for monitoring language development, for both researchers and parents. This questionnaire incorporates several principles that maximise its validity and parent-friendliness by reducing demands on the respondent's memory: a. the assessment is limited to current behaviour, b. the assessment focuses on emergent behaviour, and c. a recognition format is used (Dale *et al.*, 1989; Frank *et al.*, 2021). This instrument has been shown to be a valid and reliable source of information about children's communicative and language development, based on numerous quantitative studies and comparisons with direct assessment (Bennetts *et al.*, 2016; Camaioni *et al.*, 1991; Dale *et al.*, 1989; Dale, 1991; Ebert, 2017; Feldman *et al.*, 2005; Jahn-Samilo *et al.*, 2000; Miller *et al.*, 2017; O'Toole & Fletcher, 2010; Reese & Read, 2000; Thal *et al.*, 2000; Thal *et al.*, 1999).

However, apart from the good statistical properties of the instrument, it is important for researchers and practitioners to be aware of the strengths and weaknesses of parental reports, which represent one of the most important methodological issues in assessing early children's language. There is a widespread belief that parents are not sufficiently objective observers because they are prone to a positive response bias. One of the major limitations is that most parents have no special training in linguistics or language development and may not be sensitive enough to recognize some subtle language categories and structures (Dale, 1991; Stiles, 1994).

Parent-reported measures may also be biased by factors related to the parents' background: parents from low socio-economic backgrounds (low income and low education) tend to overestimate or underestimate their children's language abilities (Bennetts *et al.*, 2016; Feldman *et al.*, 2003; Law & Roy, 2008; Roberts *et al.*, 1999), whereas parents with higher education are more likely to correctly estimate their children's language (Feldman *et al.*, 2003). It has also been noted that lower-educated parents are less able than well-educated parents to distinguish between expressive and receptive items on a vocabulary checklist and thus overestimate their child's language abilities (Reese & Read, 2000). In general, parental education is likely to correlate with language sensitivity and the ability to recognize and articulate observed language phenomena in the child.

Parents' unique experiences, opinions and attitudes (both explicit and implicit) may also contribute to a response bias (Bennetts *et al.*, 2016). For example, natural pride in the child and failure to critically review their impressions may lead parents to overestimate their child's abilities, while frustration in the case of a language delay may lead to underestimation (Dale, 1996; Dale *et al.*, 1989). A possible source of bias in parents' reports is also that they may pay more attention and remember better challenging or unusual behaviours (Zapolski & Smith, 2013). Child characteristics such as temperament and the differential expectations of boys and girls have also been shown to influence parents' reports (Dale, 1991; Hayden *et al.*, 2010).

Researchers agree that parents are better at judging their children's language production skills than their comprehension skills and grammar (Eriksson *et al.*, 2002; Jahn-Samilo *et al.*, 2000; Luyster *et al.*, 2008; Sachse & Von Suchodoletz, 2008; Tomasello & Mervis, 1994). This is due to parents' difficulties in distinguishing whether their child really understands a word or only recognises a certain context (Jahn-Samilo *et al.*, 2000). Parents tend to attribute word comprehension to their child when the child indicates through his or her behaviour a familiarity with an object or an event to which the word refers (Tomasello & Mervis, 1994).

One of the most important strengths of parental report measures is that most parents are naturally interested in their child's development and generally enjoy the experience of completing the questionnaire (Dale, 1991; Rescorla, 1989). The other, perhaps even more important reason is that they have a wealth of information about

their child's development. Parental reports do not require the child's cooperation, so they can be used to assess young children who often refuse to interact with strangers or cooperate during testing in the experimental setting. Parents can provide data that is more representative of the child's language than laboratory samples because they observe the child in a more natural and familiar environment and in a wider range of situations (Dale, 1991; Robinson & Mervis, 1999). Because parent reports are based on collected observations over a longer period of time and in a variety of contexts, they are less influenced by performance factors such as word frequency (Dale, 1996; Feldman *et al.*, 2003), i.e. they can sample the entire vocabulary range, not just the more frequent terms (Jahn-Samilo *et al.*, 2000). They also have the opportunity to provide evidence of specific behaviour that occurs relatively rarely or intermittently. An important advantage of the parental report method is its cost-effectiveness in the rapid general assessment of a child's language, which can be valuable for screening purposes in clinical and educational settings (Dale, 1991).

Parental engagement in assessing young children's communication helps them understand their own role and how it improves the accuracy of evaluation; it also increases motivation to participate in early support and education. Birbili and Tzioga (2014) have shown that working with parents to document and reflect on children's learning in an intervention program provides teachers with reliable and rich information about the child's progress and helps parents understand the importance of monitoring their child's progress. They also showed that parents welcome the opportunity to participate in documenting and are willing to share their findings with the teacher if the teacher finds them valuable.

Bagnato (2007) argues that conventional tests and norm-referenced, decontextualized tests must be abandoned in the assessment of early child development because they are not validated in infants, toddlers, and preschoolers, as well as in children with developmental disabilities. Instead, an "authentic assessment alternative" is proposed to avoid mismeasures in the assessment of early childhood development. It is dedicated to the authentic, alternative, and observational approach recommended by the *National Association for the Education of Young Children (NAEYS)*, and *Head Start Early Childhood Learning & Knowledge ECLKC*. If accounted in terms of Bronfenbrenner's Ecological Model of Human Development (Bronfenbrenner, 1988), parental involvement in assessing the child's communication finds its place in the interaction of microsystems within a mesosystem – the interaction of family, pre/school, and health centre. Parental involvement in early developmental assessment is also consistent with the *Early Intervention Framework for Children and Young People's Mental Health and Wellbeing* and the policy of inclusive education in Serbia (National Report on Inclusive Education in the Republic of Serbia for the period 2019–2021, 2022).

The actual process of parental reporting on a child's development has remained conspicuously unexplored, in particular: how parents understand the questions,

what strategies they develop in completing the questionnaire, how decisions are made about particular items, how confident parents are in their choices; and how they perceive the task of reporting on their child's achievements. In Dale's opinion "many of the reservations which have been expressed in relation to parent reports may have more to do with how parental experience is accessed rather than with the validity of that perspective in general" (Dale, 1996: 164). For this reason, we believe that it is very important to explore parental experience and consider their perspective when filling out the questionnaire.

Aims. The focus of this study is to provide a better understanding of the process of parental reporting on their child's language development. Based on a thematic analysis of parents' perceptions of the use of the MacArthur-Bates Communicative Development Inventory (CDI-I and CDI-II, Fenson *et al.*, 2007), we aim to examine how the questionnaires are perceived, understood and valued by parents, and whether parents can adequately respond to the requests for assessment of their child's communication. We also assess whether parents perceive the items as relevant, understandable, and appropriate for themselves as target participants. By highlighting the difficulties parents face in completing this task and the strategies they build for them, we try to provide an in-depth understanding of parents' common experiences. In doing so, we try to shed more light on possible solutions to the dilemmas parents inevitably face when reporting on their child's communication, and consequently the dilemmas researchers/practitioners face regarding parental reporting.

More specifically, our main aims are to explore:

- What difficulties do parents encounter in filling out the questionnaire regarding the instructions and certain parts/items of the questionnaire? Which parts of the questionnaire are the most difficult for parents and which answers within the questionnaire are they least confident about?
- What response strategies did parents develop when completing the questionnaires?
- How do parents value the questionnaire, and what is their perception of it? Is the questionnaire useful for them? When filling it out, are they concerned about whether their child meets the age-appropriate criteria? Does it induce any other considerations that parents would like to share?

■ METHODS AND MATERIALS

The study was approved by the Institutional Review Board of the Department of Psychology, Faculty of Philosophy, University of Belgrade. It was conducted using the material compiled for the purpose of adapting CDIs to the Serbian language (Anđelković, 2017).

Research design. Inductive thematic analysis (Braun & Clarke, 2006; Lochmiller, 2021; Thomas, 2006) was performed in two phases based on qualitative data compiled from two sources:

- I. Two semi-structured focus group discussions about parents' experience of reporting on the items of the first adapted version of the CDIs for the Serbian language. The focus group method served primarily to validate the preliminary version of questionnaires and to identify the parts that were difficult for parents to understand and answer. In addition, it was an opportunity to look for an appropriate replacement of items and sections, which implied the active participation of mothers in shaping the working version of the Serbian CDIs. Finally, it was a source of information for the cultural adaptation of the inventories, preferable expressions, etc.
- II. The narrative responses of 155 parents/caregivers to three additional open-ended validation questions added at the end of the second adapted versions of the CDI-I and CDI-II questionnaires improved the basis of the results obtained in the focus group.

The data obtained from the focus groups and from the open-ended questions were used for methodological triangulation, which helped us to ensure an in-depth and more unbiased set of findings on the challenges of parent reporting.

I Focus Group Discussions

Focus groups sample. The CDI-I focus group involved four mothers (3 with a university degree and 1 with a secondary school diploma) whose children were aged 8-17 months, and it lasted 2 hours and 25 minutes. The CDI-II focus group involved six mothers (2 with a university degree, 2 with a college diploma and 2 with a secondary school diploma) whose children were aged 18-30 months, and it lasted 2 hours and 15 minutes. Parents with primary education were not included in the focus group samples because we could not reach them. This important limitation must be considered when interpreting the results. The sample of mothers who participated in the focus group discussions was convenient; the researchers contacted mothers from their milieu who they knew had children of the target age, and asked them to participate in the study. The fact that fathers were not among the participants was

not a decision of the researchers, but a consequence of the fact that mothers in Serbia spend most of their time with infant children. None of the participants had any formal education in linguistics and/or language acquisition. All participants were familiar with the aims and procedures of the study and volunteered to participate. The focus groups also included 3 researchers, one of whom acted as a moderator, while the other two participated in the group and facilitated the discussion.

Focus group data compilation. Before participating in the focus group, the mothers were given the first adapted version of the CDI-I or CDI-II questionnaire depending on their child's age to fill out in one week. They were informed that their answers would be used to improve the adaptation of CDIs to the Serbian language. They were also told that we would appreciate their feedback in the form of comments, remarks, and suggestions about the instructions and the items. It was suggested that they include input from other family members who spend a lot of time with the child, if needed. They were instructed to pay attention to anything that was not clear to them or caused a dilemma, as well as to write down any words they thought were missing from the vocabulary section. They finally shared their observations in two focus group discussions, one for the CDI-I and the other for the CDI-II. The focus group discussions were held in a conference room of the laboratory the researchers work in.

Focus group discussion protocol. The discussion was facilitated according to the following protocol:

1. What is your general impression of the questionnaire?
2. Was it difficult to complete the questionnaire? If yes, why?
3. Who participated in filling out the questionnaire?
4. Was it difficult to involve other family members? If yes, why?
5. How clear were the instructions? What was unclear? Do you have any suggestions on how to make certain instructions clearer?
6. Do you have any objections to certain parts/items? What are they?
7. Did you have difficulty understanding particular items? What was unclear?
8. Was there anything important about your child's communicative/language development that was not listed and asked about in the questionnaire? What was it?
9. Was there anything in your child's communicative/language development that confused, worried, or amused you? Would you share it with us?
10. Which part of the questionnaire was the most difficult to answer?
11. Which answers are you least convinced of, i.e., which of your answers do you think are least reliable? And why?

The conversations held in the focus groups were recorded with the participant's consent and then transcribed. The audio recordings of the focus groups were transcribed by the researchers. Thematic analysis of the focus group discussion data.

An inductive approach was chosen for the thematic analysis of the focus groups' contents (Thomas, 2006).

The researchers familiarised themselves with the content of the focus group discussions by transcribing them and reading the transcripts several times. For the purpose of coding, and based on the goals of the study, they looked for information in the transcripts that would provide at least a partial answer to the research questions posed. During the repeated reading of the transcript, each researcher in her version of the file marked with a specific code the illustrative parts of the discourse relevant to the research questions. Then she listed the codes in an Excel file along with the illustrations/examples marked in the transcripts. In the next phase, the researchers independently produced the list of themes and sub-themes based on the available examples. Through conversation, they reconciled the themes/sub-themes that one of the researchers recognized, and the other did not, and also the adequacy of the illustration/examples for a particular theme/sub-theme. In this way, the final coding structure was established and it was systematically implemented in the transcripts by researchers.

II Open-ended Validation Questions in the CDI Questionnaires

Sample. Based on the comments and suggestions of parents shared in the focus groups, an improved second version of the questionnaire was created (Anđelković *et al.*, 2017) and distributed to a convenient sample of 155 mothers (CDI I N=77, CDI II N=78, 38,4% with a university degree, 48,1% with a secondary school diploma and 13,5% with primary school). Contact with the mothers was established through personal acquaintances or through local health centres when they had brought their child for a regular health check.

Materials. In this version of the questionnaire, there were three open-ended questions designed to check whether parents were still having difficulties completing the questionnaire, and if so, what they were. These open-ended questions were:

- Please write comments in this section about anything that was not clear to you when you filled out the questionnaire.
- Which part of the questionnaire was most difficult for you to answer and why?
- We are aware that certain parts of the questionnaire were more difficult to complete than others. It is quite possible that you were not able to answer all parts of the questionnaire with equal confidence. Which part (or parts) of the questionnaire are you least confident about your answers?

Thematic analysis of the responses to open-ended questions. Using the results of the thematic analysis from the focus group discussions, the researchers independently reviewed the parents' responses to the questions listed above and identified particular themes and subthemes. The final list of themes and subthemes was reconciled

through conversations among the researchers. The analysis enabled recognition of the parts of the questionnaires that parents may still have found most difficult and least reliable.

■ RESULTS

I Focus Group Discussions

The results of the thematic analysis are presented as the main six themes and sub-themes with illustrative quotations composed of parents' difficulties and dilemmas, strategies for responding to the items, perceptions of the questionnaire and parent reporting as a method, as well as insights, attitudes and values related to child language development. All the topics contribute to knowledge about the difficulties parents face while reporting and how they overcome them, whether questionnaires support objective parental reporting, and why it is useful to involve parents in children's language assessment.

1. Difficulties parents face when filling out the questionnaires:
 - 1.1. Language comprehension: judging whether their child comprehended particular words, utterances, and grammatical constructions.
 - 1.2. Productive language vs. imitation: making a decision whether a particular child's word or utterance was a sign of productive language or was based on pure imitation of the input language.
 - 1.3. Natural variability in production and intermittent usage of words and forms: these made it difficult for parents to judge whether their child acquired particular words/forms.
 - 1.4. Polysemy of words listed in the questionnaires: it was difficult for parents to judge which meaning was being asked for.
 - 1.5. Parental focus on linguistic forms vs. communication: parents were primarily more concerned with communication than with language forms, and had difficulties answering when specifically asked about the form.
 - 1.6. Complex morpho-syntactic features of the language: parental difficulties with noticing, recognizing, remembering, or distinguishing between homophones, etc.
2. The questionnaire-filling strategies used by parents regarding the organisational issues – circumstances and dynamics of completing the questionnaire, the contribution of other family members, and decision-making strategies.
3. Parental insights on factors and mechanisms of language acquisition.
4. Parental attitudes and values relevant to supporting the child's language development.

5. Parents' fears regarding their child's language development.
6. A questionnaire as an educational tool for parents.

1. Difficulties Parents Face

1.1. Language Comprehension

As previous research has already shown, one of the main difficulties in completing the questionnaire for parents was making decisions about the comprehension of words and phrases, because they are not sure whether the child really understands or only recognizes a certain context.

The focus group discussions revealed that parents are aware that language comprehension and language production do not always develop simultaneously because of a certain degree of natural dissociation between these two areas. They perceive the inherent multimodality of communication, which includes the use of linguistic, para-linguistic and non-verbal means by both parties of the interaction and describe in detail all modalities. Furthermore, parents who are aware of the complexity of communication are not always able to clearly determine what information was crucial for their child to understand an utterance in a particular situation – be it the knowledge of speech code, intonation, non-verbal indicators or other information from the physical and social environment. Parents shared their impression that the child understands more than they can confirm with certainty at any given time.

That is what I said, whether they really understand all these expressions or whether they understand better through my voice. At what level, actually? I'm not sure, but I think it's more on an emotional level. Emotion rather than real understanding. And these communication expressions, he says "Let's go outside". Whether it's the word *outside* or the fact that I'm already putting my jacket on, which I'm doing as I say that. Actually, I talk a little and do a lot. Well, I'm really not sure.

Based on the child's behaviour, parents get the impression that the child understands their words on different levels, rather than only linguistically.

... yes, and then he puts something in, only I'm not sure if he knows the game, and then he puts [the shapes into the corresponding openings], or he reacts to the word *inside*.

"You are a good boy" or girl, I think... I don't really know if they understand exactly that sentence, I think that they understand that tenderness in my voice, they feel more than they understand because when I say "You are a good boy" I certainly say it in

the nicest possible way and he looks at me as if he understands. Whether he really understands it, that's just..

But parents also express reasonable caution when making judgments about their child's language comprehension.

It's because I'm not sure how subjective I am, how much I can really judge by his look and his behaviour, let's say by his body language. The way he looks at me, whether he really understood, whether he's trying to say something, whether he's just interested... I can't judge whether he really understands.

1.2. Productive Language vs. Imitation

Parents reported various dilemmas regarding their children's language production. They were not always able to distinguish whether the child was merely imitating adult speech or was capable of producing words independently. Also, some words were produced by the child even though it was obvious that he/she did not even know their meaning or the meaning was narrow and contextual.

My son, for example, uses both *tomorrow* and *yesterday*. I'm not sure he knows what it means, but he uses it. He doesn't know what *today* is, I don't think he uses that.

And I have an example, when he says "I've had enough" when he's finished eating, he does not want to eat anymore, he says "I've had enough" but he does not say "There's enough of something there".... Maybe it's just a memorised word because we say "I've had enough".

Based on the realisation that the production of words was not always accompanied by knowledge of their meaning, parents face the dilemma of whether such words should be marked as part of the child's vocabulary. One parent suggested that it would be easier for them to complete the CDI-I questionnaire if there were "produce" options in addition to "understand" and "understand and produce". Another suggestion was to include a statement in the questionnaire informing parents that they do not have to consider whether a child knows the meaning of the word in addition to the form of the word.

1.3. Variability in Production and Intermittent

Usage of Words and Forms

Variability of forms is a natural developmental feature of children's utterances and is found in all domains of language structure (phonology, morphology, syntax). In

this regard, parents report that they are not sure whether words/utterances deviating from the standard forms can be indicated as acquired in the questionnaire.

1.3.1. Pronunciation. The instruction in the vocabulary part of the questionnaire included an explanation that phonological variations in word pronunciation should be marked as words when parents recognize that a child uses them systematically with a particular meaning. Through conversation, parents illustrated that they implemented this instruction using various examples. However, there were some cases that were more challenging in this regard. One mother noted that the way her child pronounces a word prevents her from recognizing whether he is using the word in the singular or irregular plural (the information was significant for a particular item):

MOTHER: And I wasn't sure if he was saying /tsve'e/ 'flowers' or /tsvet/ 'flower', because still his pronunciation is not...

MODERATOR: Ok, but he says /tsve'e/ 'flowers', there is /tsve'e/?

MOTHER: /tsve'e/ 'flowers' or /tsvet/ 'flower', I don't know, he says /tssets/.

1.3.2. Hyperextension. A typical developmental phenomenon in language acquisition – hyperextension, also made trouble for some parents. Parents were not sure whether to mark a word for which they are sure the child understands its meaning but instead uses another word caused by hyperextension:

Both of us [mom and dad] are *daddy* and when I say “mammy”, he says “daddy”.

My son for some reason doesn't say “light bulb” or “lamp” but “day”, or “Turn on the day!”... He understands when I say “Turn on the lamp” or something like that, but when he protests, he says “Turn off the day!”.

1.3.3. Child words and neologisms. The parents also faced the dilemma of whether to mark a word for which their child had their own word. The parents gave an example of a child's word at an early age that is phonologically simpler.

My kid just named the pacifier and he's already calling it “nena”... Yes, I don't know why, I don't know with what logic, and now she keeps naming it consistently that.

1.3.4. Intermittent usage of morpho-syntactic markers. While children start to actively explore morphological forms they may intermittently produce particular words and change their form in a short time.

This morning my son and his dad wrestled and then Marko shouted to Ana “Pomagaj, pomagaj!”, 'Ana, help, help' [help.v.imp.2p.sing], and then she shouted back “*Pomagam!” 'I am helping', and then she run to him, and when she climbed on top of her dad, she shouted “*Pomagajem!” 'I am helping'.

The example shows two trials of the usage of the imperfective verb¹ *pomagati* 'help' in the present tense. The target form is *pomaže-m* consisting of the present base and the blended morpheme *-m* [present.1p.sg]. In the first instance **pomaga-m*, instead of the correct present base *pomaže-*, the child used the infinitive base *pomaga-*. In the second instance, produced just a few moments later, she created **pomagaj-e-m* based on the complete imperative form *pomagaj* instead of the present base *pomaže-*. She probably imitated the form she heard from her brother a few moments ago and used it as a basis for the present tense. Later on, it was difficult for her mother to decide whether these words could be counted as acquired or not.

1.4. Polysemy of Words Listed in the Questionnaires

Some polysemous words were also a source of dilemma for parents. One mother recognized that her child was pronouncing a certain word because its meaning within a particular context was different from the one prompted in the questionnaire, so she was not sure whether to tick that word:

My son says "zvezda" 'star', but it has nothing to do with a star [celestial body], but with the Crvena Zvezda 'Red Star' [football club]. So, I think if he would support Partizan [football club], that wouldn't be covered.

1.5. Parental Focus on Linguistic Forms vs. Communication

The study of the CDI questionnaires revealed that parents are primarily more concerned with communication than with language forms, even when specifically asked about the form. Thus, information about the presence or absence of a word or grammatical structure may be reported in two or three sections of the questionnaire, with considerable inconsistency. For example, the use of a particular pronoun form could be reported in the section on pronouns, in the grammatical complexity section, and in the spontaneously produced complex utterances. We found that parents were more restrictive in marking certain forms (e.g., the pronoun *he*) in the list of grammatical words than in the section intended for the spontaneously produced utterances. In the latter case, they reconstructed the utterances based on meaning, speech acts and communicative intentions rather than faithfully reproducing the form of the utterances. They tended to expand the child's utterance by adding

¹ In Serbian and other Slavic languages, the verbal aspect is an inherent part of lexeme and its meaning.

morphosyntactic markers (pronouns, prepositions, target verb forms, etc.) to make the meaning and function of the presented utterance clearer to the researcher.

It was difficult for parents to remember the use of grammatical forms of pronouns, verbal forms, and auxiliary verbs. The focus group discussions revealed that they would confidently confirm that their child had mastered negation, but it was difficult for them to recognize the use of negative blended forms of the verb *biti* 'be': *nisam* 'I'm not', *nisi* 'you're not', *nije* 'he/she/it is not'; *neću* 'I won't', *nećeš* 'you won't', *neće* 'he/she/it won't'.

1.6. Morphosyntactic Features of the Language

1.6.1. Noticing and remembering. When expected to respond to the items targeting the three types of verb conjugation (the present tense in the 3rd person plural ending with *-u*, *-ju*, or *-e*), a mother was unsure which of them actually occurred in her child's production:

Yes, it is, because again it's difficult since he rarely uses the plural, then when he uses it, I had to figure out whether he uses exactly those verbs in a particular plural form...

I tried to remember such examples [conjugation of verbs *-u*, *-ju* or *-e*], because according to what he says on the way, it does not work. But when we read a book together, I could ask him what they [characters from the book] were doing.

Conversely, parents notice errors and deviations from standard forms more easily than words/forms that children use correctly. Irregularities in children's speech attract the attention of people around them and are told in the form of anecdotes so parents can easily remember them later.

I remembered some examples where he nicely combined "papuče tatine" 'dad's slippers', "nove maramice" 'new handkerchiefs', "mamine ruke su hladne" 'mom's hands are cold', but he says "*dva kuce" 'two dogs' [instead of *dve kuce* according to the rule of agreement by gender, number and case], he has a problem with numbers.

1.6.2. Recognition of words out of context. In Serbian, recognizing items out of context proved difficult for some word categories: pronouns, auxiliary verbs, negative verbs, verbal conjugation, prepositions, and conjunctions. Conjunctions are typically not the main carrier of meaning in sentences, so parents rarely remember them. Functional words like pronouns, auxiliary verbs, negative verbs, and verbal conjugation produce different morphological forms and are therefore difficult to notice and remember in the course of vivid conversational exchange. Later, it is difficult for mothers to recognize and be sure of them in an alphabetically ordered list of items.

For example, the highly frequent word *je* 'is' can be the present tense 3rd person singular form of the auxiliary verb *biti* 'be', or a clitic blended accusative form *je* 'her' of the feminine personal pronoun *ona* 'she'. For that reason, the word *je* is rather unsuitable for a presentation in a list of words, if it is expected to be recognized for lexical and grammatical meaning.

It is also interesting to note that the challenge of recognizing items exists not only in the realm of grammar but also in the lexical domain (vocabulary). The idle presentation of a verb in the infinitive form was sometimes difficult to confirm because it did not resemble the language of a developing child and did not sufficiently trigger the memory of the child's vivid utterances in some parents. In addition, some mothers had a dilemma as to whether the verb produced by the child in the personal form could be accepted as acquired since the infinitives were listed in the questionnaire.

It worries us a little, *baciti* [throw.inf] is written, and he says "baci" [throw.imp.2p.sg], and then I didn't know if it meant to be *baciti* or *baci*, because when we throw the ball to him, he says "baci", he doesn't say *baciti*.

1.6.3. Homomorphy. The homomorphs among the words in grammatical forms, especially among functional words, may mislead parents to a different grammatical role and meaning. Serbian pronouns have numerous morphological forms among which homomorphs are frequent, making it impossible to distinguish them out of context. For example, the word *ona* 'she' can be a personal or demonstrative pronoun, singular or plural, feminine or neutral gender:

This was not clear to me: *on, ona, ono* [listing personal pronouns in all three singular genders; *ona.fem.3p.sg*], *oni, one, ona* [listing personal pronouns in all three plural genders; *ona.neu.3p.pl*], *onaj, ona, ono* [listing demonstrative pronouns in all three singular genders; *ona.fem.3p.sg*]. So in that whole repetition, she has *ona* on all three. I know that she says the word *ona*, because for example when she is angry she says "Ona me udarila!" 'She hit me' when she complains to someone. I marked all three, but I wasn't sure at all.

1.6.4. Recognition of relevant domain(s) of language production in the questionnaire. Parents sometimes paid attention to phonological properties when answering items designed primarily to test grammar. One mother was unsure whether phonological deviation from the standard word form could be ignored in an item designed to test conjugation. The example shows that parents are not always sure about which domain(s) of language structure is most relevant for particular items.

He says, for example, /pupa/ 'bath' instead of /kupa/ [bath.present.3p.sg]. And now I don't know if... I think I marked it anyway, but /kupaju/ [bath.present.3p.pl] is written here, he does not use it in that form.

Derivational morphology is productive in Serbian, and parents notice groups of meanings formed around the roots of words, which possibly helps both parents and children to classify them into broader semantic fields used in communication. However, this can also be a source of difficulty in completing the CDI questionnaires, since it prompts the parent to confirm the presence of a noun, based on the use of an etymologically related verb.

Here I noticed, he doesn't know what *lepak* 'glue' [lep-(i)-ak] is, but he knows when something breaks, then he says "Zalepi mi" 'glue it for me' [za-lepi].

2. The Questionnaire-Filling Strategies

Some mothers commented on the questionnaire. When they saw the size of the questionnaire, they initially felt resistance and put off filling it out for a day or two. But when they started filling it out, it became interesting and captivating.

I don't think it's some banal test like a test from a magazine. I think it is an obligation in that sense, and it was also easier for me to isolate myself, to do it at night, and to think carefully about it. As I would say, anything less than that would not be serious enough. Somehow, I'm completely fine that if we're investigating something, that if a parent thinks that a child might have a problem or wants to check how he's progressing, that it's fine to be so dedicated. I think it [the questionnaire] somehow shows expertise... But I think it's an obligation. It is demanding.

In the process, parents developed different strategies for completing the questionnaire.

2.1. Organisational Strategies

With regard to the circumstances and dynamics of how parents completed the questionnaire, we identified three ways:

- a) They filled in what they were sure about for several days, then they observed the child's language in interaction sequences, and finally, they tested word comprehension.
- b) Some of them filled out the questionnaire all at once. Most mothers indicated that they tried to remember specific examples of their children's production, typical expressions they use, or specific communicative situations.
- c) Some mothers monitored their child's language continuously and made notes which made it easier for them to finally fill out the questionnaire.

They also had different strategies regarding the participation of other family members. Some mothers filled in the questionnaire on their own, when they were

alone, after putting their child to bed, because they needed to concentrate in peace and try to remember relevant examples. One of them decided to avoid the father's help because she thought he would overestimate the child's language production. For others, it was a joint venture with the father or even another family member (the child's aunt) and they all eagerly participated. One mother remarked that she and the father were complementary sources of information because she was more sensitive to the child's nonverbal communication (gestures, activities, play) while the father recognized verbal communication better.

It took me several days to complete it, so I filled it out in several sessions. First, I went through it [the questionnaire] once, then what remained unclear to me, where I wasn't sure, I went through it again. But it wasn't just me, father got involved a little too, so we did it together.

2.2. Decision-Making Strategies

As suggested by Stiles (1994), certain parts of the CDI questionnaires require different decision-making response strategies due to the different nature of the target behaviours. Whereas word production, grammatical constructions, and gestures assess specific behaviours that are explicit and accessible to parental observation, the comprehension assessment requires parents to infer from indirect indicators that the child recognizes the meaning of the communication. To make a decision about comprehension, it is necessary to recall several situations in which the child responds appropriately in different contexts and maintains the flow of communication in an appropriate manner.

Different strategies in making decisions were also evident in the focus group discussion as parents were struggling to provide valid and reliable responses in the situations already presented in the previous sections of this paper:

- a) deciding whether the child's comprehension in multimodal communication was based on the understanding of linguistic markers, nonverbal cues, or contextual information (section 1.1),
- b) distinguishing between the child's productive language and imitation (section 1.2),
- c) deciding whether the child used functional words and grammatical markers (section 1.6).

3. Parental Insights on Factors and Mechanisms of Language Acquisition

An important finding of this study is that parents recognize some basic mechanisms of language acquisition and that they spontaneously comment on them with other focus group participants.

3.1. Imitation

Imitation as a mechanism of language acquisition was observed especially in children at an early age:

I think more and more, in recent days, he is starting to imitate trying to speak. Recently, it was raining, and we were like “Jao, pada kiša” ‘oh, it’s raining’. Then one could hear him speaking softly /kisa/ ‘rain’. Actually, it is probably that stage now...

But he only uses them [diminutives] if I taught him that way, he doesn’t make it himself from some other word...

3.2. Frequency

Parents are also aware of the role of frequency in the acquisition of vocabulary and grammatical forms:

What my children usually do, for example when they drink, juice, then maybe he says what his brother and sister are doing, “piju” ‘they drink’ [drink.pres.3p.pl], so it’s something that is often used. But what we do not have often, he does not know it...

What it is often used, for example, “What are babies doing”, “They bath” ‘they are taking bath’ [bath.pres.3p.pl], he knows that.

3.3. Principle of Contrast

It is interesting to note that parents are aware of the principle of contrast which often makes the basis for observation and the grounds for naming things and acquiring new words in communication.

For example, my child says “selo” ‘village’, he remembered it when we took him there, but he doesn’t say “grad” ‘city’, even though he lives in the city. It’s like a normal environment, and he remembered the village because it’s different...

3.4. Language Input

Some parents remarked that the selection of items in the questionnaire did not always reflect the specifics of the environment in which the child was acquiring the language. They often stated that their child had not been exposed to certain words, activities, games, or places and that this was the reason why some of these words had not yet been acquired. In such cases, parents said, a child would be unfairly underestimated in the assessment of different semantic domains: numerous items of “unhealthy” food (hot dog, pate, French fries, bubble-gum); certain places that are not parts of a child’s routine (circus, church, store); activities not performed in the presence of the child (watching TV, vacuuming, washing dishes, blowing into a cup of hot milk to make it cold).

On the other hand, parents were also aware that their children acquired some words precisely because they had been exposed to certain environmental circumstances: They know words for animals because they read a book about animals or played with animal toys; they know words like *nail* and *hammer* because their grandfather is a carpenter and the child often plays with him in the workshop.

4. Parental Attitudes and Values Relevant to Supporting a Child’s Language Development

Mothers are aware of how important their behaviour and attitude are for the child’s development and take care of it continuously. They realise that it is important to talk to children, even about things the children do not yet understand, and they practise this. Some of them avoid baby talk and try to speak in complete sentences and as correctly as possible, as they see themselves always as a role model for a child.

I talk to her a lot and from the very beginning somehow. I avoid saying *buzz*, and *chi choo* [onomatopoeia], and those expressions. I don’t know, I didn’t even use that with an older child, no matter how much easier it is for them to acquire it in that way. I address them in a full sentence: That is the oven, we bake things there, it’s hot...

Participants considered some practices in typical parents’ behaviours as undesirable or even harmful. Some mothers emphasised that it was important to address children politely and that, therefore, the directive use of the imperative verb form should be avoided when talking to children.

MOTHER: I never use *Zini!* ‘Open your mouth’, I never use *Sedi!* ‘Sit down’. Now, I don’t know if it is a matter of wording since it seems so...

MODERATOR: It sounds like a command, right?

MOTHER: Yes, it's a bit directive, maybe that turned me off. But, for example, when I'm bathing her and I say "Come on, sit in the tub now", she might even understand it, but when it's written like this, especially with an exclamation mark...

5. Parents' Fears Regarding Their Child's Language Development

The instructions for the questionnaire emphasised that children vary widely in the number of words they understand and use, since vocabulary develops rapidly. Nevertheless, some mothers shared how worried they were about their child's low achievement:

And somewhere we were depressed and, in the end, when we saw how much there was... Although we had already taken him to a psychologist for some evaluations. So, we were really depressed, seeing how little he knew.

Other mothers are aware that a child cannot be expected to know everything from the questionnaire and that language develops very quickly from day to day:

It didn't bother me at all that I couldn't mark everything, because I had in mind that it was for children up to 30 months. And but I can see how much he has improved in a month, but what he will be able to do in three months, it's clear to me that is a big difference. And I think you put it somewhere in the instruction too.

6. Questionnaire as an Educative Tool for Parents

Many parents remarked that it was interesting for them to fill out the questionnaire and perceived it as an opportunity for learning. The questionnaires encouraged them to think about their child's development and they learned what to observe in communication. It also made them aware of how rich their child's language already was and how much more it would develop soon:

I was fascinated when I saw that he knew all that...

But it was really interesting for me to go through that, like wow! He will talk all of this!

The experience with the questionnaire motivated several mothers to think about their role as parents in support of communicative development and led them to reconsider their practice.

Well, I was surprised by how much the mother or the person who spends the most time during the day with children can influence language development. That you can work on it when the child is in the mood and when you have time.

Focus groups discussion revealed that parents differ in sensitivity to verbal and non-verbal communication. Some mothers became aware that they dominantly communicate with their children non-verbally because they understand their child's needs and intentions without words. They reported becoming aware that they insufficiently stimulate their children verbally and the questionnaire made them think about it.

It was also interesting to me how we actually divided up the interaction roles within our little community... Every motor skill and these communication gestures, when he shows something or asks for something, I understand them perfectly, because I recognize them better, more clearly than father. But the words are more difficult for me. It seems to me that father is better with words.

I play with them [twins] in silence, I take the cube ... I keep silent, I give the cube, we play in silence, we caress, communicate, and look into each other's eyes, but we do not speak.... And I think they would know more words if their mom was more talkative.

II Open-Ended Validation Questions

The adapted versions CDI-I and CDI-II were used for the field study and included three additional questions for parents, as outlined in the *Methods* and *Materials* section. Out of the 155 parents who fulfilled the questionnaires, 74 of them answered at least one of the three additional open-ended questions, 38 parents from the CDI-I, and 36 from the CDI-II.

Parents' responses showed that most of the weaknesses in the first version of the questionnaire were eliminated in the second revised version (Anđelković, 2017). Nevertheless, some important challenges remained: assessing word comprehension and evaluating the production of certain words and grammatical structures.

The answers to our open-ended questions indicated that parents felt most uncertain when evaluating whether their child understood the meaning from the context (situational), gestures, intonation or utterance. Difficult parts for parents to fill in were both vocabulary and grammar, but the grammar was more often cited: verbs and pronouns in the CDI-I, and prepositions, auxiliary verbs, verbs, and complexity in the CDI-II.

When it comes to more general remarks about the questionnaire, some parents thought that the specificities of language input a child receives may affect the evaluation of his/her achievements (e.g. vocabulary items specific for a particular

family, profession, or small community). Parents also emphasized that the speed with which some words and language forms were acquired made it difficult for them to follow along and that they were unsure of their answers. They said that, although extensive and demanding, the questionnaire was useful for them to see what the child already knew and what they could expect soon in his/her language development.

Thus, the findings obtained from the open-ended questions confirmed some of the themes raised in the focus group discussions and supported the methodological integrity of that study.

■ DISCUSSION

Given the amount of time parents spend with their children and the quality of attention and relationships they build with them, it is unusual that parents are not more involved by experts in the monitoring and assessment of their children's development. One of the reasons for this is the widely held and empirically supported assumption that parents are not always reliable observers and tend to overestimate or underestimate their children's language abilities (Bennetts *et al.*, 2016; Dale, 1996; Dale *et al.*, 1989; Feldman *et al.*, 2003; Law & Roy, 2008; Reese & Read, 2000; Roberts *et al.*, 1999). Synthesising parents' experiences with the CDI questionnaires collected in the focus groups and the open-ended validation questions from the subsequent normative study allowed us to explore their perceptions of the CDIs, reflect on the complexity of their reporting and the strategies they developed in the process, the insights and conclusions they came to, the knowledge they gained about communication, as well as their attitudes, values, fears and potentials. All of these findings provided a more detailed picture of parents as knowledgeable and reliable informants about their child's language and communication development than is usually considered. In addition, the weaknesses of parent reporting were highlighted.

Main Challenges in Parent Reporting

On the other hand, parents faced various challenges in reporting their child's communication. Three of them occupy a prominent place in terms of their importance and prevalence.

The most demanding task was to assess the child's production and comprehension and to reflect on the perceived dissociation between these two language components in early language when there is no necessary one-to-one mapping between linguistic form and meaning. The child may produce a word and use it systematically and appropriately which is the case when the word is fully acquired. Or, he/she may not produce a word but can understand it in interaction. Parents have difficulty

determining whether the child really understands the word or is responding to the overall context in which it is used (Jahn-Samilo *et al.*, 2000; Tomasello & Mervis, 1994). Finally, the child can produce a word, but the parents do not believe that the child knows its meaning. Parents complained that the last option was missing from the questionnaire, so they had no way of indicating when children used a linguistic form while there was no evidence of whether they knew its meaning. Although such a suggestion is unacceptable on methodological grounds, it illustrates the parent's ability to recognize the child's tendency to use a word that is frequent and functional at a given time, even if it is not yet fully developed semantically (Tomasello, 2003; 2009).

The variability and intermittency of children's utterances also pose a great difficulty for parents, since the completion of this questionnaire is based on a forced binary decision. Focus group discussions revealed that parents do not perceive their children's production in a binary way, but that a child's deviations from the norm may be smaller or larger within a short period of time. In such cases, they usually base their decision on the consistency of meaning and usage, regardless of phonological features.

Finally, focusing more on the functional rather than the structural aspects of language makes it difficult for parents to reconstruct the morpho-syntactic properties of the child's utterances. Combined with limited linguistic knowledge it explains the lower validity and reliability of reporting observed in previous studies (Bennetts *et al.*, 2016; Feldman *et al.*, 2003; Law & Roy, 2008; Roberts *et al.*, 1999).

The results obtained from the responses to the open-ended validation questions from a larger number of respondents confirm these difficulties discussed in the focus groups. Challenges were cited in making decisions about comprehension and in distinguishing comprehension based on linguistic cues from comprehension based on nonverbal and contextual cues. Low intelligibility of children's utterances, the use of non-standard forms, and numerous grammatical forms were also difficult to report.

Parents as Reliable Informants

In the task of reproducing the child's longest utterances, parents tended to rely on meaning, emphasising a particular word or non-standard form that caught their attention, while reconstructing other parts as morpho-syntactically fully developed sentences that the child objectively did not or even could not produce. It is a complex task for parents, not only because their knowledge of the details of language structure is generally limited (Dale, 1991; Stiles, 1994), but also because *their attention is primarily focused on meaning, speech acts, and communicative intent rather than on morphological and syntactic features of the child's utterance.*

The focus group discussions showed that adapting the original CDIs to languages with completely different morpho-syntactic structures can result in items that are difficult to recognize and understand without context. Whereas in analytic languages the alphabetically ordered items in a structured format greatly reduce the load of search and finding particular words and structures (Fenson *et al.*, 1994), in synthetic languages some of the blended morphemes and grammatical forms are difficult to recognize without context. Apart from the fact that parents with lower educational levels are likely to have difficulty answering questionnaires, *we believe that limited linguistic knowledge and the difficulty of objectively reconstructing the morpho-syntactic features of children's utterances are the only real methodological obstacles to valid and reliable parental reports on children's language development that cannot also be attributed to experts.* Other two major challenges, dissociation between comprehension and production, and variability and intermittency of child language products, are also unavoidable in the experts' assessment. In addition, we assume that these parent-specific difficulties are more likely to be present in synthetic, morphologically complex languages if items are listed alphabetically (instead of functional and paradigmatic principles of organization). The question of whether and how frequently these challenges occur in other languages could be the subject of further research.

One might ask is if parents are limited in their linguistic knowledge and ability to reconstruct morpho-syntactic features of children's language, what else could they validly report about when it comes to language development? We think there are many developmentally relevant things parents know well: what children talk about, how they communicate, whether they can express everything they want, what words they use, what kind of sentences they produce, how long the sentences are, whether they understand the people around them, how they use nonverbal means of communication, what modality of communication they use dominantly, whether they understand utterances that are not supported by nonverbal and situational cues, and so on.

In other words, parents turn out to be more competent and reliable informants when we ask them about what they know about the child's contextual, productive, variable, and multimodal communication. Although the CDI questionnaires do not answer all of these questions, they are based on this philosophy because they include a vocabulary test organised according to the semantic principle, sections on early signs of comprehension, early comprehension of phrases and sentences, games and routines, gestures, highly frequent functional words and forms, open-ended questions at the end of the questionnaires, and the like. The competence required to answer such questions is acquired in the daily care of a child and cannot be expected of practitioners, researchers, and experts, no matter how highly educated and well-trained they are. Difficulty in deciding on word comprehension in early-age children is not parent-specific, but rather a universal difficulty in recognising the state of mind of a young child. Or, as one parent would briefly put it:

The questionnaire is clear, the problem is that at this age we do not understand everything the child wants to tell us.

Moreover, *parents demonstrated an elementary knowledge of basic mechanisms of language acquisition* and used it to explain what they observed in their children. It is important to emphasise that such insights were expressed not only by highly educated parents, but also by parents with secondary education, suggesting that these were not necessarily knowledge acquired through formal education but inferences and insights based on direct interaction with a child and parents' high motivation to understand developmental phenomena.

Parents' Perception of the CDIs

Parents found the questionnaire demanding in terms of time and intellect, but considered it important and worth completing because of its benefits for their children. They see it as a guide to the most important aspects of communicative development in a concise form. Informants reported that they felt encouraged to learn and use the questionnaire as a tool for closer observation and more accurate recording of relevant indicators of developmental progress. The questionnaire enabled parents to rethink and critically reflect on their own approach of interacting with their children. They became inspired to consciously enrich communication, to stimulate and provoke verbal interaction more, especially when they realised that it was overshadowed by nonverbal communication.

In this sense, the CDI could be considered not only as an anamnestic and assessment tool for developmental achievements, but also as a parent education tool and an opportunity to actively involve parents in formative assessment and monitoring.

Assessment of Experts vs. Parent Reporting Assessment

Several decades ago, it was emphasised that assessors need to be aware of the essential elements of the assessment process, its goals and implications, and the decisions that can be made based on them, especially when working with children at an early age and children with developmental disabilities (Wasch & Sheenan, 1988; Huber & Wallander, 1988). With this in mind, the choice of methods for monitoring the development of child communication has significant implications for the kinds of data we seek and obtain, and parent report inventories certainly have their place in the assessment process.

Our analysis has shown that parents face some of the same difficulties as experts in assessing children's comprehension and production, but the judgments of experts are rarely questioned. Some of these difficulties are in principle insurmountable because they are universally present and are related to the nature of the communication phenomenon itself rather than to the assessor's knowledge, experience, or method of assessment.

Both parties, parents and experts, have their strengths and weaknesses as assessors. The experts' advantages are their knowledge of the language structure and a more objective attitude toward the child's performance. They also have a more reliable frame of reference and know what to expect at what age. The advantages of parent assessment, on the other hand, are inherent motivation and care, a much larger and more representative sample of children's language and communication, and the ecological validity of the available data.

Our study has empirically confirmed that parents have metalinguistic and metacognitive skills and insights regarding interaction that make them conscientious, careful, and competent assessors: awareness of different communication modalities, awareness of the developmental intermittency of language structure, reasonable doubts about their own assessments, awareness that they might underestimate or overestimate the child's performance, then sensitivity to different communication styles, information about developmental factors, and understanding of some developmental mechanisms, etc. This kind of self-reflection can only be attributed to someone who has the potential to be an objective observer and reliable informant. *Nevertheless, our study reveals some important challenges that parents necessarily face in the process of providing data about their child's communicative development – a finding that should be taken into account when preparing instructions for parents and when using parental reports in the assessment of child language development.*

Limitations of the Study

The sample of participants was small and included highly motivated parents interested in learning and reflecting on the questionnaires and children's language. Nevertheless, it is reasonable to expect a similar sentiment among parents in the general population, as parents are intrinsically interested in learning about child development. On the other hand, the focus group samples did not include parents with elementary school education, only those with secondary and high education. It can be assumed that parents with a lower level of education would have more difficulties completing the questionnaire and understanding all the linguistic subtleties, which could significantly reduce their motivation to participate in the study.

■ CONCLUSION: SUPPORTING PARENTAL ASSESSMENT

We believe that our research can result in several recommendations that can support parents in assessing their children's communication and language abilities.

When we think of adapting the original MB-CDIs from English into other languages, we suggest some of the adjustments applied in the adaptation to Slovak

















and Serbian languages (Kapalková *et al.*, 2010; Anđelković *et al.*, 2017): adapting the instructions to achieve a better understanding of items and better communication with parents; dialogue form of questions, which strengthens parents' meta-linguistic potential and makes the task easier for less educated parents; the arrangement of items according to grammatical paradigm illustrated with concrete and frequent examples typical for parent-child interaction; presentation of homomorphs and other opaque items, together with paradigmatic and functionally close items, to achieve better transparency of meaning and function of words. In addition, it is important to provide clearer criteria for parents to make a decision about the comprehension of words and phrases and the production of words used in a non-standard, variable, and intermittent manner. We also find it important that the questionnaire instructions relieve parents of the responsibility that their assessment is the sole and decisive source of information for further decisions about the child.

It proved advisable to allow parents to take the questionnaire home with accompanying instructions and an open avenue of contact, to observe their child's language and communication, note the observations, and return the questionnaire in seven days. Indeed, one can imagine that the motivation of the parents and the process of filling out the questionnaire in this way is very different from what happens in a doctor's office or waiting room in about 30 minutes, when the parents' attention and expectations are focused more on the conversation with the paediatrician or speech and language expert than on the questionnaire and its items. This study provided evidence that a questionnaire completed at home within one week not only provides better documenting and reflecting on children's development, but also better self-reflection and motivation of parents to participate in monitoring developmental changes, and better support for the child's future development.

When systematic screening and monitoring of child development are considered, collaboration between parents, health care, and education is recommended, especially for minorities, children with developmental delays, learning disabilities, and other disadvantaged populations. In such cases, decontextualized testing is considered inappropriate and scientifically invalid (PCESE, 2002), while consistency between parental reports and professional assessment should neither be required nor expected (Bagnato, 2007). Observations and individual records in an ecologically valid context, collaboration between parents and professionals, respectful relationships between professionals and parents, and team decision making are recommended for appropriate developmental assessment.

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■ REFERENCES

-  Anđelković, D., Ševa, N., Savić, M., & Tutnjević, S. (2017). Empirically based solutions for the Serbian adaptation of a parent report inventory used in the assessment of child language development. *Zbornik instituta za pedagoška istraživanja*, *49*(2), 147–169. http://www.ipisr.org.rs/page/Zbornik_Instituta_za_pedagoska_istrazivanja_49_2_2017
-  Bagnato, S. J. (2007). *Authentic assessment for early childhood intervention: Best practices*. NY: Guilford Press, Inc.
-  Bennetts, S. K., Mensah, F. K., Westrupp, E. M., Hackworth, N. J., & Reilly, S. (2016). The agreement between parent-reported and directly measured child language and parenting behaviors. *Frontiers Psychology*, *7*, 1710. DOI: 10.3389/fpsyg.2016.01710
-  Birbili, M., & Tzioga, K. (2014). Involving parents in children's assessment: Lessons from the Greek context. *Early Years*, *34*(2), 161–174. <https://doi.org/10.1080/09575146.2014.894498>
-  Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. DOI: 10.1191/1478088706qp063oa
-  Bronfenbrenner, U. (1988). Interacting systems in human development. Research paradigms: Present and future. In B. Niall, A. Caspi, G. Downey, & M. Moorehouse (eds.), *Persons in context: Developmental processes* (pp. 25–49). New York: Cambridge University Press.
-  Camaioni, L., Castelli, M. C., Longobardi, E., & Volterra, V. (1991). A parent report instrument for early language assessment. *First Language*, *11*(33, Pt 3), 345–359. <https://doi.org/10.1177/014272379101103303>
-  CDI Advisory Board. (2015). Adaptations. <https://mb-cdi.stanford.edu/adaptations.html> [Accessed March 6, 2023].
-  Dale, P. S., Bates, E., Reznick, J. S., & Morisset, C. (1989). The validity of a parent report instrument of child language at twenty months. *Journal of Child Language*, *16*(2), 239–249. DOI: <https://doi.org/10.1017/S0305000900010394>
-  Dale, P. S. (1991). The validity of a parent report measure of vocabulary and syntax at 24 months. *Journal of Speech, Language, and Hearing Research*, *34*(3), 565–571. DOI: 10.1044/jshr.3403.565
-  Dale, P. S. (1996). Parent report assessment of language and communication. In K. N. Cole, P. S. Dale & D. J. Thal (Eds.), *Assessment of communication and language*, Vol. 6, 161–182. Baltimore, Maryland: Paul H. Brookes Publishing Co.
-  *Early Intervention Framework for Children and Young People's Mental Health and Wellbeing*. NHS Education of Scotland. <https://earlyinterventionframework.nhs.scot/> [Accessed March 6, 2023]
-  Ebert, K. D. (2017). Convergence between parent report and direct assessment of language and attention in culturally and linguistically diverse children. *PLoS ONE*, *12*(7), e0180598. <https://doi.org/10.1371/journal.pone.0180598>
-  Eriksson, M., Westerlund, M., & Berglund, E. (2002). A screening version of the Swedish communicative development inventories designed for use with 18-month-old children. *Journal of Speech, Language, and Hearing Research*, *45*(5), 948–960. DOI: 10.1044/1092-4388(2002/077)
-  Feldman, H. M., Dollaghan, C. A., Campbell, T. F., Kurs-Lasky, M., Janosky, J. E., & Paradise, J. L. (2003). Measurement properties of the MacArthur communicative development inventories at ages one and two years. *Child Development*, *71*(2), 310–322. DOI: 10.1111/1467-8624.00146
-  Feldman, H. M., Dale, P. S., Campbell, T. F., Colborn, D. K., Kurs-Lasky, M., Rockette, H. E., & Paradise, J. L. (2005). Concurrent and predictive validity of parent reports of child language at ages 2 and 3 years. *Child Development*, *76*(4), 856–868. DOI: 10.1111/j.1467-8624.2005.00882.x

- 📖 Fenson, L., Dale, P. S., Reznick, J. S., Bates, E., Thal, D. J., & Pethick, S. J. (1994). Variability in early communicative development. *Monographs of the Society for Research in Child Development*, 59(5), 1–185.
- 📖 Fenson, L., Dale, P., Reznick, J. S., Thal, D., Bates, E., Hartung, J., Pethick, S. & Reilly, J. S. (1993). *The MacArthur communicative development inventories: User's guide and technical manual*. San Diego, CA: Singular Publishing Group.
- 📖 Fenson, L., Marchman, V. A., Thal, D. J., Dale, P. S., Reznick, J. S., & Bates, E. (2007). *MacArthur-Bates communicative development inventories: User's guide and technical manual*. Baltimore, MD: Paul H. Brookes Publishing Co.
- 📖 Frank, M. C., Braginsky, M., Yurovsky, D., & Marchman, V. A. (2021). *Variability and consistency in early language learning: The Wordbank project*. Cambridge, MA: MIT Press.
- 📖 Hayden, E. P., Durbin, C. E., Klein, D. N., & Olino, T. M. (2010). Maternal personality influences the relationship between maternal reports and laboratory measures of child temperament. *Journal of Personality Assessment*, 92(6), 586–593. DOI: 10.1080/00223891.2010.513308
- 📖 Head Start Early Childhood Learning & Knowledge Center (ECLKC). *Child screening and assessment*. <https://eclkc.ohs.acf.hhs.gov/child-screening-assessment>
- 📖 Head Start Early Childhood Learning & Knowledge Center (ECLKC). *Look at me! Using focused child observation with infants and toddlers*. <https://eclkc.ohs.acf.hhs.gov/video/look-me-using-focused-child-observation-infants-toddlers> [Accessed March 14, 2023]
- 📖 Hubert, N. C., & Walander, J. L. (1988). Instrument selection. In T. D. Wasch & Sheenan, R. (Eds.), *Assessment of young developmentally disabled children* (pp. 43–60). New York, NY: Springer.
- 📖 Jahn-Samilo, J., Goodman, J. C., Bates, E., & Sweet, M. (2000). *Vocabulary learning in children from 8 to 30 months of age: A comparison of parental reports and laboratory measures* (Technical Report No. CND-0006). San Diego: University of California.
- 📖 Kapalková, S., Kesselová, J., Slaněšová, D., & Zajacová, S. (2011). Cross-cultural and crosslinguistic relations of the test of communicative behaviour (TEKOS I and TEKOS II) for Slovak-speaking children. *ELDEL. International conference on reading, spelling and writing development. Enhancing literacy development in European languages* (pp. 31), June 4 – 5, Prague, Czech Republic.
- 📖 Law, J., & Roy, P. (2008). Parental report of infant language skills: a review of the development and application of the communication development inventories. *Child and Adolescent Mental Health*, 13(4), 198–206. DOI: 10.1111/j.1475-3588.2008.00503.x
- 📖 Lochmiller, C. R. (2021). Conducting thematic analysis with qualitative data. *Qualitative Report*, 26(6), 2029–2044. <https://DOI.org/10.46743/2160-3715/2021.5008>
- 📖 Luyster, R. J., Kadlec, M. B., Carter, A., & Tager-Flusberg, H. (2008). Language assessment and development in toddlers with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 38(8), 1426–1438. <https://doi.org/10.1007/s10803-007-0510-1>
- 📖 Miller, L. E., Perkins, K. A., Dai, Y. G., & Fein, D. A. (2017). Comparison of parent report and direct assessment of child skills in toddlers. *Research in Autism Spectrum Disorders*, 41–42, 57–65. DOI: 10.1016/j.rasd.2017.08.002
- 📖 *Nacionalni izveštaj o inkluzivnom obrazovanju u Republici Srbiji za period od 2019 do 2021 godine* [National Report on Inclusive Education in Republic of Serbia for the period from 2019 to 2021], 2022. Ministarstvo prosvete Republike Srbije.
- 📖 NAEYS. National Association for the Education of Young Children. <https://www.naeyc.org/>
- 📖 Nordahl-Hansen, A., Kaale, A., & Ulvund, S. E. (2014). Language assessment in children with autism spectrum disorder: Concurrent validity between report-based assessments and direct tests. *Research in Autism Spectrum Disorders*, 8(9), 1100–1106. <https://doi.org/10.1016/j.rasd.2014.05.017>

- 📖 O'Toole, C., & Fletcher, P. (2010). Validity of a parent report instrument for Irish-speaking toddlers. *First Language*, *30*(2), 199–217. <https://doi.org/10.1177/0142723709359237>
- 📖 PCESE President's Commission on Excellence in Special Education (2002). *A new era: Revitalizing special education for children and their families*. Available from <https://doi.org/10.1177/10883576020170040101>
- 📖 Pless, C. E., & Pless, I. B. (1995). How well they remember. The accuracy of parent reports. *Archives of Pediatrics and Adolescent Medicine*, *49*(5), 553–558. doi:10.1001/archpedi.1995.02170180083016
- 📖 Reese, E., & Read, S. (2000). Predictive validity of the New Zealand MacArthur communicative development inventory: Words and sentences. *Journal of Child Language*, *27*, 255–266. DOI: <https://doi.org/10.1017/S0305000900004098>
- 📖 Rescorla, L. (1989). The language development survey: A screening tool for delayed language in toddlers. *The Journal of Speech and Hearing Disorders*, *54*(4), 587–599. <https://doi.org/10.1044/jshd.5404.587>
- 📖 Roberts, J. E., Burchinal, M., & Durham, M. (1999). Parents' report of vocabulary and grammatical development of African American preschoolers: child and environmental associations. *Child Development*, *70*(1), 92–106. DOI: 10.1111/1467-8624.00008
- 📖 Robinson, B., & Mervis, C. (1999). Comparing productive vocabulary measures from the CDI and a systematic diary study. *Journal of Child Language*, *26*(1), 177–185. DOI: 10.1017/s0305000998003663
- 📖 Sachse, S., & Von Suchodoletz, W. (2008). Early identification of language delay by direct language assessment or parent report? *Journal of Developmental & Behavioral Pediatrics*, *29*(1), 34–41. DOI: 10.1097/DBP.0b013e318146902a
- 📖 Stiles, J. (1994). On the nature of informant judgments in inventory measures: ..and so what is it you want to know? *Monographs of the Society for Research in Child Development*, *59*(5), 180–185. <https://doi.org/10.1111/j.1540-5834.1994.tb00187.x>
- 📖 Thal, D. J., O' Hanlon, L., Clemmons, M., & Fralin, L. (1999). Validity of a parent report measure of vocabulary and syntax for preschool children with language impairment. *Journal of Speech Language and Hearing Research*, *42*, 482–496. DOI: 10.1044/jslhr.4202.482
- 📖 Thal, D., Jackson-Maldonado, D., & Acosta, D. (2000). Validity of a parent-report measure of vocabulary and grammar for Spanish-speaking toddlers. *Journal of Speech Language and Hearing Research*, *43*(5), 1087–1100. DOI: 10.1044/jslhr.4305.1087
- 📖 Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, *27*(2), 237–246. <https://doi.org/10.1177/1098214005283748>
- 📖 Tomasello, M., and Mervis, C. B. (1994). The instrument is great, but measuring comprehension is still a problem. *Monographs of the Society for Research in Child Development*, *59*(5), 174–179. <https://doi.org/10.1111/j.1540-5834.1994.tb00186.x>
- 📖 Tomasello, M. (2003). *Constructing a language: A usage-based theory of language acquisition*. Cambridge, MA: Harvard University Press.
- 📖 Tomasello, M. (2009). The usage-based theory of language acquisition. In L. Bavin (Ed.), *The Cambridge Handbook of Child Language* (pp. 69–89). Cambridge University Press.
- 📖 Wasch, T. D., & Sheenan, R. (1988). *Assessment of young developmentally disabled children*. Springer Science Business Media New York.
- 📖 Zapolski, T. C. B., & Smith, G. T. (2013). Comparison of parent versus child-report of child impulsivity traits and prediction of outcome variables. *Journal of Psychopathology and Behavioral Assessment*, *35*(3), 301–313. DOI:10.1007/s10862-013-9349-2