

Lexical and Pragmatic Development of Italian Children During the Second Year of Life: a Longitudinal Study

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Abstract

A longitudinal study on the lexical and pragmatic development of 24 Italian children during the second year of life is presented. Parents filled in the PVB inventory and were interviewed using PICA parental interview at 14, 18 and 24 months of age of their children. Results are consistent with previous findings that underlined the individual stability of language acquisition and show the positive correlations between lexical and communicative acts increments. Those findings point out the possibility of a very early intervention if there is a late language emergence.

Keywords: lexical development; pragmatic development; correlations; second year of life; longitudinal study.

Introduction

According to Goldin-Meadow, Levine, Hedges, Huttenlocher, Raudenbusch, & Small (2014; but also and other authors, e.g., Camaioni, 2001), the acquisition of language is “a robust process”, despite the fact that children develop in very different linguistic contexts, which present different quality and facilitation characteristics. Linguistic-communicative development typically exhibits several common pathways, but also many remarkable individual differences. These differences mainly regard the rate and timing of linguistic and communicative development: this is significant, also for educational and/or clinical intervention, because language skills are crucial for the development of other important cognitive, emotive and social capacities. Early characteristics of individual language development show continuity and stability; the early linguistic and communicative capacities are interrelated with scholastic skills in primary school and academic achievement.

Lexical development: Around 9 months the child achieves the communicative intentionality, that is she/he utilizes specific tools *for the purpose* to obtain determinate results. At the beginning the communicative intentions are expressed by gestures, and around 12 months children produce “referential” gestures that is symbolic manual acts for objects and actions.

The first words appear on average between 11 and 13 months; the gesture usually replaces the word that the child is not able to produce during the second year of life. In the first phase of lexical development children on average produce from 50 to 70 different words; between 16 and 20 months there occurs a strong acceleration in vocabulary growth, that is a remarkable increase of number of produced words named “vocabulary spurt”. This phenomenon is not regarded as “universal”, but most of the Italian children (e.g.

D’Odorico, Carrubbi, Salerni, & Calvo, 2001), exhibit a vocabulary spurt, which is documented in many other studies regarding several different languages. Two-years-old Italian children have a vocabulary size of about 300 words; according to Caselli, Pasqualetti & Stefanini (2007) at this age 49 words represent a benchmark of delay in language development, evolving if possible in language impairment (Bonifacio & Hvastja-Stefani, 2010).

Pragmatic development: Pragmatics concerns the use of language in context, according to situations, interlocutors and personal style. Speech is used to perform social acts, for example to agree or to disagree; the communicative use of speech indeed is a social and culturally determined behaviour. Numerous are the communicative acts taxonomies (see Ninio & Snow, 1996). In the present research it was utilized a parental interview, PICA, elaborated by Ninio and Goren (1993), for the assessment of first 100 communicative acts.

According to Ninio and Snow (1996), communicative intentions between 8 and 24 months are acquired in the following order: attention negotiations, emotions expression, events marking, games performing, discussions, action negotiation, clarification.

The aims of the present longitudinal study were the following: a) to describe the lexical development of a sample of Italian children at 14-15, 18-19 and 24 months; b) to describe the communicative acts development at the same ages; c) to verify possible relations between lexical and pragmatic development.

Method

Participants

Twenty four children recruited from paediatricians’ offices took part in the study. They were 16 males and 8 females since some families were not available for all assessments. All children were born at term and without health and hearing problems; they showed a typical development in all fields. Families were Italian native, monolingual speakers and their sociocultural levels were medium-high (37.5%), medium (50%) and medium-low (12.5%), as defined on the basis of the parents’ education level and job.

Assessments

Participants underwent three subsequent evaluations at 14-15, 18-19 and 24 months. They were administered two different parent-report instruments: the “Primo vocabolario

del bambino”(PVB) inventory (Caselli & Casadio, 1995), and the parental interview PICA (Ninio & Goren, 1993). The PVB is the Italian version of the MacArthur – Bates CDI, one of the most utilized checklists for assessing language development between 8 and 30 months, even for cross-cultural researches. The PVB includes two forms: one, Words and Gestures, to evaluate gestures and emerging vocabulary between 8 and 17 months; the other, Words and Sentences, to evaluate the vocabulary strong increment and the emerging grammar between 18 and 30 months (now 36 months, see Caselli, Pasqualetti & Stefanini, 2007).

The PICA-100 questionnaire is a parental interview on the first 100 communicative acts of 8 – 30 months old children. The Italian version was elaborated by the author, and used experimentally for the first time in the present research.

Procedure

Participants were asked to collaborate in a research relative to communicative development of children during the second year of life, with three scheduled assessments. Parents (usually the mother at family home) filled in the PVB - Words and Gestures, at 14-15 months, and the PVB - Words and Sentences at 18-19 and 24 months. All parents received complete and individual instructions on compilation manner. They were instructed to fill in the questionnaire only after a familiarization with the instrument and a period of observation of communicative-linguistic behavior of their child. The parental interview PICA was administered at family home by a trained research collaborator at the same times of the PVB inventory.

Results

The analysis of lexical and pragmatic developmental indices collected through PVB and PICA at 14-15, 18-19 and 24 months of age (Table 1) revealed remarkable inter-individual differences consistent with previous studies on Italian language acquisition (D’Odorico et al., 2001).

Keeping as a standard the results of Caselli & Casadio (1995; Caselli et al., 2007), in the 14-15 months age group I found: (1) a similar average number of Gestures number at 14-15 months; (2) a similar advantage for Words comprehension over Words production; (3) a larger average number of comprehended words.

Results on Words production across age groups were fully comparable with the standard. At 24 months 9 children produce less than 150 words, 8 children produce between 150 and 300 words, 7 children between 300 and 665 words. Most children show a vocabulary spurt between the second and third assessment, in that confirming the results of many, cross-cultural researches. Individual differences are large, but individual vocabulary development seems rather stable. All increments in vocabulary size were significant for all comparisons (MANOVA test for repeated measures, $F_{2,46} = 57.6, p < 0.001$).

	Age (months) (N = 24)		
	14-15	18-19	24
Gestures number	36 ± 9		
Words comprehension	162 ± 75		
Words production	8 ± 8	72 ± 95	281 ± 175
Communicative acts	38 ± 8	50 ± 11	69 ± 11

Table 1: Mean scores and Standard Deviations of gestures, lexical (revealed by PVB) and pragmatic (revealed by PICA) developmental indices at 14-15, 18-19 and 24 months.

Also the number of Communicative acts increased with age. Children produce on the average 38 communicative acts at 14-15 months (range = 22-55); 50 at 18-19 months (range = 34-73); 69 at 24 months (range = 48-93). All increments were significant for all comparisons (MANOVA test for repeated measures, $F_{2,46} = 127.8, p < 0.001$). Relative to the results of Ninio and Snow (1996) on American and Hebrew children, the tested sample of Italian children produced fewer communicative acts at 24 months. A comparison with other Italian researches (e.g. Longobardi, Rossi-Arnoud & Spataro, 2011) is not possible principally because there were used different assessment tools or method of data collection.

Considering the different functions of communicative acts at 14 months I found that: 90% (99% at 18 months; 99% at 24 months) of children produced nonverbal or verbal attention negotiations; 51% (66.5% at 18 m.; 82% at 24 m.) expressed emotions; 45% marked events (62% at 18 m.; 81% at 24 m.); 44% shows play performances (65% at 18 m.; 78% at 24 m.); 23% was able to discuss (30% at 18 m.; 47% at 24 m.); 31% shows action negotiations (45% at 18 m.; 64% at 24 m.); 0% of children show clarifications at 14 and at 18 months, 4% exhibited this function at 24 months.

These results show that the order of acquisition of communicative intentions in Italian children is similar to the one of American and Hebrew children, except for action negotiation functions, which Italian children seem to master better at all ages than discussion functions. American and Hebrew children actually show an inverse result with this respect (Ninio & Snow, 1996).

Correlations between lexical and pragmatic developmental indices

Correlational analyses were conducted on percentage values of data since tools with different standards were used. Comprehension of words at 14-15 months was positively correlated with gestures production at the same age (Pearson’s $r = 0.584, p < 0.003$), words production at 24 months (Pearson’s $r = 0.517, p < 0.01$), communicative acts at 18-19 months (Pearson’s $r = 0.476, p < 0.01$).

Vocabulary size at 14-15 months was positively correlated with produced communicative acts at the same age ($r = 0.489, p < 0.01$), at 18-19 months ($r = 0.617, p < 0.001$), at 24 months ($r = 0.436, p < 0.03$). Words production at 18-19 months was positively correlated with produced communicative acts at the same age ($r = 0.751, p < 0.001$), and with the communicative acts number at 24 months ($r = 0.757, p < 0.001$). Words production at 24 months was correlated with communicative acts at the same age ($r = 0.756, p < 0.001$).

The growth of Vocabulary size is finely correlated with the growth of pragmatic skills, with an increasing correlation as the age increased. These results confirm a continuity hypothesis in gestures, linguistic and pragmatic development and underline the possibility of early interventions. For instance, language delays might be compensated by means of gestures increasing via imitation, vocabulary increasing via early literacy as well as by communicative acts increasing via adequate and rich parental style.

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