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THE CONTRIBUTION OF PARENTS IN THE EVALUATION OF CHILDREN'S EARLY COMMUNICATION COMPETENCE



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Abstract

Objective: Parent reports on communication competences are fundamental to observe and evaluate children's development, for helping understanding difficulties and setting prevention strategies. Nevertheless, researchers highlighted the risk of using parents, i.e. naïf observers, as informers. To test the adequacy of parent's observation we developed a new user-friendly parent report tool, the QCSP (Questionario sulla Comunicazione Sociale Precoce – Early Social Communication Questionnaire), conceived as parallel form of the SCSP (Scala della Comunicazione Sociale Precoce), the Italian version of the Early Social Communication Scale (ESCS). The questionnaire evaluates three socio-communicative functions (social interaction, joint attention, behavior regulation) and three roles the child can play during interactions (initiative, response, maintaining), from two to 30 months of age.

Method: We compared the QCSP filled up by parents with the SCSP administered by trained observers, on a sample of 116 middle-class Caucasian toddlers (58 girls; average age = 17 months).

Results: The correlations between the two evaluations were substantive even controlling the age, then our results demonstrated that the parents may be reliable observers when use an adequate tool, as QCSP.

Practical implications: We will discuss several applications of the QCSP as a useful tool to support intervention in the field of early communicative development.

Keywords: early infancy, social communication, observation, parent report, QCSP.

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Introduction

The evaluation of early social and communicative development is an important research topic in infancy and an important domain for assessing and preventing risk in early infancy as well. In fact, the way in which nonverbal communication (gaze and point following, joint attention, use of conventional gestures), linguistic comprehension and symbolic function develop can be a good indicator of atypical development in later infancy and childhood (for a review, see Wetherby, Allen, Cleary, Kublin, & Goldstein, 2002).

Observation has been the principal tool for studying early communication since the first diary studies (Darwin, 1877; Preyer, 1882; Taine, 1877; Tiedeman, 1787). Nevertheless, direct observation is very time- and resource-consuming, and it is often impossible to use direct reliable observation for screening purposes. On the other hand, parents have a privileged perspective on their child's communication: they can observe the child over time and in a familiar environment in everyday conditions (Matheny, Wilson, & Nuss, 1984), and observe several and uncommon behaviors. Moreover, studies confirmed that the child communication changes according to some characteristics of the partners: the child communication improves if the partner is a familiar one or an efficient communicator (Tourrette, Marcelli, Boinard, Kasolter-Péré, Barbe, & Crête, 2000). Then, parents are the best candidates to elicit and observe children's communication.

Nevertheless, parents are not trained observers: their judgment may be biased by social desirability and they can overestimate their children's competence, or, conversely, they may be incapable of perceiving their children's real competence (Fenson, Dale, Reznick, Bates, Thal, & Pethick, 1994). Moreover, social representation of children may play a role in distorting adults' observations (D'Alessio, 1990; Ponzo, 1990; Toselli, 1999).

Many authors have proposed the completion of diaries or questionnaires to help caregivers and parents producing reliable observations. Since the 1980s, research has focused on different tools for evaluating early communicative and linguistic development, correlating parent reports with direct observations of the child or with testing procedures performed by trained observers. Results are inconsistent, because often correlations between trained observers and parent reports were not entirely adequate: the correlations ranged from .23 to .96, they were lower when gestural communication was considered, and were a little bit higher when parents evaluated language (for a review, see Molina and Bulgarelli, *submitted*). Moreover, in most cases these instruments concerned the second year of life and linguistic development, while tools designed for infants and non-verbal communication were scarce (Camaioni, Caselli, Longobardi, & Volterra, 1991; Wetherby et al., 2002). For instance, the most widespread tool, the *The MacArthur Communicative Developmental Inventories* (CDI: Fenson, Dale, Reznick, Thal, Bates, Hartung, Pethick, Reilly, 1993), principally takes into account the child's lexicon both in production and in comprehension, and it is mostly designed to detect atypical linguistic development.

Research in the field of early communication tools also highlighted some criteria a questionnaire should present to better guarantee parent report reliability (Dale, Bates, Reznick, & Morisset, 1989; Fenson et al., 1994): the questionnaire has to focus on behaviors currently exhibited by children; it should not ask for general judgments but question the presence or absence of a specific behavior; it should ask for reporting or choosing among concrete behaviors.

In this direction, we will present a new questionnaire for parents and caregivers, the QCSP (Questionario della Comunicazione Sociale Precoce; Molina, 2008): it evaluates social and communicative development in



early infancy and presents several interesting features.

The QCSP: description of the questionnaire

The QCSP is a parent-report questionnaire designed for children from two up to 30 months and it evaluates the communicative and social development *in context*, through interaction with an adult. Its items are presented in the frame of daily game situations or interactions. Parents are asked to check one or more items for each situation, thinking about the behaviors the child showed the last time s/he was involved in a situation like the one the questionnaire describes. Thus, according to the relevant literature (Dale et al., 1989; Fenson et al., 1994), the questionnaire follows the criteria necessary to guarantee the reliability of a parent-report tool: it focuses on behaviors currently exhibited by children; it questions the parent about the presence of behaviors, not about general judgments; it requests parents to report (or to choose among) concrete behaviors.

The QCSP is based on the SCSP Scale (Scala della Comunicazione Sociale Precoce; Molina, Ongari, & Schadee, 1998; Seibert & Hogan, 1982; Mundy, Delgado, Block, Venezia, Hogan, & Seibert, 2003; Guidetti & Tourrette, 1993, 2008), and shares the same theoretical and structural settings. The QCSP is based on two assumptions: the functional continuity between pre-linguistic and linguistic development (Bruner, 1983; Bates, Benigni, Bretherton, Camaioni, & Volterra, 1979; Bates, O'Connell, & Shore, 1987), and the hierarchical conception of development in which, according to the neo-Piagetian perspective, competences become more and more complex, integrating the lower ones (Fischer, 1980; Fischer & Silvern, 1985).

The QCSP is organized on three dimensions: socio-communicative functions, child's interactive roles and cognitive level reflecting the complexity of the communicative behaviours.

The QCSP socio-communicative functions are three, corresponding to three scales: Social Interaction, Joint Attention and Behavior Regulation. These functions refer to what the child is trying to accomplish by his or her behavior.

The Social Interaction (SI) Scale deals with dyadic interactive behaviors in which the focus of attention is the partner (Trevarthen's primary inter-subjectivity: Trevarthen, 1977, 1979, 1984): getting or keeping attention, proximity of or contact with someone else, typically for playful or affiliative purposes. Greetings, structured and unstructured social games and routines, including interactive gestural, vocal and verbal play, imitation games, and object exchange games, are all related to this function.

The Joint Attention (JA) Scale concerns all the interactions whose goal is sharing a common attention focus in the external world (Trevarthen's secondary inter-subjectivity: Camaioni, 1993; Mundy, Sigman, & Kasari, 1993). It takes place when one of the partners tries to direct the other's attention towards an object, a person or an event. Despite its strongly social quality, joint attention differs from social interaction in that there is a primary focus, entity or event jointly attended to rather than an interaction itself. Showing things to the other person, looking at pictures and books together, and using words to ask and talk about the characteristics and functions of objects are included within joint attention.

Finally, in the Behavior Regulation (BR) Scale, the goal of interaction is either to enlist the other's aid in obtaining a desired object or situation, or to inhibit, restrict or direct proper behavior to comply with one's implicit or explicit demands.

A very specific characteristic of the QCSP is that it takes into account the role the child can play during the interactions: initiating, responding or maintaining the interaction



(the BR Scale does not evaluate maintenance of the interaction). As regards individual differences, this is an interesting aspect for evaluation: for instance, a child poor in initiative may systematically respond to interactional cues; or a child may be low in behavior regulation response, but high in joint attention response. Moreover, the questionnaire can differentiate a child showing the same competence levels in all roles from a child who performs the different roles at different cognitive levels.

In fact, the QCSP is organized in five developmental levels, corresponding to Piaget's sensory-motor intelligence stages, designed according to Fischer's theory (1980). At each level, an underlying cognitive structure accounts for the child's competences in different developmental areas, particularly in the social and communicative field (Fischer, 1980; Hogan, 1983; Seibert, Hogan, & Mundy, 1986).

Level 1 (*simple* or *single sets*: according to Fischer³ the modal age of first emergence is two to four months) refers to the child's isolated abilities, derived from reflex but modified by experience, as in Piaget's description: it is characterized by the emergence of simple, undifferentiated actions, and by the emergence of intentional activities during interactions. In social-communicative development, we observe simple, uncoordinated expressive/communicative features: i.e. smiling, crying, looking, etc. For instance, Item 5 (RIS subscale): [*If you sing a song, your child*] looks at you; then, if you stop, uses simple vocal or gestural response, or looks at you.

Level 2 (*complex* or *mapping*; from seven to eight months, according to Fischer) is characterized by the emergence of simple coordination like looking/reaching coordination, implying means/goal coordination and, consequently, intentional behavior. As regards

socio-communicative development, the infant reaches secondary inter-subjectivity, differentiates strangers and familiar people, and communicates by expressive gestures. The gesture is still embedded in the context, not autonomous, and it is not decomposable. An example of a level 2 item is: Item 21 (subscale IAC): *looks at and points to objects and pictures without looking at you.*

Level 3 (*conventional* or *system*; from 11 to 13 months, according to Fischer) is characterized by a system, a relation between two sets of coordinated abilities, each of which is divided into two subsets: the child can control relations between two subsets for each set. In communicative and social development, level 3 allows the toddler to coordinate conventional communication system elements with corresponding real word elements (meanings). Our questionnaire, like the French Scale (ECSP), divides the conventional level into two different steps, level 3 *conventional gestural* and level 4 *conventional verbal*: the child reaches level 4 when s/he produces single isolated words accompanying gestures or instead of gestures; in any case, these words are always pronounced in the presence of the object to which they refer. Examples of level 3 and 4 items: Item 71 (subscale MIS, level 3): [*If you tickle your child's tummy, s/he...*] looks at you and nods yes or no with the head twice to continue; item 72 (subscale MIS, level 4): uses single word twice to ask you to continue the game.

Finally, at level 5 (*symbolic* or *system of systems*; from 18 to 24 months, according to Fischer) the child can keep in mind one system while dealing with the other, i.e. coordinate two different systems. This coordination of two systems allows the child to function at a different level (representational), where the system of systems is the elementary element, and then allows the emergence of the symbolic function. At this level, the child is able to anticipate interactions, to comprehend words outside the context or with few contextual references, to combine two or more words (or

³ These ages indicate the period when a level first appears in middle-class western children (Fischer & Silvern, 1985).



gestures). Item 18 (subscale IBR): uses two-word combination to request for help (for instance: ‘Daddy help’, ‘Mummy boo-boo’). Fischer differentiates an *optimal* level, corresponding to the higher competence the child shows, and a *functional* level, representing the child’s performance in the concrete tasks, even regarding areas where the toddler was not particularly stimulated. This differentiation implies a double scoring system in the questionnaire: the *optimal level*, i.e. the higher communicative competence level the child shows during the assessment, and the *mean or median level*, i.e. the average or the median of the optimal levels the child reaches in the eight subscales. The mean level allows us to differentiate the children better, because it reflects how a specific level is generalized in the different roles (initiative, response and maintaining) the child can play in a specific communicative function (social interaction, joint attention, behavior regulation), whereas the optimal level gives a rougher evaluation, because it reflects the higher ability the child has acquired. For example, two children with the same optimal level of social interaction can perform in very different ways: one showing this level in the three initiatives, response and maintaining scales, the other just in one.

Thus, the QCSP provides a three-dimensional evaluation of the child, in respect of the communicative functions (SI, JA, BR), the interactional roles and the cognitive levels (see Figure 1). Crossing the Scales and the interactional roles, we obtain eight Subscales, or series of items: Responding to Social Interaction (RSI), Initiating Social Interaction (ISI), Maintaining Social Interaction (MSI), Responding to Joint Attention (RJA), Initiating Joint Attention (IJA), Maintaining Joint Attention (MJA), Responding to Behavior Regulation (RBR), Initiating Behavior Regulation (IBR).

The QCSP consists of 98 items, including two control items (one about imitative behaviors and one about the temperamental aspect of perseverance), that are not considered in the scoring. At least one item is attributed to each subscale at each level, so that different *optimal* levels are computable: the total level, the three scale levels (SI, JA and BR) and the eight subscale levels (Social Interaction: ISI, RSI, MSI; Joint Attention: IJA, RJA, MJA and Behavior Regulation: IBR, RBR). Mean and median levels are computable as well, for the total instrument and for the three scales (SI, JA, BR; for an example of a fictitious profile, see Figure 2).

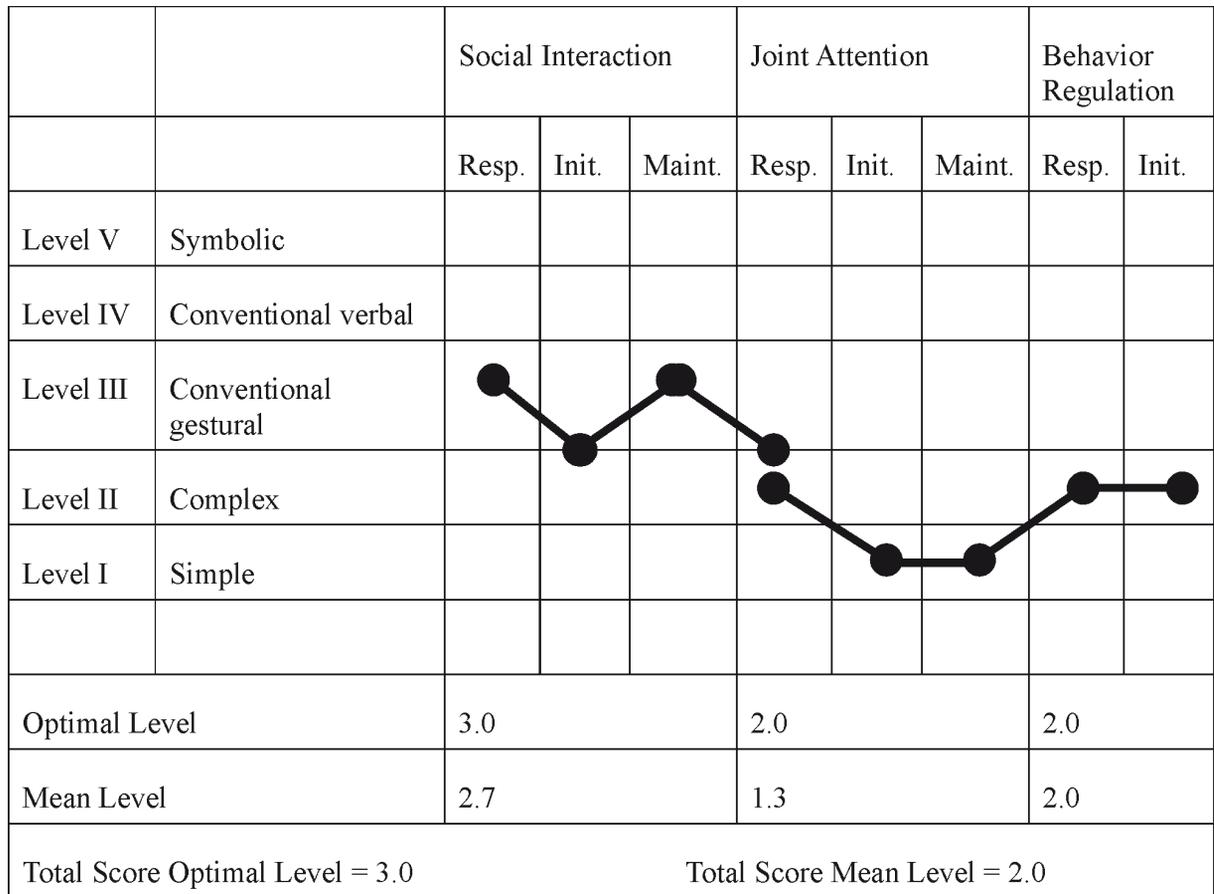
Figure 1. QCSP, male version – Example of an everyday play situation

Subscale, role and level*	Situation: If you roll a ball or other toy to him:
SI Response, level 3:	“Will he roll it back to you with a smile and look at you?”
BR Initiative, level 3:	“If he doesn’t want to play, does he give the object to you to get rid of?”
BR Initiative, level 4:	“... with a word (e.g. ‘No’, etc.)”
BR Initiative, level 5:	“... with a two-word combination (e.g. ‘No more’, etc.)”
BR Initiative, level 1:	“Cries or whines when the object disappears”

* The QCSP evaluates three socio-communicative functions (SI: social interaction, JA: joint attention, BR: behavior regulation), three child’s roles (initiative, response, maintaining) and five cognitive levels (1-simple, 2-complex, 3-conventional gestural, 4-conventional-verbal gesture, 5-symbolic).



Figure 2. Hypothetical QCSP developmental profile



Method

Aim

Our study aims at validating the QCSP in comparison with the observational scale it originates from, the SCSP: we compare the QCSP completed by parents with the SCSP evaluations obtained by professional observers on the same children.

The SCSP (Molina et al., 1998) is the Italian translation of a French observational scale, the ECSP (Echelle de la Communication Sociale Précoce: Guidetti & Tourrette, 1993, 2008), inspired by a non-standardized US scale, the ESCS (Early Social Communication Scale: Seibert & Hogan, 1982; Mundy et al., 2003). The ESCS is a clinical tool, conceived primarily for evaluating atypically developing children: no USA standardization was realized, but many studies considered the factorial structure of the scale (Seibert et al., 1986; Seibert, Sliwin, & Hogan, 1986) and its discriminant validity for typical and atypical development (Mundy, Seibert, & Hogan, 1984;

Seibert, Hogan, & Mundy, 1984). Mundy et al. (2003) proposed a revised version of the scale, mainly for studying joint attention development and autistic children's early development (Mundy, Sigman, & Kasari, 1990). The French version (ECSP, Guidetti, & Tourrette, 2008) was standardized on a sample of 190 typically developing children from two to 30 months, observed in daycare facilities. The scale showed a good relationship with age and a good correlation with a classical baby test (Brunet & Lezine, 1951). The Italian version used in this study (SCSP: Molina et al., 1998) was standardized on a sample of 191 children: the scale showed a large correlation with age and a factorial structure highlighting a unique factor (social competence), strongly correlated with age. The SCSP consists of 125 items, including 96 QCSP items (with the exception of the two control items).

Participants

The sample included 119 Caucasian toddlers; three children were excluded (one girl) be-



cause their parents did not fill in the questionnaire (see Table 1). Thus, the analyses were performed on a sample of 116 children (58 girls). The sample was regularly distributed by months from two to 30 (See Table 2). They

were all typically developing children, without any psycho-physical pathologies. Ninety-six per cent of the children were full-term, but three children were born at 35 weeks of gestation, one at 32 and one at 30: for these

five children, we used the corrected age. Comparing our sample with the Italian population in the two-year period when we collected the data (from 1997 to 1998; ISTAT, 1999), the only children (43%) were over-represented: nevertheless, our sample consisted of toddlers, whereas the Italian referential sample encompasses children up to the age of five. Mothers' ages ranged from 22 to 46 years (means 33 years, SD 5 years) and fathers' age from 24 to 51 years (means 35 years, SD 5 years: see Table 1): parents' ages were comparable to those of Italian toddlers' parents (Sabbadini, 2000). Family SES was predominantly middle-class: the educational level of our sample was higher than that of the Italian population.

Table 1. Summary of participants' demographics

Sample size	116
Child's age in months (M, SD)	16.58 (8.21)
Percentage of females	50%
Percentage of firstborns	57%
Context of assessment	
Home	79%
Child care	20%
Parent's nationality	
Mother	
Italian	100%
European	--
Other	--
Father	
Italian	95%
European	5%
Other	--
Parent's education in years completed (M, SD)	
Mother	13 (3)
Father	12 (4)
Parent's age in years at the assessment (M, range)	
Mother	33 (22-46)
Father	35 (24-51)
Filler of the questionnaires	
Mother	82%
Father	3%
Both parents	14%
Other	1%

Table 2. Average Mean and Optimal Levels per age

Age (N)	Optimal Levels (SD)		Mean Levels (SD)	
	QCSP	SCSP	QCSP	SCSP
2-6 months (17)	2.41 (.62)	2.00 (.00)	1.29 (.47)	1.47 (.34)
7-12 months (24)	3.50 (1.02)	3.08 (.86)	2.37 (.74)	2.23 (.47)
13-18 months (23)	4.74 (.45)	4.54 (.51)	3.63 (.53)	3.39 (.46)
19-24 months (27)	4.93 (.27)	4.93 (.27)	4.26 (.49)	4.24 (.56)
25-30 months (25)	5.00 (.00)	5.00 (.00)	4.79 (.28)	4.65 (.34)
Total (116)	4.24 (1.10)	4.05 (1.21)	3.42 (1.32)	3.34 (1.24)



Procedure

Data were collected between 1998 (June) and 2000 (December) in Piedmont (Turin and suburbs): all the parents filled in the QCSP, while three trained observers administered the SCSP. No payment was offered to the families; to thank them, we gave the parents a copy of the videotapes of the SCSP administration.

Ninety-two children (79%) were contacted through private acquaintances and were observed at their home. Twenty-four children (21%) were observed in two municipal daycare facilities in Turin and its suburbs. No differences were found in respect to the context of administration (home vs. daycare facility), as in previous research (Molina, Ongari, & Schadee, 1997).

Three trained observers⁴ administered the SCSP (the second author was one of them), following the SCSP standard administration procedure, and coded the administrations. We did not find difference among the three observers controlling the age; moreover, the data obtained in our sample was comparable with the scores obtained in the Italian standardization sample of the Scale (Molina et al., 1998).

Data analysis

We performed the Wilcoxon test for dependent measures (Monte Carlo exact test) to test the differences between the QCSP and the SCSP average scores.

We used the Pearson correlation to test the QCSP relationship with age, and the correlation between observation (SCSP) and questionnaire: the Pearson correlation allows partial correlations, thus the possibility of correlating QCSP and SCSP taking age

into account. Nevertheless, the QCSP scores are ordinal ones, so we completed non-parametric correlations (Spearman Rho and Kendall Tau-B) as well, and the results were absolutely identical to the parametric ones.

Results

The age trend of the QCSP Optimal and Mean levels (total instrument and SI, JA and BR scales) grows very regularly with age, as reported in Table 2. The correlations with age are very strong, for the total level ($r = .93$, $p < .001$) and for the three scales as well (SI: $r = .89$, $p < .001$; JA: $r = .89$, $p < .001$; RC: $r = .89$, $p < .001$), and comparable to the results obtained for the SCSP.

Nevertheless, the average levels of the QCSP and the SCSP are significantly different (see Table 3), generally showing a higher scoring in the parent evaluations (QCSP). The differences between the QCSP and the SCSP scores are lower than half a standard deviation. Moreover, parent and observer evaluations always fall on the same level (for instance, the JA mean levels are both *conventional*), pointing that the evaluators give a similar image of the child's communicative competence (in the JA case: use of conventional gestures, no use of words). This is not true only for the SI Optimal levels.

The correlations between the QCSP and the SCSP are substantive, for the Total mean level (see Figure 3) and the Social Interaction, the Joint Attention and the Behavior Regulation scales (see Table 4): the correlation values range between .78 and .91, and all the values are significant (Pearson correlation, $N = 116$, $p < .001$). The Social Interaction scale shows the lower value, whereas the higher correlation values relate to the Total level and the Joint Attention scale. When we control the age effect, the correlations obviously decrease, but the Total and the JA ones are still good and significant, whereas the SI and the BR correlations are no longer significant ($p > .10$).

⁴The training consisted of 45 hours of work supervised by the first author, encompassing the SCSP theoretical bases, group and individual scoring of video-recorded administrations, and some preliminary administration discussed with the trainer.



Table 3. Average Mean and Optimal Levels for questionnaire (QCSP) and observation (SCSP)

		Mean levels		Optimal levels	
		Average	p ^(*)	Average	p ^(*)
Total	QCSP	3.42 (1.32)	.245	4.24 (1.10)	.001
	SCSP	3.34 (1.24)		4.05 (1.21)	
Social Interaction	QCSP	3.56 (1.25)	.000	4.12 (1.12)	.000
	SCSP	3.21 (1.22)		3.72 (1.26)	
Joint Attention	QCSP	3.30 (1.42)	.000	3.74 (1.34)	.027
	SCSP	3.53 (1.37)		3.88 (1.26)	
Behavior Regulation	QCSP	3.40 (1.51)	.000	3.78 (1.43)	.364
	SCSP	3.24 (1.37)		3.71 (1.37)	
Responding	QCSP	3.63 (1.30)	.001	3.72 (1.33)	.057
	SCSP	3.41 (1.32)		3.87 (1.31)	
Initiating	QCSP	3.22 (1.41)	.098	4.20 (1.11)	.000
	SCSP	3.31 (1.21)		3.86 (1.22)	
Maintaining	QCSP	3.41 (1.42)	.098	3.74 (1.36)	.150
	SCSP	3.27 (1.38)		3.64 (1.34)	

(*) Wilcoxon Exact Test, Monte Carlo method

Figure 3. SCSP and QCSP Total Mean Levels

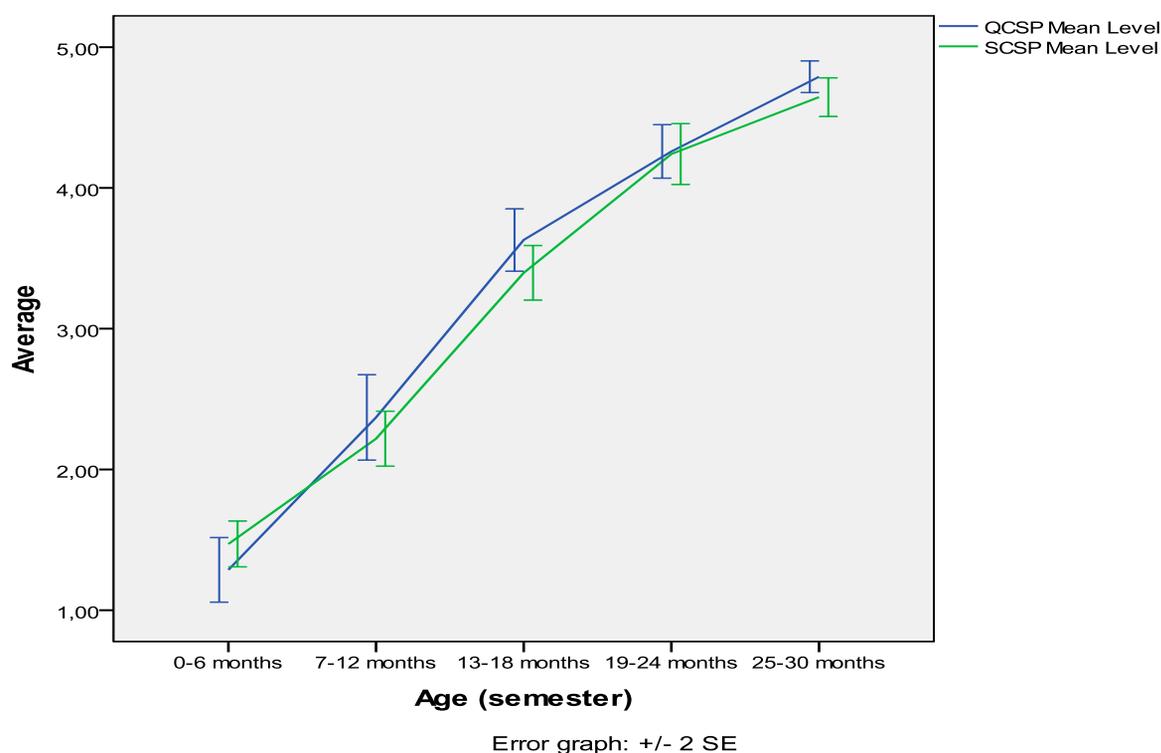




Table 4. Correlations between the SCSP scale and the QCSP questionnaire mean levels

		Correlation	Correlation Controlling for age effect
Total		.91**	.33*
Functions	Social Interaction	.78 **	.15
	Joint Attention	.89 **	.37 *
	Behavior Regulation	.82 **	.14
Interactive	Responding	.86 **	.21 *
Roles	Initiating	.82 **	.19 *
	Maintaining	.83 **	.16

Pearson correlation, Two-tailed (N=116)

* $P < .05$

** $P < .001$

The QCSP and the SCSP encompass an evaluation of the different roles the child can play during interaction (response, initiative and maintaining); we also control the concordance between parents and trained observers on this aspect. The correlations (see Table 4) are large and significant (Response: $r = .86$, $p < .001$; Initiative: $r = .82$, $p < .001$; Maintaining: $r = .83$, $p < .001$). The QCSP roles largely correlate with age as well (response: $r = .89$, $p < .001$; initiative: $r = .90$, $p < .001$; maintaining: $r = .90$, $p < .001$). Controlling for the age effect, we found that the correlations between the QCSP and the SCSP responses and between the QCSP and the SCSP initiatives are still significant ($r = .21$, $p < .05$; $r = .19$, $p < .05$); whereas, the correlation between the QCSP and the SCSP maintaining is similar but not significant ($r = .16$, $p < .10$).

The average levels of the QCSP and the SCSP roles are generally equal (see Table 3). Parents reported higher mean levels for the response and higher optimal levels for the initiative.

Conclusions

The goal of the study presented here was to demonstrate the validity of the QCSP, while its Italian standardization is still ongoing. Our data supported QCSP reliability. Comparing

the QCSP with the observation scale it originated from, the SCSP, we found that the questionnaire showed good reliability: it allowed us to collect reliable information from parents in respect of both the communicative functions and the interactive roles the child can play. The correlations between the QCSP and the SCSP ranged from .78 to .91, and they were very good, considering that our sample encompasses very young infants as well: in fact, previous research reported higher correlations for older than younger children. Moreover, the QCSP mainly encompassed nonverbal communicative behaviors, but the higher correlations in literature referred to linguistic production, whereas gesture correlations were lower.

The correlations between the SCSP and the QCSP were generally substantive and significant even when they were controlled for age: this result means that parents and trained observers evaluate the child in very similar ways, independently from the generic image the adult has about what a child can or cannot do at a specific age. Nevertheless, some correlations were not significant any more, once they were controlled for age. This was true for the Social Interaction scale, for the Behavior Regulation Scale and for the Maintaining role. The SI and the BR scales showed higher levels when evaluated by parents (QCSP) rather than by trained observers (SCSP). We



think these scales are the ones mostly influenced by the familiarity the child had with the adult evaluating him and this could be the reason why the average QCSP scores were higher (see Table 3) and the partial correlations were not significant any more (see Table 4). In fact, for instance, a child could better perform in “singing together a song” if he or she already shares a routine with the adult, as it happens between parents and child, but not between unfamiliar observers and child. Similarly, a familiar adult knew deeply the child and could more easily catch his or her communication (for instance, a gesture to ask the adult to do something, or first words that are usually difficult to understand) and coherently respond to that communication, even for several turns.

In regard with the correlation between the QCSP and age, they were strong, pointing out that the QCSP could capture the development of communicative competence: the SCSP scale, from which the QCSP derived, showed a similar correlation with age.

Practical implications

Altogether, the QCSP shows interesting features both for research and intervention in the field of early communication development: it was designed for very young children from two months of age, and it can also take into account individual characteristics, for instance through the evaluation of the child interactive role; it can be usefully joined to other tools mainly evaluating linguistic development, such as the CDI (Fenson et. al., 1993), for better detecting nonverbal communication.

Nevertheless, we think that the most important contribution of our research is supporting the idea that parents could be reliable informants about their children’s development: in completing our questionnaire, parents proved to be reliable observers, despite social desirability or social representation effects. This is an important topic, because parents are the first resource for early screening and for sup-

porting the child development, even in problematic situations.

As respects further research and applications, it could be interesting to understand if parents with different characteristics are able to reliably fill the questionnaire: for instance, analyzing responses of parents raising from different socio-economical status or from risk conditions, or parents of children with different developmental problems.

Another future goal of research will be to test the QCSP usability as a screening tool. In fact, monitoring joint attention behaviors is very important in early infancy, and the JA Scale proved to be stable and reliable, so that the QCSP could usefully respond to the need for tools evaluating this aspect. Obviously, the clinical use of the instrument needs a larger sample, and this is the objective of the ongoing Italian standardization.

As regards possible applications of this instrument, the QCSP has already proved to be a useful tool for daycare facility educators’ training, both for practicing observational techniques and for updating knowledge about early communicative competence (Molina & Bulgarelli, 2010). The QCSP was also used to discriminate the communication characteristics of children with developmental delays in day-care groups (Molina, Bulgarelli, Marsan, Spinelli, Albanese, Antonioti, Arati, Farina, Garbo, 2007).

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