

ILDIKÓ KOÓS**First Language Acquisition: the Temperament of the Mother and Preverbal Communication**

The present study made an attempt to look into the linguistic characteristics strongly related to the mother's temperament vis-à-vis the success of the early communication with their infants. By comparing percentage data we can conclude that all of the mothers characterised along the scales unstable—stable and introvert—extrovert do use motherese strategies, out of which scenarios given by affirmative intonation, the various communication functions and the verbal paradigm were analysed. We found that the stage and the frequency at which these language features were used varied significantly and strongly depended on the mother's personality factors. We can therefore establish that mothers with different temperaments can be characterised by a different combination of language strategies facilitating first language acquisition. No mother temperament displayed a total lack of motherese elements.

The role of the motherese

Mothers wish to communicate with their infants already in the course of the first twelve months. As part of linguistic socialisation and depending on the cultural community, they employ language strategies facilitating L1 acquisition, raising a growing communication demand as the infant grows. This linguistic behaviour of the mother is called a motherese, encompassing communication functions, the characteristic distribution of the paradigmatic features of verbs, (not) initiating and keeping eye-contact, words of motherese, characteristic use of supra-segmental factors and meta-communication signs and the special content of the utterances directed at the infant. The framework of early communication (cf. Réger 1990) is determined by the presence or absence of these factors, varying individually. If motherese shows a strong presence in the linguistic socialisation environment, the infant in this environment shows preverbal and kinetic behaviour patterns at an early stage, which serve to establish a contact with the environment, and are thus parts of the so-called early preverbal communication including various sorts of cries, smiles, the initiation and keeping of eye-contact and the quantity and frequency of crowing. The beginning of L1 acquisition, that is, the success of early parent-infant communication depends largely on the presence and combination of the elements of motherese (c.f. Bruner 1980; Dore 1980; Lengyel 1981).

The motherese strategies of the mother is triggered by a social, genetic and pedagogical “programme”, “based on human existence and culture-dependent micro- and macro-social

community as 'each civilisation has beliefs and suppositions on what infants are like (...) and these beliefs and suppositions exert an influence on how people treat infants, and what infants see from their environment'" (Cole 1997,185). Motherhood begins with the period of expectancy already, but the bond between parent and infant is not forged overnight. Post-natal factors, determining also the linguistic future of the relationship are as follows: the look and sex of the infant; the age and the temperament of the mother; the experience of giving birth and the first hours with the infant (c.f. de Chateau 1987; Lamb 1982; Szanati–Nagy 2006). The parent is also driven by a pedagogical consciousness, his/her communication with the infant is influenced by his/her expectations set in accordance with the beliefs and suppositions of the particular civilisation such as principles of upbringing, raising infants to an awareness of male and female roles).

The present study wishes to highlight the linguistic features of mothers' temperament, as part of the motherese. We carried out an investigation to see whether or not these distinctive linguistic features as characteristic linguistic strategies encourage the L1 acquisition of infants.

Scope and method

We were trying to establish an interrelatedness between the characteristics of the mother's motherese and the willingness of the infant 0;0,0 – 1;0,0 (year; month, day of the infants age) to communicate. We monitored nursing situations of an average duration of 5.5 minutes. We carried out the observations in the home of 36 mothers and infants, on one occasion each. Mothers and infants were selected primarily on the basis of the infant's age, with an equal distribution between girls and boys, and between first-borns and later children. The result of the personality test of the mother was also a major aspect of selection, namely that mothers with different temperaments should be allocated evenly in the various age-groups of mothers and infants. We set up three age-groups on the basis of the age of the infant and the stage of preverbal communication in L1 acquisition (see Table 1). The observations were recorded by two video cameras, one recording the infant's behaviour and one recording the mother's behaviour. We arrived at the subject matter of our investigation of the communicative behaviour by slowing down and projecting the two, complete, simultaneously recorded films onto each other and by observing the corresponding linguistic corpus.

Prior to our present investigation, we have carried out an experiment to observe the presence or absence of the various elements of the motherese, their proportion compared to

one another, irrespective of the mother's temperament (Other conditions of the observation were the same as now, and it was broken down to the three age-groups as specified in Table 1., c.f. Kátainé 1998). The observation data showed that the special utterances of the mother changed dramatically as the language competence of the infant was gradually enhancing with age. When analysing the outcome of the present observation, we will give the percentage values of a particular element of the motherese, significant in a particular age-group. The values are given as indicators typical of the mother's general speech production, irrespective of her temperament and strikes of personality.

Characteristic features of the mother's temperament are interpreted on the scales introversion—extroversion, and neurocity. The aspect introversion—extroversion reflects the extent to which the person turns rather inside or to the outside world. We find shy persons at the 'introvert' end of the scale, that is, people turning into themselves especially when facing stress. We find sociable persons at the 'extrovert' end of the scale, that is, people who seek the company of others when they face a conflict. Neuroticism is an emotional dimension with unpredictable, anxious persons with a poor capacity to adapt at the 'unstable' end and with calm persons with a large capacity to adapt on the 'stable' end. By combining the two scales, we can establish further sub-features, correlating with the factors investigated to a varying degree. To outline the characteristic features of the observed mother, we used a survey testing altogether 160 features along four degrees (not characteristic of me at all; less typical; typical; very typical of me). Characteristic features were compared within the individuals themselves by pointing out the 20 most and the 20 least typical features (Halász–Marton 1978; Atkinson et al. 1999).

Age group	Age	Preverbal characteristics	Number of infants
Group 1	0;0 – 0;3	From eye-contact to smiles	12
Group 2	0;3,1 – 0;6	To the first forms of crowing (babbling)	12
Group 3	0;6,1 – 1;0	More advanced forms of crowing (syllable-like forms) to the first words	12

Table 1: Groups of infants broken down according to age
A résztvevő csoportok

Characteristics of personality features

Mothers with *extrovert—unstable* personalities show a rather dominant behaviour, contacting their infant in a determined and purposeful way, encouraging action from the infant. They typically do not tolerate mistakes, know the right answer, and they expect the infant to know it as well, setting high expectations. This is similar to Hypocrite's category of a 'choleric' (irritable) personality.

Mothers with an *extrovert—stable* personality can be characterised by friendliness, serenity and good humour. Their spirit is changeable, often irresponsibly careless. From the very beginning on, they regard their infants as equal partners, sociable beings. They are usually identified as sanguine (optimistic). Mothers on the *introvert—unstable* scale participate in communication in a self-sacrificing way, paying a constant attention at the infant's needs. They are characterised by a pursuit of perfection and harmony; a need to explore the other person, combined with a deep thinking, which they encourage in their children, too. They are, however, often anxious, avoiding the company of other people and rather pessimistic. Hypocrite regarded them as melancholic (depressed) personalities. On the *introverted—neuroticism* scale, mothers who take the time to care for their infant, accept them whether good or bad alike, are emotionally stable. They are calm and consistently patient parents, characterised also by an emotionally restrained behaviour, are perhaps far too passive and careful. This picture gives a so-called phlegmatic (calm, neutral) temperament. The initial communication strategies of the mothers towards their infants are strongly influenced and are made highly individual by the differences within these personality factors. Accepting the idea that maternal communication strategies have a culture-dependent impact on L1 acquisition (Réger 1990), and then consequently we must also assume that the linguistic characteristics of the personality factors of mothers are similar influencing factors (as part of the motherese strategy).

Outcome

The present study makes an attempt to investigate the linguistic features, out of the elements of the motherese serving as the basis of a successful early communication, related to the characteristics of the personality factors of the mother, including affirmative intonation, verbal paradigm and the distribution of communication functions per utterance (%).

In the period of global perception in the first twelve months of their lives, it is the affirmative intonation in the mother's linguistic strategy which is first perceived and interpreted by the infant as questions. This intonation triggers a response (crowing, babbling, body language) and communication (c.f. Csépe 2005; Gósy 1994; Kátainé 1998). We found that a *typically affirmative intonation (mostly yes-no questions)* was characteristic for 30 % and 23% in group 2 and group 3, respectively. Its presence is evenly distributed and typically high and encourages tremendously the infant's readiness to crow and to enter into early dialogues. It is only the mothers categorised as choleric who do not use this motherese strategy. An affirmative intonation characterises a mere 17% of their linguistic utterances (already in group 1), which is then reduced to 11 and 9 % in group 2 and 3, respectively. Asking questions characterises introverted—unstable mothers in 24%, 27% and 45% in groups 1, 2 and 3, respectively. Their utterances are strongly characterised by the predominance of the *verbal emotional communication function* in group 1, which utterance normally accompanies mother and child interactions (17%, 14% and 7% in group 1, 2 and 3, respectively). After birth, when the euphoria of the inseparable bond between mother and infant is extremely strong, this function becomes linguistically typical (23%) even with melancholic mothers. In groups 2 and 3, however, we experienced a significant absence of emotional verbal utterances (7% and 1%, respectively). Should the anxious strikes of personality, making the person avoid the company of others outweigh other features, post-natal depression could follow. Characteristic symptoms are a loss of emotions and pessimistic behaviour, which typically occurs when the infant is about 3 months old, and has, of course, a negative impact on the communication between mother and infant, eventually resulting in a loss of contact, the complete lack of verbalism and an intention to prevent the independence of the infant. It is not only the absence of the emotional function in the motherese in groups 2 and 3 that call our attention to this inclination. In group 2 these mothers fail to produce the characteristic percentages neither in the paradigmatic characteristics of the use of verbs nor in the use of meta-linguistic and fatig communication functions, see in-depth analysis below.

In the linguistic manifestation of the particular personality factors the use of verbs (related to the infant as an acting agent) displays considerable differences in terms of mood, person and number of the subject.

Egalitarianism can be strengthened by the mother if she uses verbs in the *first person plural (I/Pl)*. Chart 1 shows the distribution of the experience 'we', the use of verbs in the first person plural (%), broken down to age groups, and compared to the characteristic feature of

the mother's temperament. The bar chart show averages calculated for the % value typical of a particular age group, irrespective of the personality factors of the mother (c.f. Chart 2 and 3). The new-born infant is characterised by a sense of innateness, the fading and interchangeability of notions 'me' and 'not me'. The high frequency (31% and 30%) of verbs in the first person plural in groups 2 and 3, respectively, is a clear testimony to the strong physical and emotional relationship between mother and infant. Let me give a couple of linguistic examples: *most pedig megfürdünk (0;1,11)* (and now we'll have a bath); *gyorsan vissza is öltözünk (0;3,2)* (we'll get dressed again quickly); *kinézzük magunknak, mert szeretjük, amikor meztelenkedünk (0;2,1)* (we like running about in the buff).

As the child grows, the use of verbs of the mother's speech corpus, suggesting an egalitarian attitude is gradually decreasing to a mere 15% in group3. This code shift is meant to help the infant in the process of gaining physical and psychological independence. The emotional communication function is gradually decreasing for a similar reason. This communication strategy is best employed by mothers with a sanguine character, who regard their infants as equal partners in communication, from the moment of the birth on. In age groups 1 and 2 egalitarianism was characteristic at a rate of 35 and 35%, respectively, which was reduced to a mere 15% in group 3, indicating the mother's linguistic support of the independence of her infant.

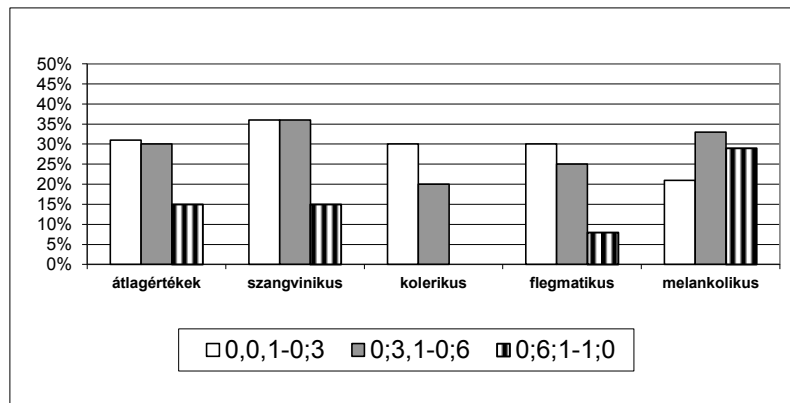


Chart 1

The distribution of the use of verbs in the first person plural (%), broken down to age groups, and compared to the characteristic feature of the mother's temperament.

A T/1. sz. igehasználát százalékos megoszlása az anya temperamentumának jellemző jegyeihez viszonyítva

It is particularly striking that the use of verbs in the first person plural is extremely high, 33% and 29% in groups 2 and 3, respectively, where the mothers showed an introvert—unstable personality. This motherese strategy, however, does not have a similarly beneficial effect on

L1 acquisition as earlier. Choleric, determined and purposeful mothers, encouraging their infant's actions, did not regard their infant as belonging within the boundaries of themselves already in group 2. In groups 2 and 3, they used verbs in the first person plural at a rate of 20% and 0%, respectively, which means that verbs in the first person plural related to the infant's action were simply gone.

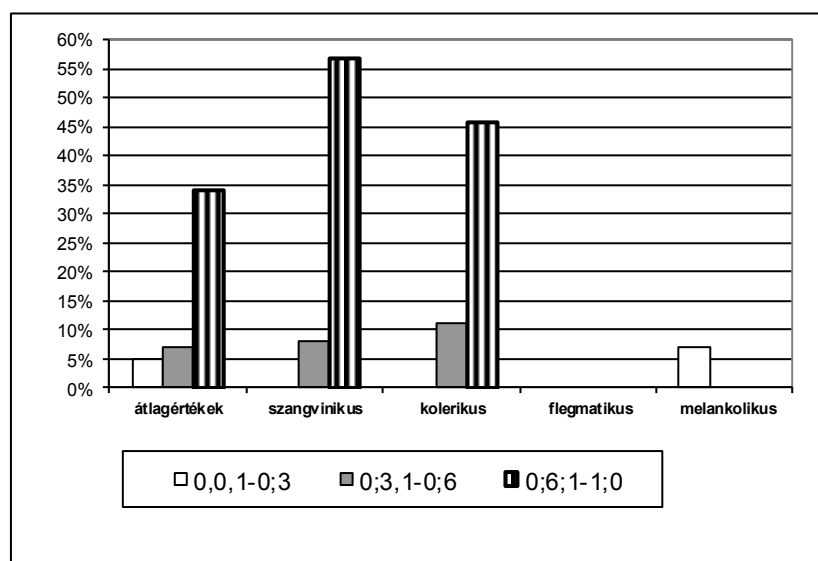
The experience 'me' and the building of self-consciousness can be helped by the mother using verbs in the first and third person singular. The infant's ego is gaining on independence gradually and is not completely over by the end of the first year. The speech of the mother aligns to this process. Her use of verbs changes in group 3, we observed so-called 'ego-building' verbs used in the third person singular at a rate of 34%, though this use of verbs was scarcely detectable with groups 1 and 2. See, for example, utterances like *Dugja a kicsi lábát a Gréta (0;6,11) (Gréta is giving me her little foot); leveszi a ruháját a Bia (0;8,17) (Bia is taking off her clothes); rakja ide a kezecskéjét a gyerek (0;7,6) (the infant is giving me her little hand).*

Chart 2 shows the distribution (%) in the use of verbs in the third person singular, reflecting the experience 'me', broken down to age groups, within the personality factors of the mother. Melancholic mothers paying a self-sacrificing attention to their infants used ego-building verbs when commenting on the actions of the infant at a rate of 7% after giving birth.

This usage of verbs is completely disappeared from their communication with the infant in group 2 and 3. (although we expect a verbal reinforcement of self-consciousness at a rate of 34%, in line with the increasing physical and psychological independence of the infant). At the same time, however, verbs maintaining egalitarianism continue to occur at a strikingly high rate up until the end of group 3. We failed to detect verbs in the third person singular referring to the infant as an acting agent in the motherese strategies of far too passive, careful and emotionally restrained (phlegmatic) mothers. Mothers with these two personality factors therefore did not indicate a need to separate the infant and to reinforce the child's ego, naturally appearing in the course of linguistic socialisation.

Compared to them, the open and extrovert mothers have an entirely different use of verbs, using verbs in the third person singular at a rate of 57% and 46%, respectively in group 3. By doing so, they substantially facilitate the linguistic socialisation of their infants. Mothers with the personality factor extrovert—stable continued to use verbs in the first person plural as a motherese strategy, displaying ideally the infant-centred communication behaviour where the infant appears as an equal partner in communication from the very beginning on.

Chart 2



The distribution of the use of verbs in the third person singular (%), broken down to age groups, and compared to the characteristic feature of the mother's temperament
Az E/3. sz. igehasználát százalékos megoszlása az anya temperamentumának jellemző jegyeihez viszonyítva

The linguistic strategies of choleric mothers did not support the experience 'us' in group 3. Their 'me' type usage of verbs in group 3 at a rate of 46% became pre-dominant, beyond its positive effect, which facilitates L1 acquisition. These mothers separated from their infants at a very early stage, not facilitating neither the establishment of a social bond or the linguistic socialisation of their infants. They only used verbs in the third person singular as imperatives for instance *leteszi a baba a cumit! Baby put the dummy down! (0;8,3)*; *Eszi már meg a hamit a Bia! (Bia eat the yummy food!) (0;11,17)*). This is the so-called trafficking imperative, which is rather shocking for the addressee. From a pedagogical point of view it is not recommended.

The on-going and increasing refinement of the infant's global perception capacity is indicated by the fact that it is able to differentiate between subtler shades in intonation in the second six months of their lives (telling apart for example, request, instructions and wh-questions); more complex forms of crowing and babbling appear. As part of their linguistic socialisation strategy, mothers set an increasingly high expectation for their infants. Parallel to this, an increasingly significant role is assigned to meta-linguistic and fatic communication functions, and the use of the imperative is also increasing.

Meta-language functions are related to the actual linguistic manifestation of the utterance and are characteristic when the mother feels a need to verbally reinforce the function of the

crowling and babbling as language signs. It functions within the situation as a nominator, and a meaning is assigned to it. For example, the infant's utterance *Ha – dá – dá – dá (0;8,17)* interpreted as a sentence, the mother's response is *Azt mondom: hagyd anyá ! Hagyd ! Hagyd ! (you are saying mum, leave me alone, leave me alone!)*. This function is characteristic of 9% of the mother's utterances in group 3, whereas it is present in group 1 and 2 at a rate of 2% and 5%, respectively (c.f. Kátainé 1998). Unfortunately, in the case of choleric mothers, who typically give instructions and separate themselves from their infants at a rather early stage, this motherese strategy, which substantially facilitates the building of language codes appears only in the second six months of the infant's life, at a low rate of 4%. Phlegmatic mothers behave languagewise in a similar way, but in group 3 they take the opportunity to use meta-linguistic communication to teach their infants language codes at a rate of 13%, above the average. As the language reflection of exaggerated passivity and relying heavily on the infant's needs, phlegmatic mothers do not use utterances with meta-language function in group 1 and 2. They do not facilitate actively the process of first language acquisition, typically till their infants are unable to produce more complex forms of babbling and the first word-like forms, that is, until they get verbally active. In line with this, verb use in the third person singular is absent from their motherese strategies and the use of verbs in the first person plural and in the imperative stays under the average (see Chart 3).

The purpose of the *fatic function* is to maintain communication. The most typical ones of these maternal utterances were ones like *Ugye? Jó?! Igen?! Na! (Tag questions, really? See?)*. The results of our previous investigations suggest that the contact keeping function of the mothers' utterances were characteristic in group 1 at a rate of 14% and at 23 % once babbling begins. Besides the reference function, this is one of the most frequent communication objectives. Its strong presence indicates that the mother's motherese strategies are of active, initiating and maintaining nature and teach language codes. This function was used most evenly by sanguine mothers, who regard their infants as partners from the very beginning on, at a rate of 23, 28 and 35% in group 1 and in groups 2 and 3 where babbling becomes characteristic. In group 2 introvert mothers with an inclination for depression used this language strategy at a rate of a mere 17%. Mothers with personality factors extrovert and unstable communicate and keep contact with their infants verbally to a lesser degree, as the rate of fatic utterances of 11%, 17% and 14% do not reach the average in either of the three groups.

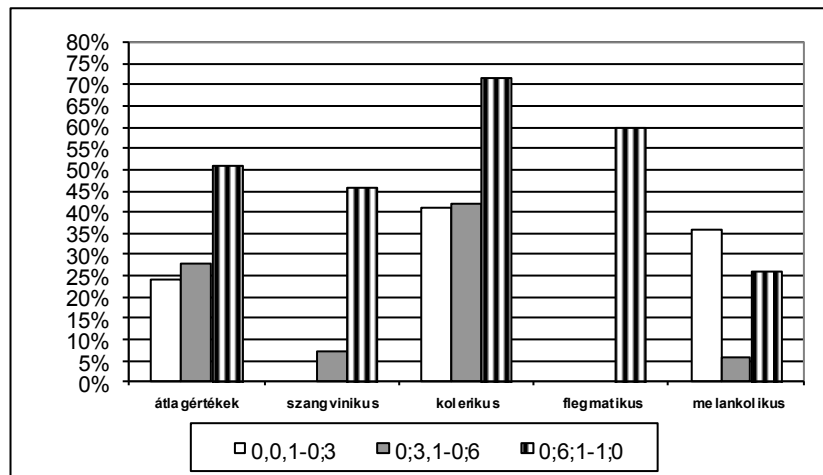


Chart 3

The distribution of the use of imperative verbs (%), broken down to age groups, and compared to the characteristic feature of the mother's temperament
A felszólító módú igehasználat az anya temperamentumán belül értelmezve

With the infant gaining in independence, the mothers' linguistic expectation towards the infant grows, and the number of imperatives produced is soaring in the second six months. By doing so, the mother can facilitate and trigger the acquisition and the use of the language code. In group 3 the imperative mood is characteristic of 51% of the mother's utterances.

Chart 3 shows the distribution of the use of imperative verbs (%), broken down to age groups, and compared to the characteristic feature of the mother's temperament. This sudden increase is not typical of the language behaviour of melancholic mothers, who use the imperative in group3 quite contrary to the expectations, at a rate of a mere 6%. That these placid and thinking parents use the imperative far too scarcely means that they do not facilitate or strengthen adequately the language independence and the willingness of the infants to crow and babble. On the other hand, determined and purposeful choleric mothers, who bring their infants up in an active fashion from the very beginning on, rely heavily on the imperative, using it in group 1, 2 and 3 at a rate of 41%, 42% and 72%, respectively. By using this language pattern, they expect their infants to gain in independence far too early, which, particularly in the second six months of the first year, triggers and greatly facilitates the infant's willingness to babble and crow, has a beneficial effect on the acquisition of L1 code system, although it may not have a positive effect on the emotional development of the infant.

We can therefore establish that mothers with different temperaments can be characterised by a different combination of language strategies facilitating first language acquisition. No mother temperament displayed a total lack of motherese elements. We can conclude that all

mothers, irrespective of their characteristic personality factors, facilitate the first language acquisition of their infants by changes in their own language usage.

BIBLIOGRAPHY

- Atkinson, R. L. – Atkinson, R. C. – Smith, E. E. – Bem, J. D. (1999): *Pszichológia*. Budapest : Osiris Kiadó, 1999. 677 p.
- Bruner, J. (1980): A kommunikációtól a nyelvig. In: Pléh Csaba (szerk.): *Szöveggyűjtemény a pszicholingvisztika tanulmányozásához*. Budapest: Tankönyvkiadó, 1980. 455–486. p.
- Cole, M. – Cole, S.(1997): *Fejlődéslélektan*. Budapest: Osiris Kiadó, 1997. 141–287. p.
- Csépe, Valéria: A nyelv agyi reprezentációjának fejlődési változásai és zavarai. In: *Magyar Tudomány*, 2005/11. 1336–1346. p.
- Csertő, Aranka (1991): *Én és a Másik*. Kecskemét:1991. 58–61. p.
- De Chateau, P. (1987): Parent-infant socialization in several Western European countries. In: Osofsky J. D (ed.): *The handbook of infant development*. 2nd ed. New York: Wiley, 1987. 57–210. p.
- Dore, J. (1988): A beszédaktusok elsajátításának feltételei. In: Pléh Csaba – Terestyéni Tamás – Siklaki István (szerk.): *Nyelv, kommunikáció, cselekvés*. I-II. Budapest: Tankönyvkiadó, 1988. 260–289. p.
- Gósy, Mária (1994): A beszédészlelés fejlődése. In: *Fejlesztő Pedagógia*, 1994/4-5. 15. évf. 4-5. sz. 10–17. p.
- Halász, László és Marton, László (szerk.) (1978): *Típustanok és személyiségvonások*. Budapest: Gondolat Kiadó, 1978. 270. p.
- Koós Kátainé, Ildikó (1998): Kommunikációs keret az első életévben: intonáció-göngicselés. In: Gósy, Mária (szerk.): *Beszéd kutatás'98*. Budapest: MTA Nyelvtudományi Intézet, 1998, 58–68. p.
- Lamb, M. E. (1982): What can „research experts” tell parents about effective socialization? In: Zigler, E., Lamb, M. E., & Child, I. L. (ed.): *Socialization and personality development*. Oxford: Oxford University Press, 1982. 422–516. p.
- Lengyel, Zsolt (1981): *A gyermeknyelv*. Budapest: Gondolat Kiadó, 1981. 340. p.
- Réger, Zita (1990): *Utak a nyelvhez*. Budapest: Akadémiai Kiadó, 1990. 166. p.
- Szanati, Dóra – Nagy, Beáta (2006): A koraszülöttség mint a preverbális képességek fejlődését befolyásoló tényező. In: *Gyógypedagógiai Szemle*, 2006/1. 34. évf. 1. sz. 23–37. p.

KOÓS ILDIKÓ

AZ ANYA SZEMÉLYISÉGJEGYEINEK HATÁSA A CSECSEMŐ PREVERBÁLIS KOMMUNIKÁCIÓJÁRA

A tanulmányban arra a kérdésre keresünk választ, mennyiben befolyásolja az anya temperamentuma a nyelvelsajátítás korai szakaszában a gyermekkel való kommunikáció sikerességét. Az eredmények szerint az anyák a meleg-korlátozó és az introvertált-extrovertált tengely mentén különböző módon és különböző erővel használják a dajkanyelvi stratégiákat: így a kérdő intonációs jellemzőket, a különböző kommunikációs funkciókat, az igehasználat eltérő módját és számát/személyét. Személyiségjegyeiktől függően az anyák csecsemőjük első életévének különböző szakaszaiban más-más erővel és módon voltak képesek használni a vizsgált dajkanyelvi elemeket. Így a különböző anyai temperamentumokra a dajkanyelvi stratégiák eltérő kombinációja jellemző. Egyetlen anyai temperamentum sem nélkülözi a dajkanyelv lehetőségét.